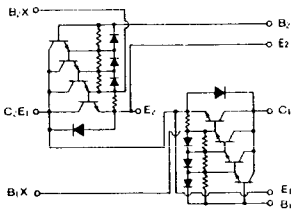
トランジスタ・モジュール 〔NPN, ダブルアーム（直列接続）〕

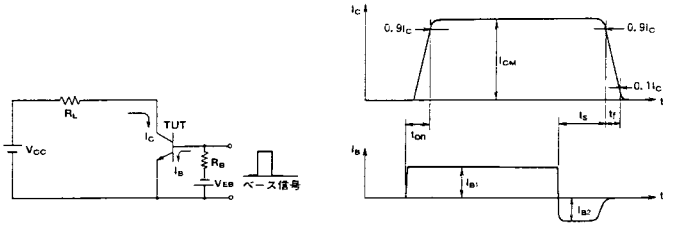
DY 3B



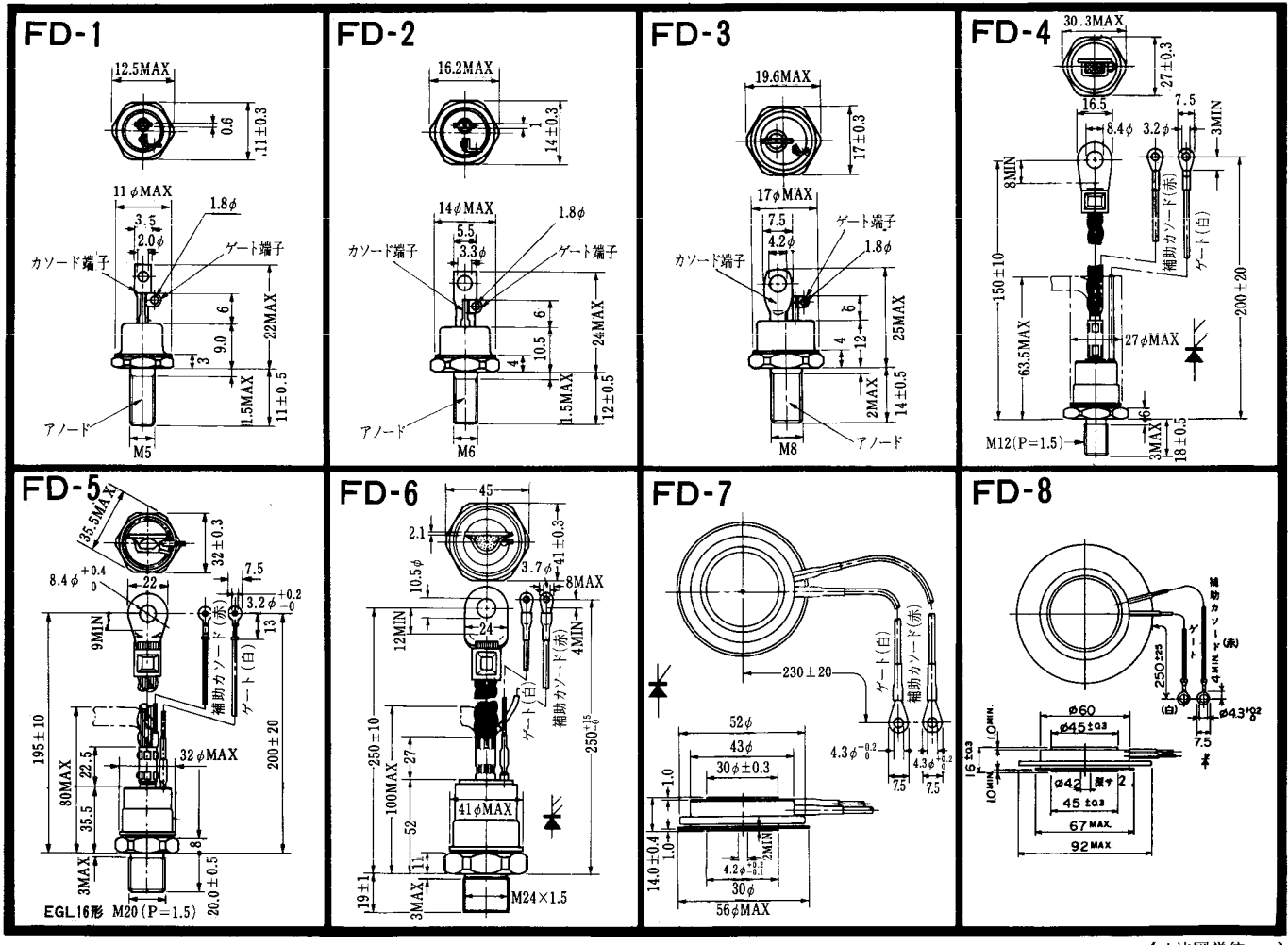

注1. $I_C$＝1A, $V_{EB}$＝2V, # 印は$V_{CEX}$ ($V_{EB}$＝2V)。　注2. 60Hz. 単相半波1サイクル波高値。　注3. $T_C$＝25℃。　注4. AC. 1分間。

| 型名 | 最大定格 ($T_J$=25℃) $V_{CBO}$ (V) | $V_{CEX(SUS)}$ (注1) (V) | $V_{EBO}$ (V) | $I_C$ (A) | $I_B$ (A) | $I_F$ (A) | $I_{FM}$ (注2) (A) | $P_C$ (注3) (W) | $T_j$ (℃) | $T_{stg}$ (℃) | $V_{iso}$ (注4) (V) | 電気的特性 $I_{CEX}$ (mA) 最大 | $V_{CE}$ (V) | $V_{EB}$ (V) | $I_{EBO}$ (mA) 最大 | $V_{EB}$ (V) | $V_{CEO(SUS)}$ (V) 最小 | $I_C$ (A) | $h_{FE}$ 最小 | $V_{CE}$ (V) | $I_C$ (A) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| QM100DY−H | 600 | 600 | 7 | 100 | 6.0 | 100 | 1000 | 620 | 150 | −40〜125 | 2500 | 2 | 600 | 2 | 100 | 7 | | | 75/100 | 2/5 | 100 |
| QM100DY−2H | 1000 | 1000 | 7 | 100 | 5.0 | 100 | 1000 | 800 | 150 | −40〜125 | 2500 | 2 | 1000 | 2 | 400 | 7 | | | 75/100 | 2.8/5 | 100 |
| QM100DY−24 | 1200 | 1200 | 7 | 100 | 5.0 | 100 | 1000 | 800 | 150 | −40〜125 | 2500 | 2 | 1200 | 2 | 400 | 7 | | | 75 | 5 | 100 |
| QM100DY−HB | 600 | 600 | 7 | 100 | 6.0 | 100 | 1000 | 620 | 150 | −40〜125 | 2500 | 2 | 600 | 2 | 100 | 7 | | | 750 | 2.5 | 100 |
| QM100DY−2HB | 1000 | 1000 | 7 | 100 | 5.0 | 100 | 1000 | 800 | 150 | −40〜125 | 2500 | 4 | 1000 | 2 | 100 | 7 | | | 750 | 4 | 100 |
| QM150DY−H | 600 | 600 | 7 | 150 | 9.0 | 150 | 1500 | 690 | 150 | −40〜125 | 2500 | 2 | 600 | 2 | 150 | 7 | | | 75/100 | 2/5 | 150 |
| QM150DY−2H | 1000 | 1000 | 7 | 150 | 8.0 | 150 | 1500 | 1000 | 150 | −40〜125 | 2500 | 2 | 1000 | 2 | 200 | 7 | | | 75/100 | 2.8/5 | 150 |
| QM150DY−24 | 1200 | 1200 | 7 | 150 | 8.0 | 150 | 1500 | 1000 | 150 | −40〜125 | 2500 | 2 | 1200 | 2 | 400 | 7 | | | 75 | 5 | 150 |
| QM150DY−HB | 600 | 600 | 7 | 150 | 9.0 | 150 | 1500 | 690 | 150 | −40〜125 | 2500 | 2 | 600 | 2 | 150 | 7 | | | 750 | 2.5 | 150 |
| QM150DY−2HB | 1000 | 1000 | 7 | 150 | 8.0 | 150 | 1500 | 1000 | 150 | −40〜125 | 2500 | 4 | 1000 | 2 | 100 | 7 | | | 750 | 4.0 | 150 |
| QM150DY−3H | 1400 | 1400 | 7 | 150 | 16 | 150 | 1500 | 1500 | 150 | −40〜125 | 2500 | 15 | 1400 | 3 | 400 | 7 | | | 100 | 5.0 | 150 |
| QM200DY−H | 600 | 600 | 7 | 200 | 12 | 200 | 2000 | 1050 | 150 | −40〜125 | 2500 | 4 | 600 | 2 | 800 | 7 | | | 75/100 | 2/5 | 200 |
| QM200DY−2H | 1000 | 1000 | 7 | 200 | 10 | 200 | 2000 | 1560 | 150 | −40〜125 | 2500 | 4 | 1000 | 2 | 800 | 7 | | | 75/100 | 2.8/5 | 200 |
| QM200DY−24 | 1200 | 1200 | 7 | 200 | 10 | 200 | 2000 | 1560 | 150 | −40〜125 | 2500 | 4 | 1200 | 2 | 300 | 7 | | | 75 | 5 | 200 |
| QM200DY−HB | 600 | 600 | 7 | 200 | 12 | 200 | 2000 | 1240 | 150 | −40〜125 | 2500 | 4 | 600 | 2 | 200 | 7 | | | 750 | 2.5 | 200 |
| QM300DY−2H | 1000 | 1000 | 7 | 300 | 16 | 300 | 3000 | 1980 | 150 | −40〜125 | 2500 | 4 | 1000 | 2 | 400 | 7 | | | 75/100 | 2.8/5 | 300 |
| QM300DY−24 | 1200 | 1200 | 7 | 300 | 16 | 300 | 3000 | 1980 | 150 | −40〜125 | 2500 | 4 | 1200 | 2 | 400 | 7 | | | 75 | 5 | 300 |

■スイッチング時間測定回路

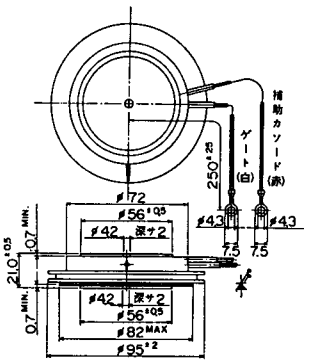



| (Tj=25℃) | | | | | | | | | | | エミッタ・コレクタ間ダイオード | | | | | | 熱抵抗 | | 等価回路 | 外形図 | 記事 | 型名 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 飽和電圧 (V) | | | | スイッチング時間 (μs) | | | | | | | $V_F$ | | $t_{rr}$ | | | | $\theta_{j-c}$ (℃/W) | | | | | |
| $V_{CE}$ | $V_{BE}$ | $I_C$ | $I_B$ | $t_{on}$ | $t_{stg}$ | $t_f$ | $I_{B1}$ | $I_{B2}$ | $V_{CC}$ | $I_C$ | (V) | $I_F$ | (μs) | $I_F$ | $V_{BE}$ | di/dt | トランジスタ部 | ダイオード部 | | | | |
| 最大 | 最大 | (A) | (A) | 最大 | 最大 | 最大 | (A) | (A) | (V) | (A) | 最大 | (A) | 最大 | (A) | (V) | (A/μs) | 最大 | 最大 | | | | |
| 2.0 | 2.5 | 100 | 1.3 | 2.0 | 12 | 3.0 | 2.0 | -2.0 | 300 | 100 | 1.75 | 100 | | | | | 0.2 | 0.65 | DY-1B | M-8A2A | UL認定済 | QM100DY-H |
| 2.5 | 3.5 | 100 | 2.0 | 3.0 | 15 | 3.0 | 2.0 | -2.0 | 600 | 100 | 1.8 | 100 | | | | | 0.155 | 0.65 | DY-2B | M-9A2A | UL認定済 | QM100DY-2H |
| 3.0 | 3.5 | 100 | 2.0 | 3.0 | 15 | 3.0 | 2.0 | -2.0 | 600 | 100 | 1.8 | 100 | | | | | 0.155 | 0.65 | DY-2B | M-9A2A | UL認定済 | QM100DY-24 |
| 2.5 | 3.0 | 100 | 0.13 | 2.5 | 10 | 2.0 | 0.2 | -2.0 | 300 | 100 | 1.8 | 100 | | | | | 0.2 | 0.65 | DY-2A | M-8A2A | UL認定済 | QM100DY-HB |
| 4.0 | 4.0 | 100 | 0.13 | 2.5 | 15 | 3.0 | 0.2 | -2.0 | 600 | 100 | 1.8 | 100 | | | | | 0.155 | 0.65 | DY-3B | M-9A2A | UL認定済 | QM100DY-2HB |
| 2.0 | 2.5 | 150 | 2.0 | 2.5 | 12 | 3.0 | 3.0 | -3.0 | 300 | 150 | 1.85 | 150 | | | | | 0.18 | 0.6 | DY 1B | M 8A2A | UL認定済 | QM150DY H |
| 2.5 | 3.5 | 150 | 3.0 | 3.0 | 15 | 3.0 | 3.0 | -3.0 | 600 | 150 | 1.8 | 150 | | | | | 0.125 | 0.6 | DY-2B | M-9A2A | UL認定済 | QM150DY-2H |
| 3.0 | 3.5 | 150 | 3.0 | 3.0 | 15 | 3.0 | 3.0 | -3.0 | 600 | 150 | 1.8 | 150 | | | | | 0.125 | 0.6 | DY-2B | M-9A2A | UL認定済 | QM150DY-24 |
| 2.5 | 3.0 | 150 | 0.2 | 2.5 | 10 | 2.0 | 0.3 | -3.0 | 300 | 150 | 1.8 | 150 | | | | | 0.18 | 0.6 | DY-2A | M-8A2A | UL認定済 | QM150DY-HB |
| 4.0 | 4.0 | 150 | 0.2 | 2.5 | 15 | 3.0 | 0.3 | -3.0 | 600 | 150 | 1.8 | 150 | | | | | 0.125 | 0.6 | DY-3B | M-9A2A | UL認定済 | QM150DY-2HB |
| 3.0 | 3.5 | 150 | 3.0 | 3.0 | 20 | 3.0 | 3.0 | -3.0 | 800 | 150 | 1.8 | 150 | | | | | 0.08 | 0.35 | DY-2B | M-10A2B | UL認定済 | QM150DY-3H |
| 2.0 | 2.5 | 200 | 2.6 | 2.0 | 12 | 3.0 | 4.0 | -4.0 | 300 | 200 | 1.75 | 200 | | | | | 0.12 | 0.33 | DY-1B | M-9A2A | UL認定済 | QM200DY-H |
| 2.5 | 3.5 | 200 | 4.0 | 3.0 | 15 | 3.0 | 4.0 | -4.0 | 600 | 200 | 1.8 | 200 | | | | | 0.08 | 0.35 | DY-2B | M-10A2A | UL認定済 | QM200DY-2H |
| 3.0 | 3.5 | 200 | 4.0 | 3.0 | 15 | 3.0 | 4.0 | -4.0 | 600 | 200 | 1.8 | 200 | | | | | 0.08 | 0.35 | DY-2B | M-10A2A | UL認定済 | QM200DY-24 |
| 2.5 | 3.0 | 200 | 0.26 | 2.5 | 10 | 2.0 | 0.4 | -4.0 | 300 | 200 | 1.8 | 200 | | | | | 0.1 | 0.33 | DY-2B | M-8A2C | UL認定済 | QM200DY-HB |
| 2.5 | 3.5 | 300 | 6.0 | 3.0 | 15 | 3.0 | 6.0 | -6.0 | 600 | 300 | 1.8 | 300 | | | | | 0.063 | 0.3 | DY-2B | M-11A2A | UL認定済 | QM300DY-2H |
| 3.0 | 3.5 | 300 | 6.0 | 3.0 | 15 | 3.0 | 6.0 | -6.0 | 600 | 300 | 1.8 | 300 | | | | | 0.063 | 0.3 | DY-2B | M-11A2A | UL認定済 | QM300DY-24 |

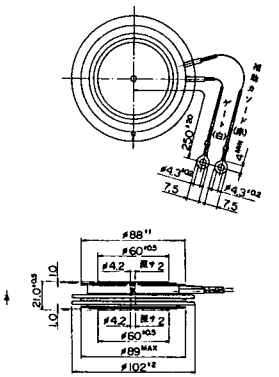

FD-1
12.5MAX
0.6
11±0.3
11φMAX
1.8φ
3.5
2.0φ
カソード端子
ゲート端子
6
9.0
3
22MAX
1.5MAX
11±0.5
アノード
M5
FD-2
16.2MAX
1
14±0.3
14φMAX
1.8φ
5.5
3.3φ
カソード端子
ゲート端子
6
10.5
4
24MAX
1.5MAX
12±0.5
アノード
M6
FD-3
19.6MAX
17±0.3
17φMAX
7.5
4.2φ
ゲート端子
1.8φ
カソード端子
6
4
12
25MAX
2MAX
14±0.5
アノード
M8
FD-4
30.3MAX
27±0.3
16.5
7.5
8.4φ
3.2φ
3MIN
8MIN
補助カソード(赤)
ゲート(白)
150±10
63.5MAX
27φMAX
200±20
6
3MAX
18±0.5
M12(P=1.5)
FD-5
35.5MAX
32±0.3
7.5
8.4φ +0.4 0
22
3.2φ +0.2 −0
9MIN
13
補助カソード(赤)
ゲート(白)
195±10
80MAX
22.5
35.5
32φMAX
200±20
8
3MAX
20.0±0.5
EGL16形 M20(P=1.5)
FD-6
45
2.1
41±0.3
10.5φ
3.7φ
8MAX
12MIN
24
4MIN
補助カソード(赤)
ゲート(白)
250±10
100MAX
27
52
41φMAX
250−15 −0
11
19±1
3MAX
M24×1.5
FD-7
230±20
ゲート(白)
補助カソード(赤)
52φ
43φ
30φ±0.3
4.3φ +0.2 0
4.3φ +0.2 0
7.5
7.5
1.0
1.0
14.0±0.4
2MIN
4.2φ +0.2 −0.1
30φ
56φMAX
FD-8
補助カソード(赤)
ゲート
250±25
4MIN
(白)
φ43 +0.2 0
7.5
φ60
φ45±0.3
1.0MIN.
16±0.3
1.0MIN.
φ42
2
45±0.3
67MAX.
92MAX.

〈寸法図単位:mm〉

## FD-9




## FD-10

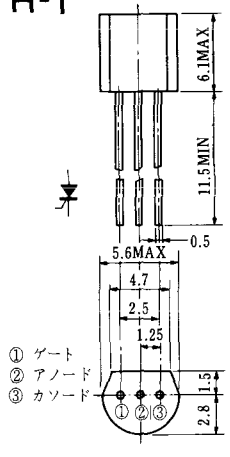



## FD-11

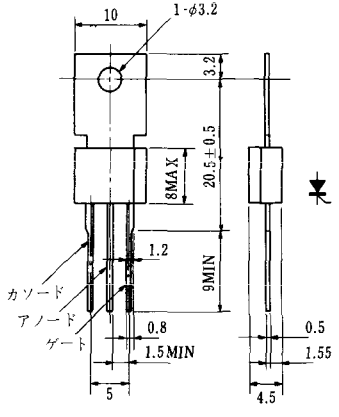
## FD-12

《寸法図単位:mm》

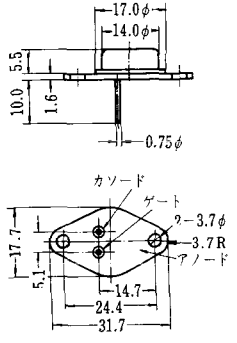
## H-1



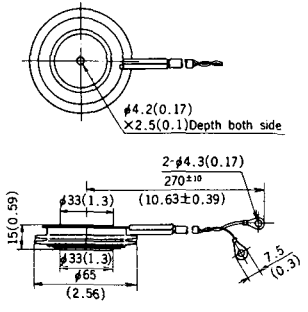

## H-2



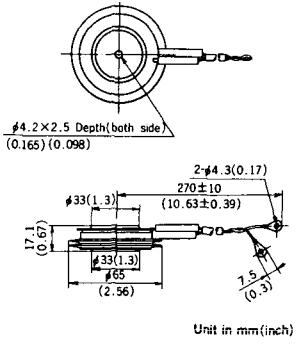

## H-3



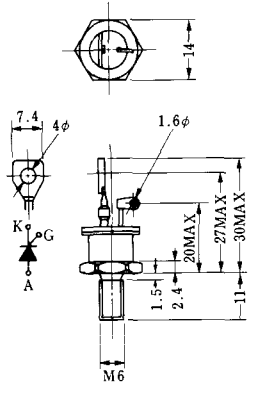

## H-4



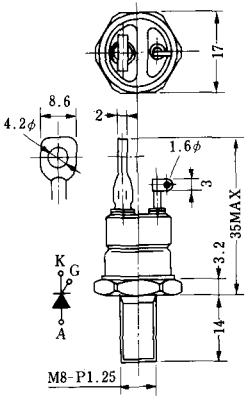

## H-5



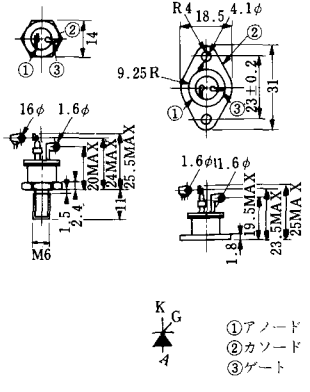

## H-6



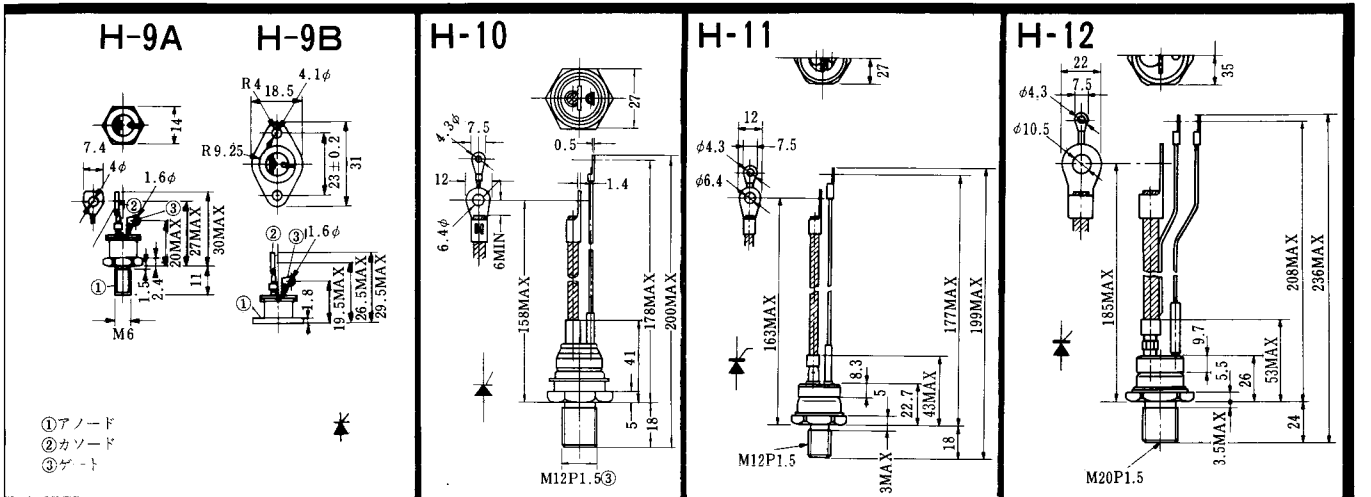

## H-7

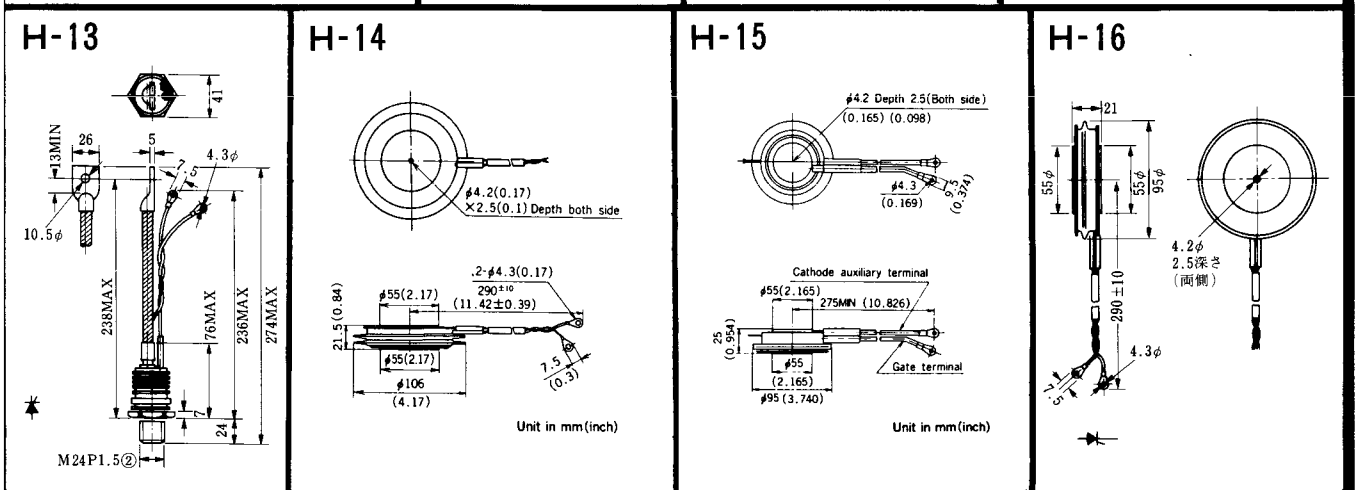



## H-8A　H-8B



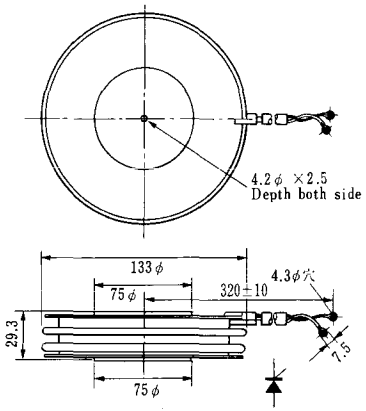

《寸法図単位：mm》


H-9A
H-9B
①アノード
②カソード
③ゲート
M6
H-10
M12P1.5③
H-11
M12P1.5
H-12
M20P1.5

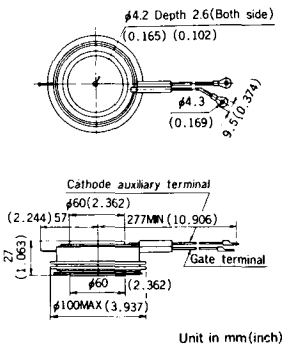

H-13
M24P1.5②
H-14
Unit in mm(inch)
H-15
Cathode auxiliary terminal
Gate terminal
Unit in mm(inch)
H-16

《寸法図単位：mm》

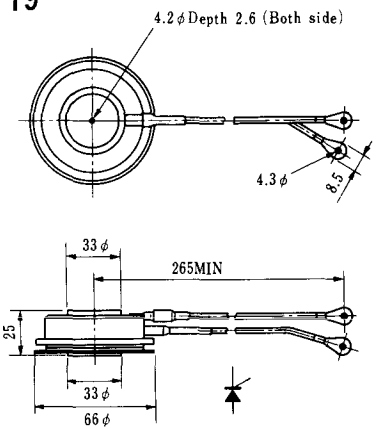
## H-17



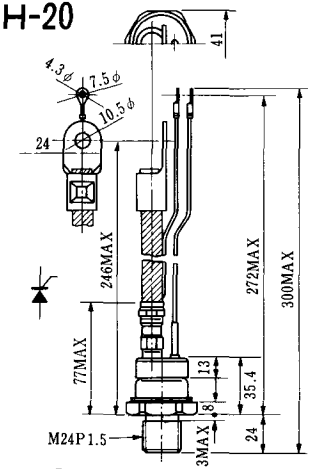

## H-18



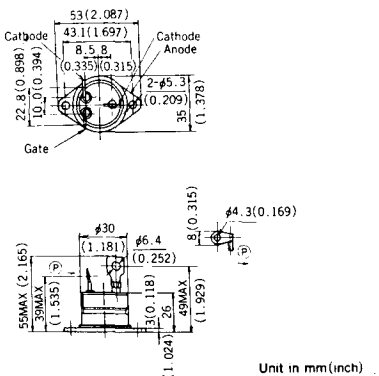

## H-19



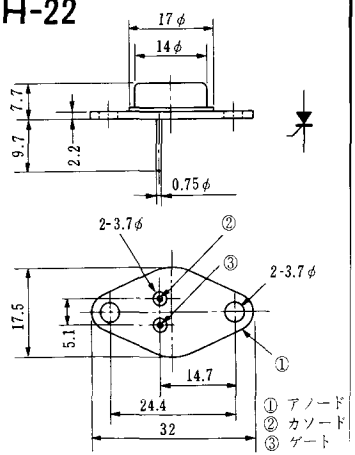

## H-20




## H-21

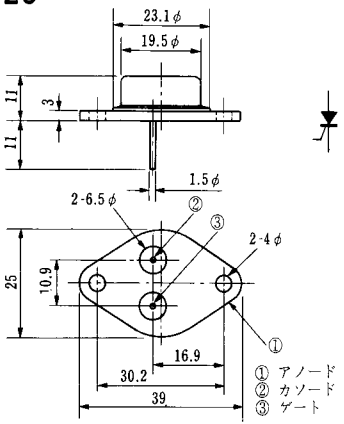



## H-22

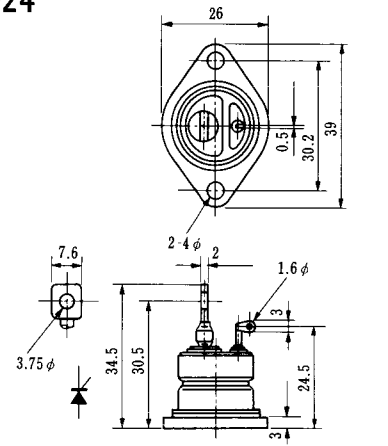



《寸法図単位：mm

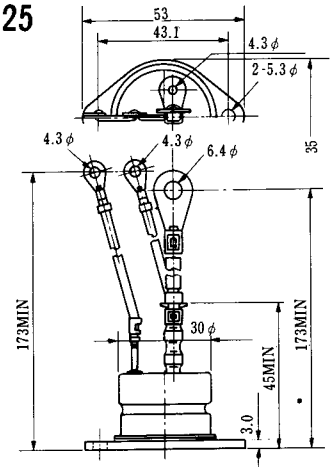
## H-23



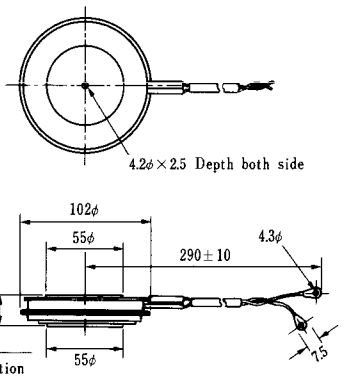

## H-24




## H-25

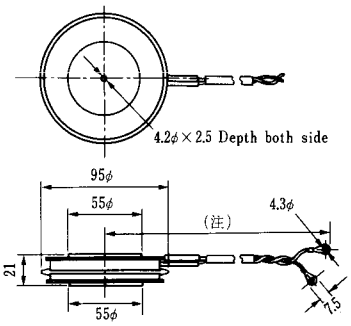



## H-26




| Type | Direction of polarity |
|---|---|
| CA12 | ▼ |

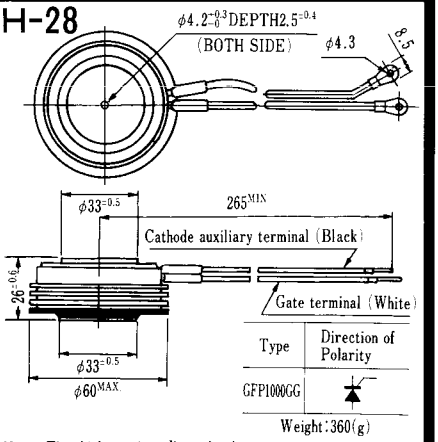
## H-27




| Type | Direction of polarity |
|---|---|
| CF11V | ▼ |

(注) CC11V : 400±10
CF11V : 250±10

## H-28



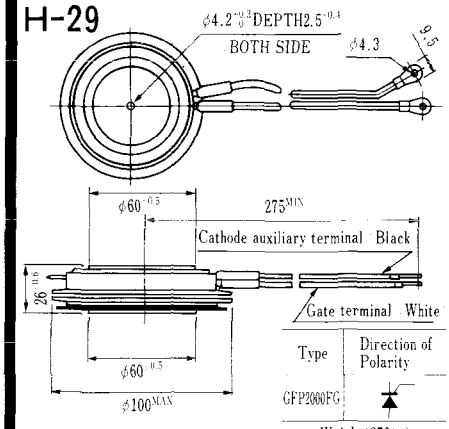

| Type | Direction of Polarity |
|---|---|
| GFP1000GG | ▼ |

Weight : 360(g)

Note : The thickness is a dimension in press at the rated mounting force.

《寸法図単位 : mm》

## H-29

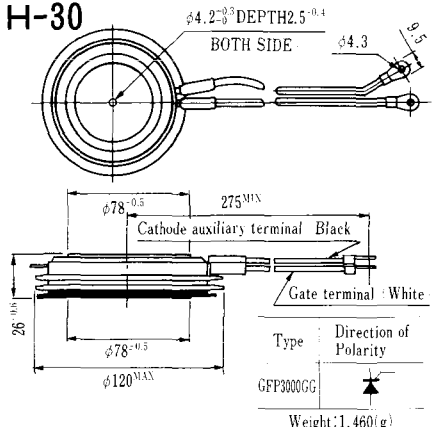



| Type | Direction of Polarity |
|---|---|
| GFP2000FG | |

Weight : 870(g)

Note : The thickness is a dimension in press at the rated mounting force.

## H-30



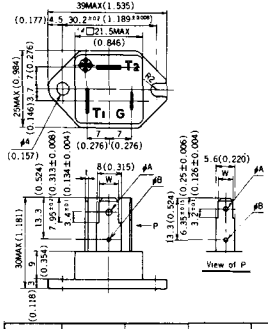

| Type | Direction of Polarity |
|---|---|
| GFP3000GG | |

Weight : 1,460(g)

Note : The thickness is a dimension in press at the rated mounting force.

《寸法図単位:mm》

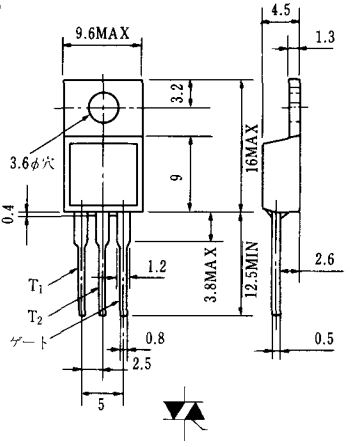
## HT-1

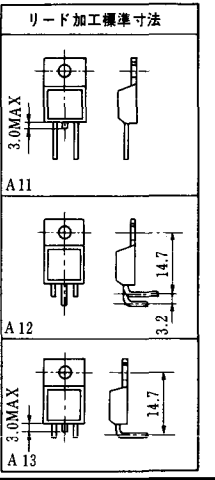



| TERMINAL | t | W | φA | φB |
|---|---|---|---|---|
| $T_1$ | 0.8±0.025 (0.031±0.001) | 6.35±0.1 (0.250±0.004) | $2.00^{+0.1}_{-0}$ ($0.079^{+0.004}_{-0}$) | 1.3 (0.051) |
| $T_2$ | 0.8±0.025 (0.031±0.001) | 6.35±0.1 (0.250±0.004) | $2.00^{+0.1}_{-0}$ ($0.079^{+0.004}_{-0}$) | 1.3 (0.051) |
| G | 0.5±0.025 (0.020±0.001) | 4.75±0.1 (0.187±0.004) | $1.55^{+0.1}_{-0}$ ($0.061^{+0.004}_{-0}$) | 1.3 (0.051) |

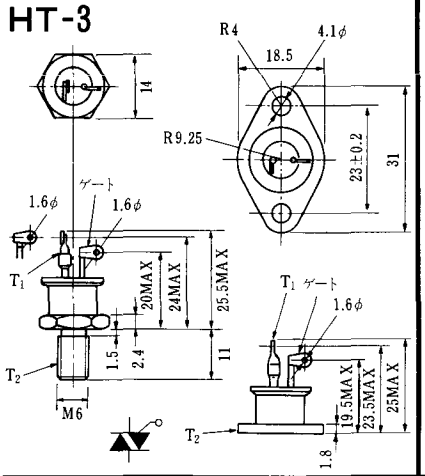
Unit in mm(inch)

## HT-2

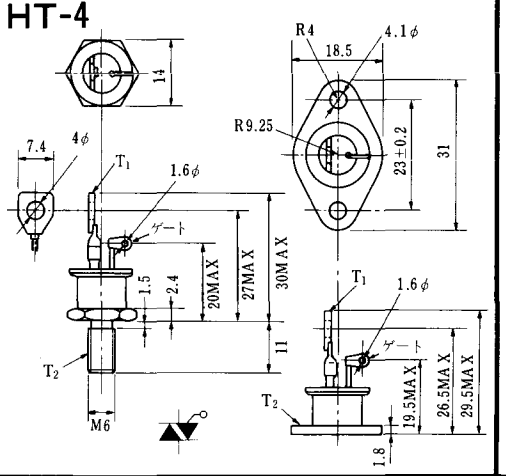


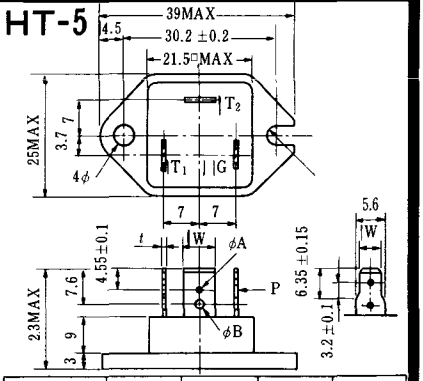

## HT-3




## HT-4



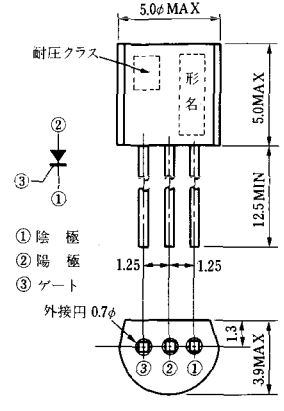

## HT-5



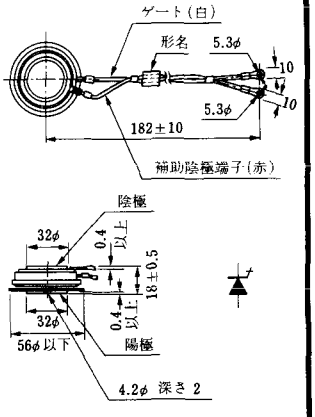

| TERMINAL | t | W | φA | φB |
|---|---|---|---|---|
| $T_1$ | 0.8±0.025 | 6.35±0.1 | $2.00^{+0.1}_{-0}$ | 2.4 |
| $T_2$ | 0.8±0.025 | 6.35±0.1 | $2.00^{+0.1}_{-0}$ | 2.4 |
| G | 0.5±0.025 | 4.75+0.1 | $1.55^{+0.1}_{-0}$ | 1.55 |

《寸法図単位：mm》

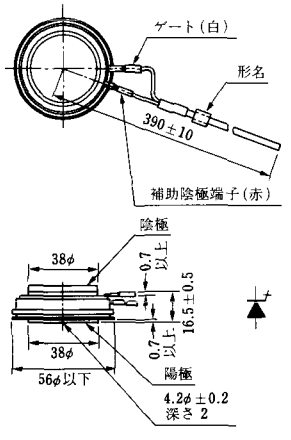
## M-1



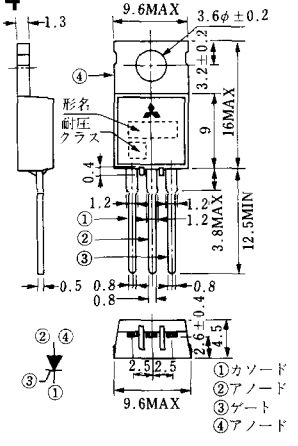

## M-2



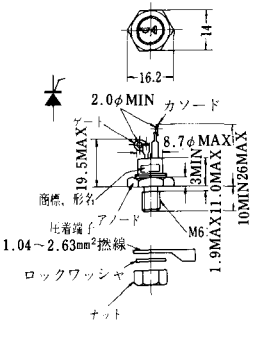

## M-3



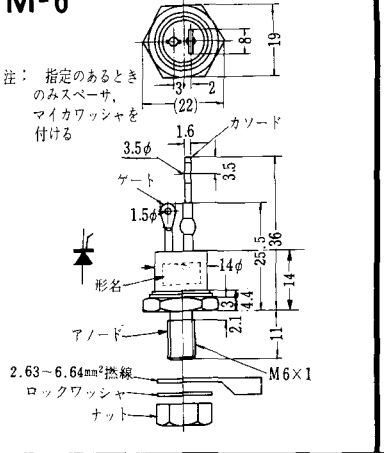

## M-4



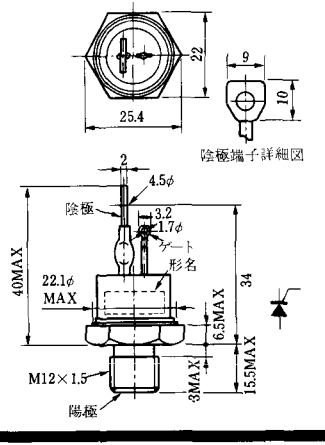

## M-5



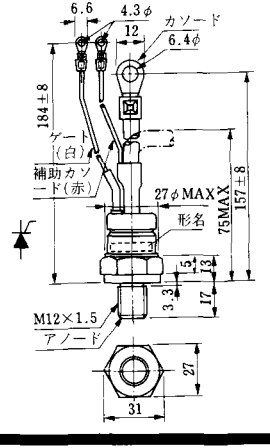

## M-6



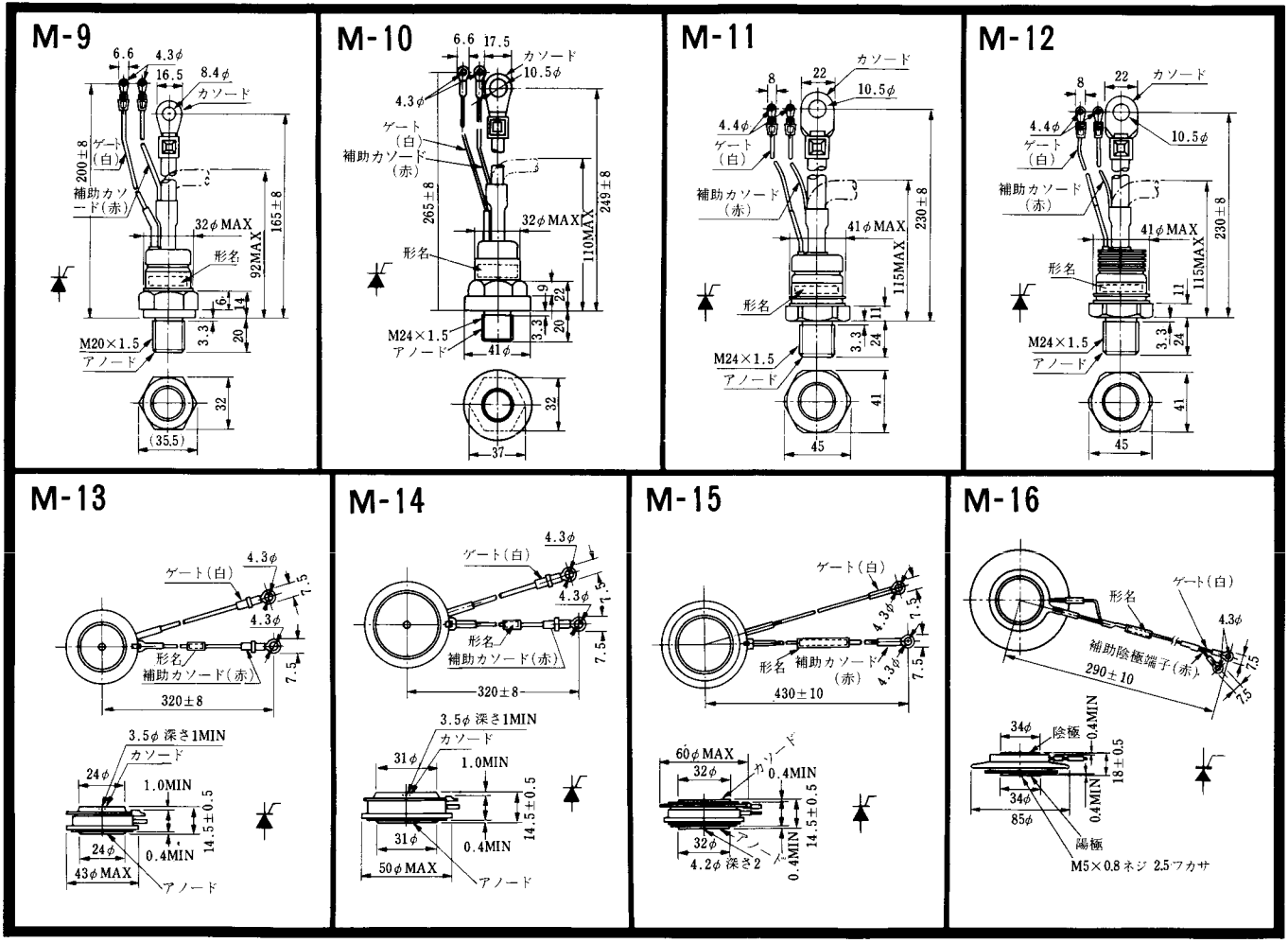

## M-7



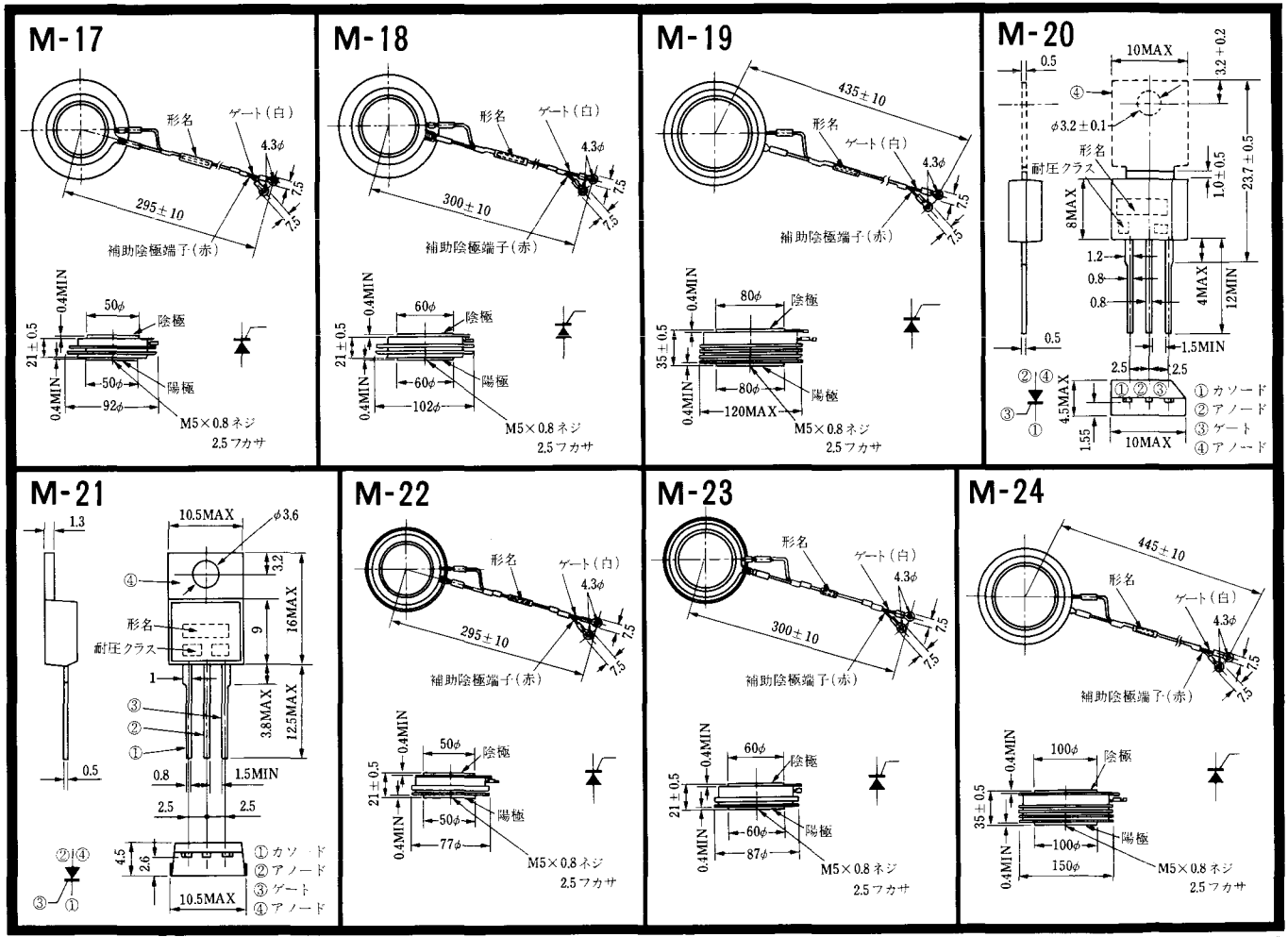

## M-8




《寸法図単位：mm

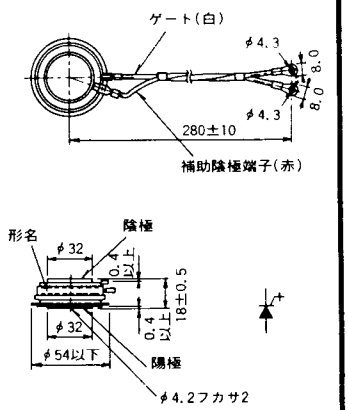

M-9
6.6
4.3φ
16.5
8.4φ
カソード
ゲート（白）
補助カソード（赤）
200±8
165±8
32φMAX
92MAX
形名
6
14
3.3
20
M20×1.5
アノード
32
(35.5)
M-10
6.6
17.5
カソード
10.5φ
4.3φ
ゲート（白）
補助カソード（赤）
265±8
249±8
32φMAX
110MAX
形名
9
22
3.3
20
M24×1.5
アノード
41φ
32
37
M-11
カソード
8
22
10.5φ
4.4φ
ゲート（白）
補助カソード（赤）
230±8
41φMAX
115MAX
形名
11
3.3
24
M24×1.5
アノード
41
45
M-12
8
22
カソード
4.4φ
ゲート（白）
10.5φ
補助カソード（赤）
230±8
41φMAX
115MAX
形名
11
3.3
24
M24×1.5
アノード
41
45
M-13
ゲート（白）
4.3φ
7.5
4.3φ
形名
補助カソード（赤）
7.5
320±8
3.5φ 深さ1MIN
カソード
24φ
1.0MIN
14.5±0.5
24φ
0.4MIN
43φMAX
アノード
M-14
ゲート（白）
4.3φ
4.3φ
7.5
形名
補助カソード（赤）
7.5
320±8
3.5φ 深さ1MIN
カソード
31φ
1.0MIN
14.5±0.5
31φ
0.4MIN
50φMAX
アノード
M-15
ゲート（白）
4.3φ
7.5
形名
補助カソード（赤）
4.3φ
7.5
430±10
60φMAX
32φ
カソード
0.4MIN
14.5±0.5
32φ
アノード
0.4MIN
4.2φ 深さ2
M-16
形名
ゲート（白）
4.3φ
補助陰極端子（赤）
290±10
7.5
7.5
34φ
陰極
0.4MIN
18±0.5
34φ
0.4MIN
85φ
陽極
M5×0.8 ネジ 2.5フカサ

《寸法図単位：mm》

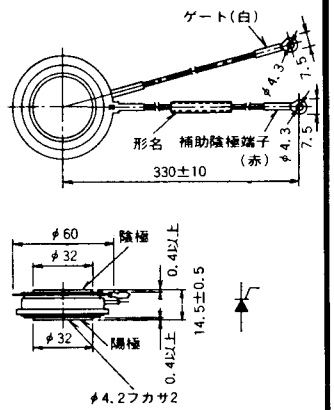

M-17
形名
ゲート(白)
4.3φ
295±10
補助陰極端子(赤)
7.5
0.4MIN
50φ
陰極
21±0.5
50φ
陽極
92φ
M5×0.8ネジ
2.5フカサ
M-18
形名
ゲート(白)
4.3φ
300±10
補助陰極端子(赤)
60φ
陰極
60φ
陽極
102φ
M5×0.8ネジ
2.5フカサ
M-19
435±10
形名
ゲート(白)
4.3φ
補助陰極端子(赤)
80φ
陰極
35±0.5
80φ
陽極
120MAX
M5×0.8ネジ
2.5フカサ
M-20
10MAX
0.5
3.2±0.2
φ3.2±0.1
形名
耐圧クラス
23.7±0.5
1.0±0.5
8MAX
1.2
0.8
0.8
4MAX
12MIN
1.5MIN
2.5
2.5
4.5MAX
1.55
10MAX
①カソード
②アノード
③ゲート
④アノード
M-21
1.3
10.5MAX
φ3.6
3.2
16MAX
9
形名
耐圧クラス
1
3.8MAX
12.5MAX
0.5
0.8
1.5MIN
2.5
2.5
4.5
2.6
10.5MAX
①カソード
②アノード
③ゲート
④アノード
M-22
形名
ゲート(白)
4.3φ
295±10
補助陰極端子(赤)
50φ
陰極
21±0.5
50φ
陽極
77φ
M5×0.8ネジ
2.5フカサ
M-23
形名
ゲート(白)
4.3φ
300±10
補助陰極端子(赤)
60φ
陰極
21±0.5
60φ
陽極
87φ
M5×0.8ネジ
2.5フカサ
M-24
445±10
形名
ゲート(白)
4.3φ
補助陰極端子(赤)
100φ
陰極
35±0.5
100φ
陽極
150φ
M5×0.8ネジ
2.5フカサ

《寸法図単位：mm》

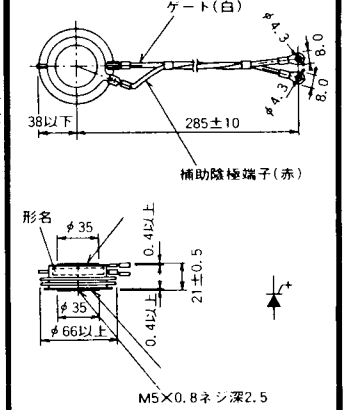
## M-25



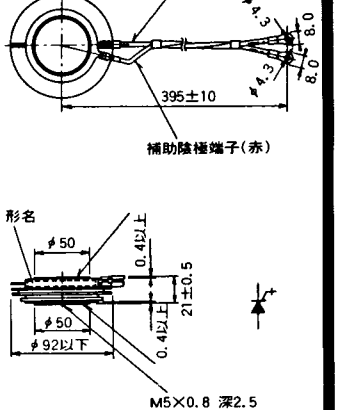

## M-26



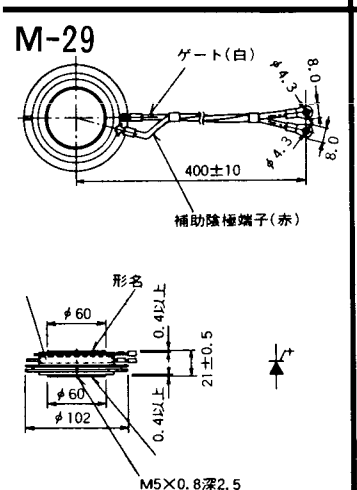

## M-27



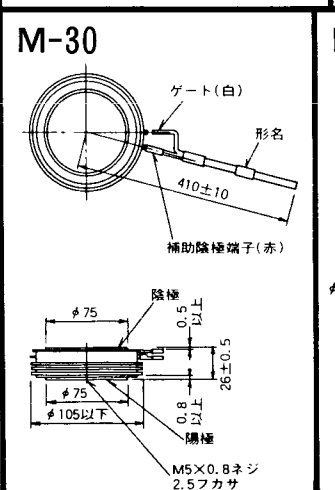

## M-28



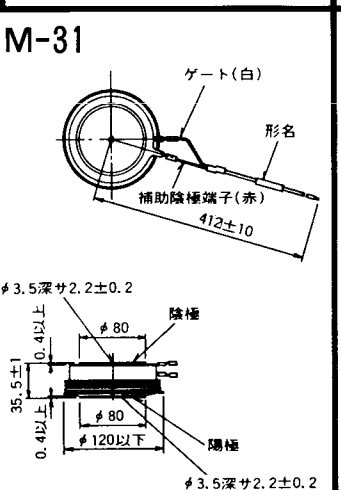

## M-29



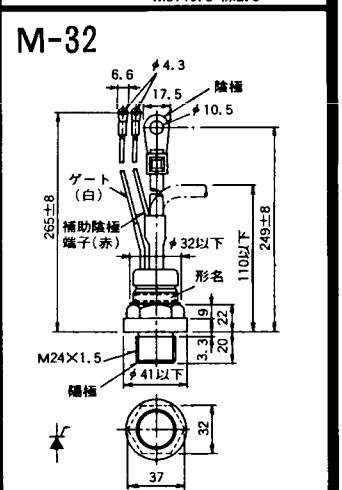

## M-30




## M-31

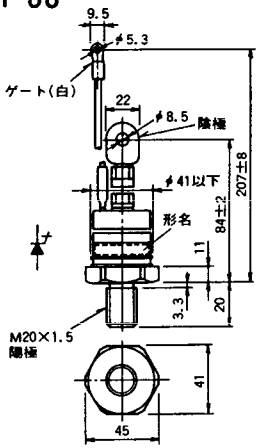



## M-32

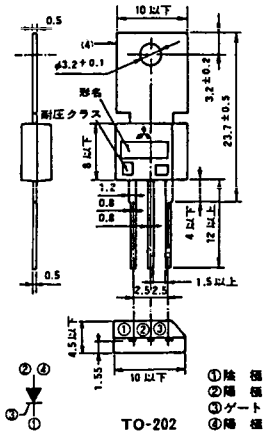



《寸法図単位：mm》

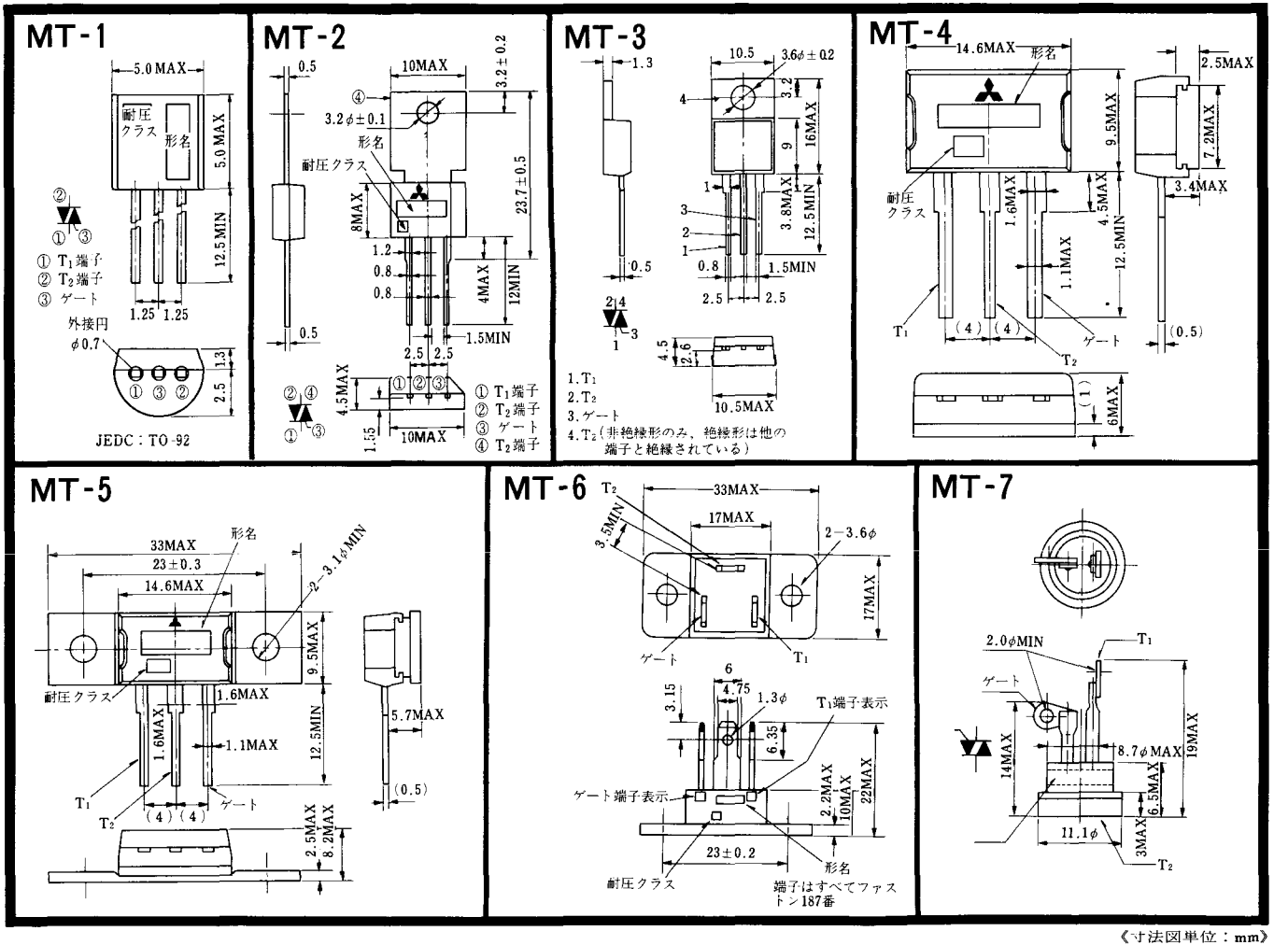
## M-33



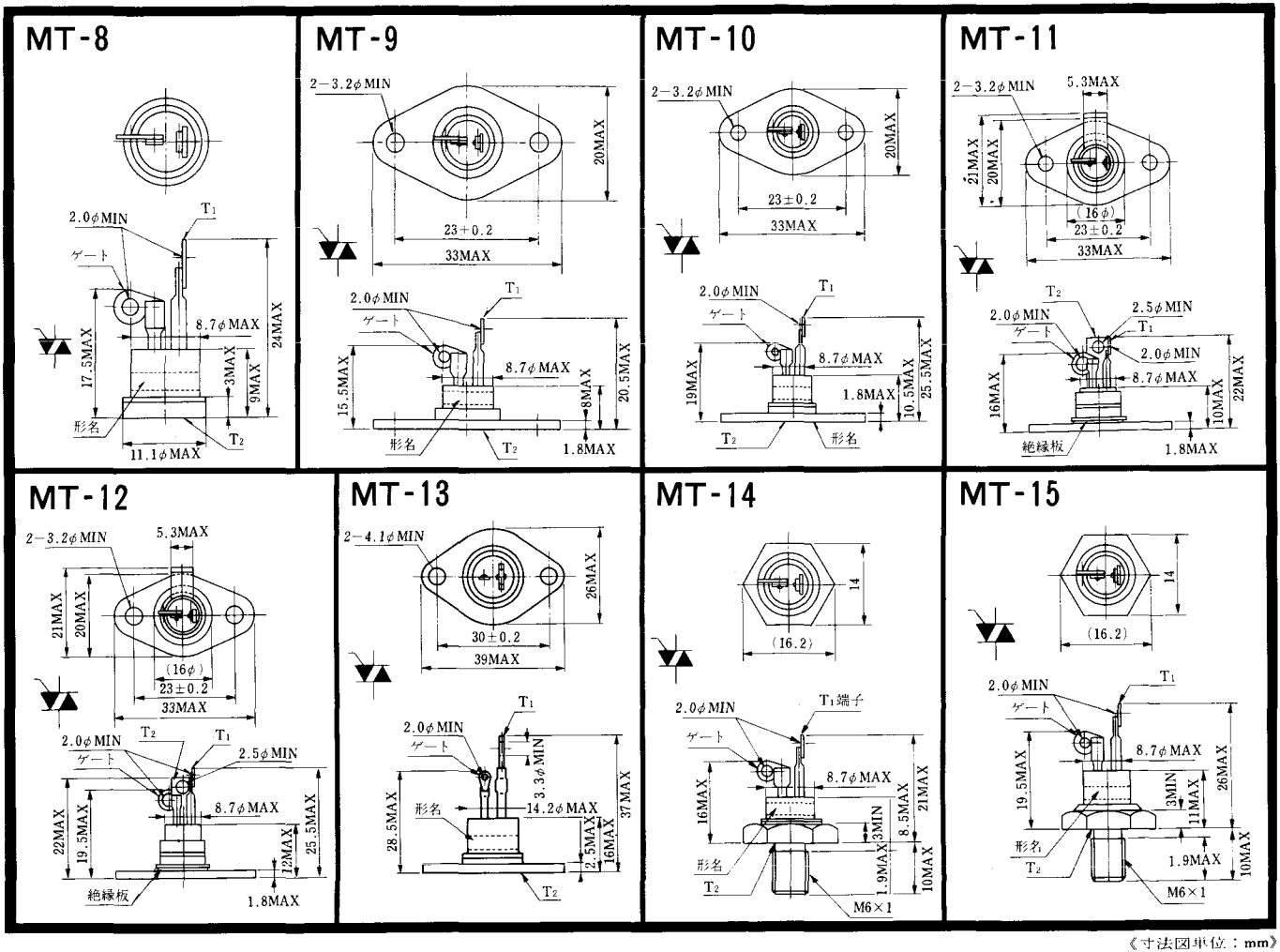

## M-34



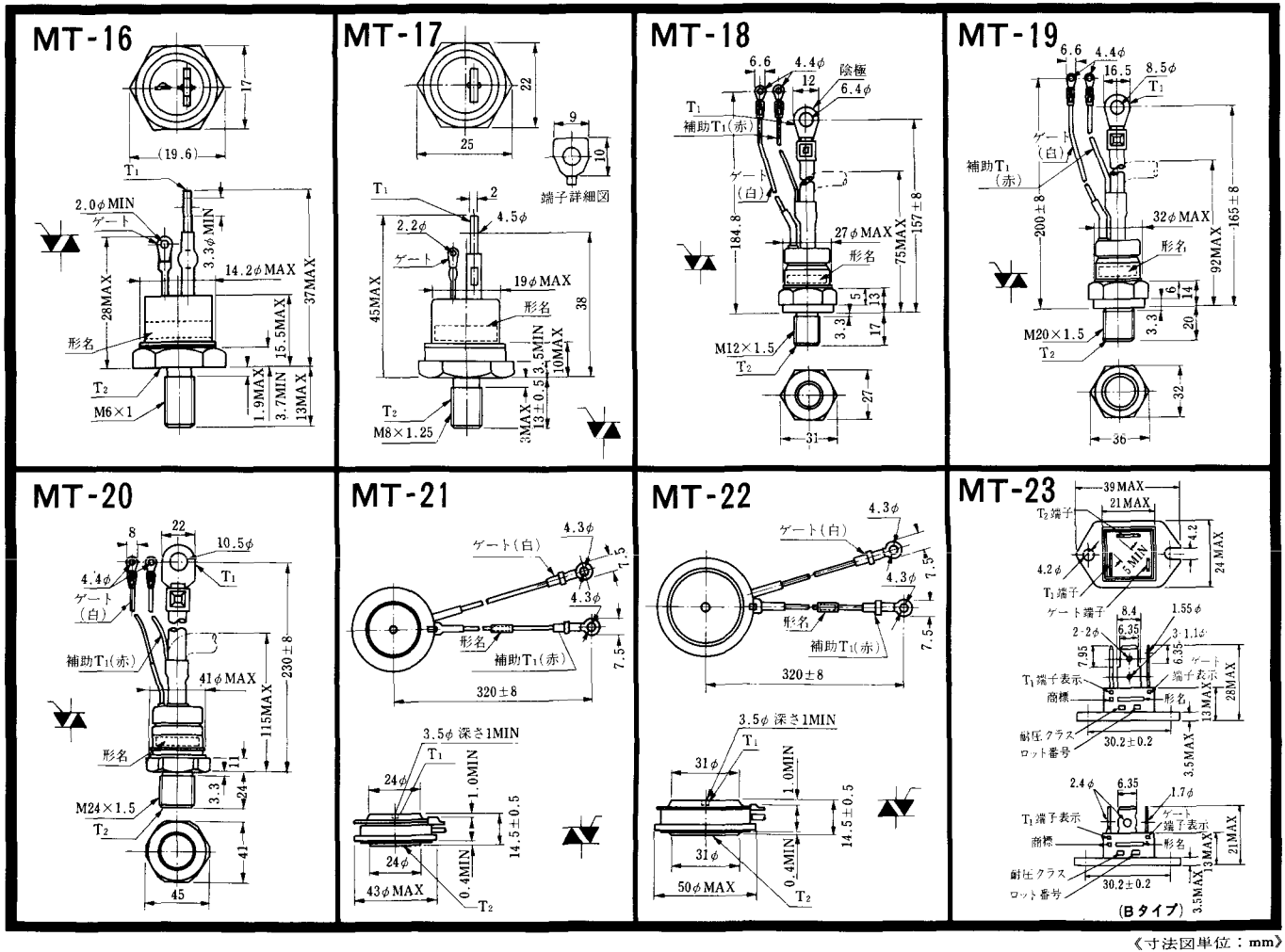

《寸法図単位:mm》


MT-1
5.0MAX
耐圧クラス
形名
5.0MAX
12.5MIN
① T1端子
② T2端子
③ ゲート
1.25 1.25
外接円
φ0.7
1.3
2.5
JEDC：TO-92
MT-2
0.5
10MAX
3.2±0.2
3.2φ±0.1
形名
耐圧クラス
8MAX
23.7±0.5
1.2
0.8
0.8
4MAX
12MIN
1.5MIN
2.5 2.5
4.5MAX
1.55
10MAX
① T1端子
② T2端子
③ ゲート
④ T2端子
MT-3
1.3
10.5
3.6φ±0.2
3.2
16MAX
9
3.8MAX
12.5MIN
0.8
1.5MIN
2.5 2.5
0.5
4.5
2.6
10.5MAX
1. T1
2. T2
3. ゲート
4. T2（非絶縁形のみ，絶縁形は他の端子と絶縁されている）
MT-4
14.6MAX
形名
2.5MAX
9.5MAX
7.2MAX
3.4MAX
耐圧クラス
1.6MAX
4.5MAX
12.5MIN
1.1MAX
T1
(4) (4)
ゲート
T2
(0.5)
(1)
6MAX
MT-5
33MAX
形名
23±0.3
14.6MAX
2−3.1φMIN
9.5MAX
耐圧クラス
1.6MAX
12.5MIN
1.6MAX
1.1MAX
5.7MAX
T1
T2
(4) (4)
ゲート
(0.5)
2.5MAX
8.2MAX
MT-6
T2
33MAX
17MAX
3.5MIN
2−3.6φ
17MAX
ゲート
T1
6
4.75
3.15
1.3φ
T1端子表示
6.35
ゲート端子表示
2.2MAX
10MAX
22MAX
23±0.2
形名
耐圧クラス
端子はすべてファストン187番
MT-7
2.0φMIN
T1
ゲート
14MAX
8.7φMAX
19MAX
6.5MAX
11.1φ
3MAX
T2

《寸法図単位：mm》

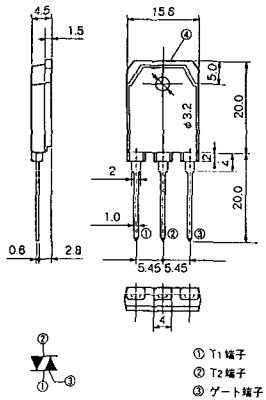

MT-8
2.0φMIN
T1
ゲート
8.7φMAX
24MAX
17.5MAX
3MAX
9MAX
形名
T2
11.1φMAX
MT-9
2−3.2φMIN
20MAX
23±0.2
33MAX
2.0φMIN
T1
ゲート
8.7φMAX
15.5MAX
8MAX
20.5MAX
形名
T2
1.8MAX
MT-10
2−3.2φMIN
20MAX
23±0.2
33MAX
2.0φMIN
T1
ゲート
8.7φMAX
19MAX
1.8MAX
10.5MAX
25.5MAX
T2
形名
MT-11
2−3.2φMIN
5.3MAX
21MAX
20MAX
(16φ)
23±0.2
33MAX
T2
2.5φMIN
2.0φMIN
ゲート
T1
2.0φMIN
8.7φMAX
16MAX
10MAX
22MAX
絶縁板
1.8MAX
MT-12
2−3.2φMIN
5.3MAX
21MAX
20MAX
(16φ)
23±0.2
33MAX
T2
T1
2.0φMIN
ゲート
2.5φMIN
8.7φMAX
22MAX
19.5MAX
12MAX
25.5MAX
絶縁板
1.8MAX
MT-13
2−4.1φMIN
26MAX
30±0.2
39MAX
T1
2.0φMIN
ゲート
3.3φMIN
形名
14.2φMAX
28.5MAX
2.5MAX
16MAX
37MAX
T2
MT-14
14
(16.2)
2.0φMIN
T1端子
ゲート
8.7φMAX
16MAX
8.5MAX
21MAX
3MIN
形名
1.9MAX
10MAX
T2
M6×1
MT-15
14
(16.2)
2.0φMIN
T1
ゲート
8.7φMAX
19.5MAX
3MIN
11MAX
26MAX
形名
T2
1.9MAX
10MAX
M6×1

《寸法図単位：mm》


MT-16
17
(19.6)
T1
2.0φMIN
ゲート
3.3φMIN
14.2φMAX
37MAX
28MAX
15.5MAX
形名
T2
M6×1
1.9MAX
3.7MIN
13MAX
MT-17
22
25
9
10
端子詳細図
T1
2
4.5φ
2.2φ
ゲート
19φMAX
形名
45MAX
38
3.5MIN
10MAX
T2
M8×1.25
3MAX
13±0.5
MT-18
6.6
4.4φ
12
除極
6.4φ
T1
補助T1(赤)
ゲート
(白)
184.8
27φMAX
形名
75MAX
157±8
5
13
3.3
17
M12×1.5
T2
27
31
MT-19
6.6
4.4φ
16.5
8.5φ
T1
ゲート
(白)
補助T1
(赤)
200±8
32φMAX
形名
92MAX
165±8
6
14
3.3
20
M20×1.5
T2
32
36
MT-20
8
22
10.5φ
4.4φ
ゲート
(白)
T1
補助T1(赤)
41φMAX
230±8
115MAX
形名
11
3.3
24
M24×1.5
T2
41
45
MT-21
4.3φ
ゲート(白)
7.5
4.3φ
形名
補助T1(赤)
7.5
320±8
3.5φ 深さ1MIN
T1
24φ
1.0MIN
14.5±0.5
24φ
0.4MIN
43φMAX
T2
MT-22
4.3φ
ゲート(白)
7.5
4.3φ
形名
補助T1(赤)
7.5
320±8
3.5φ 深さ1MIN
T1
31φ
1.0MIN
14.5±0.5
31φ
0.4MIN
50φMAX
T2
MT-23
39MAX
21MAX
T2端子
4.2
24MAX
4.2φ
5MIN
T1端子
ゲート端子
8.4
1.55φ
2-2φ
6.35
3-1.1φ
6.35
7.95
ゲート
T1端子表示
端子表示
商標
形名
13MAX
28MAX
耐圧クラス
ロット番号
30.2±0.2
3.5MAX
2.4φ
6.35
1.7φ
ゲート
T1端子表示
端子表示
商標
形名
13MAX
21MAX
耐圧クラス
ロット番号
30.2±0.2
3.5MAX
(Bタイプ)

《寸法図単位：mm》

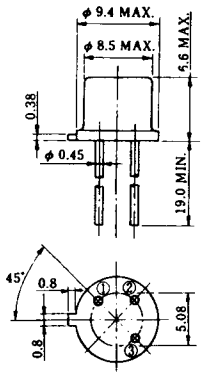
# MT-24



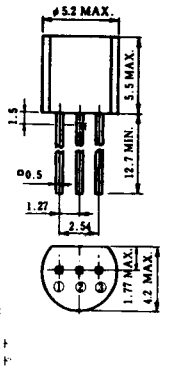

TO－3P

《寸法図単位:mm》

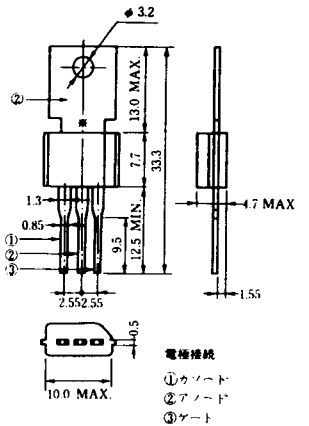
## N-1



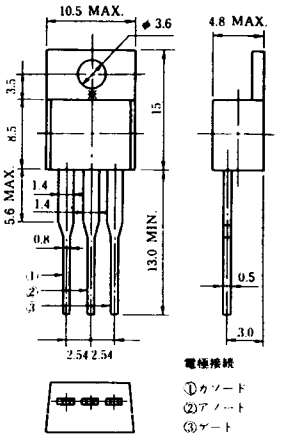

## N-2



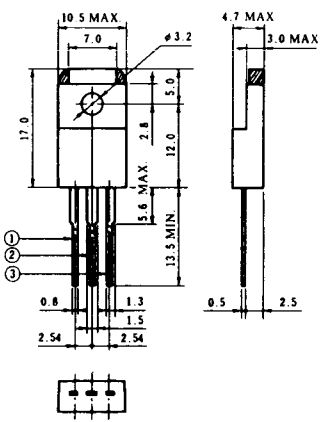

## N-3



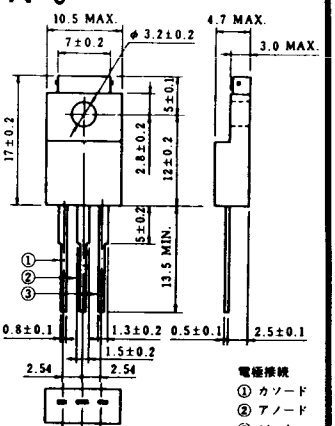

## N-4



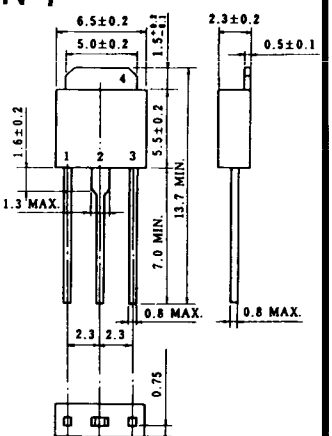

## N-5



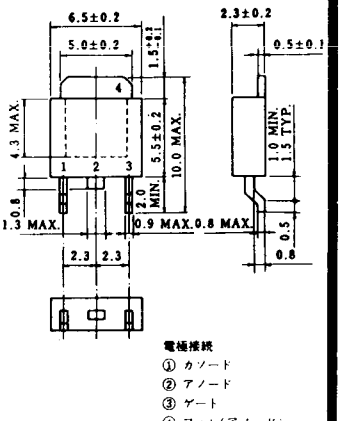

## N-6




## N-7

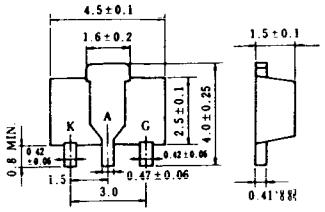



## N-8




〈寸法図単位：mm〉

## N-9




**電極接続**

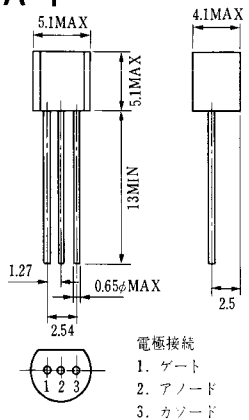
K：カソード

A：アノード

G：ゲート

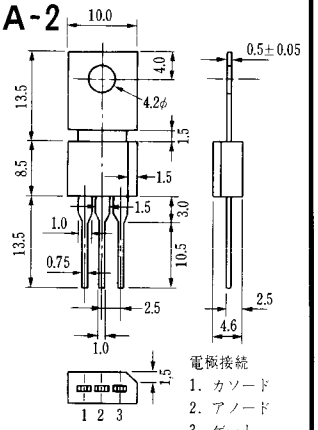
〈寸法図単位：mm〉

## NA-1




電極接続
1. ゲート
2. アノード
3. カソード
JEDEC：TO-92

## NA-2

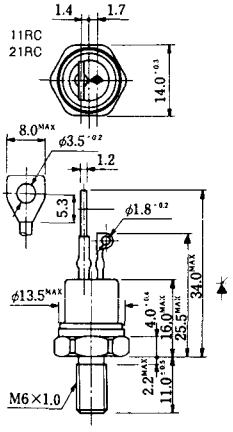



電極接続
1. カソード
2. アノード
3. ゲート
JEDEC：TO-202AA

《寸法図単位：mm》

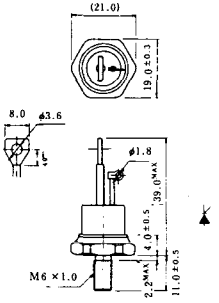
## NI-1

11RC
21RC



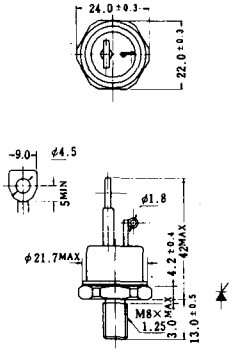

## NI-2

29RD



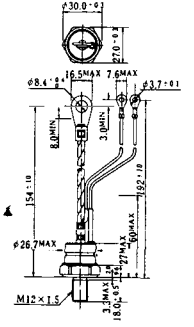

## NI-3

39RC
59RC
39RF
59RF



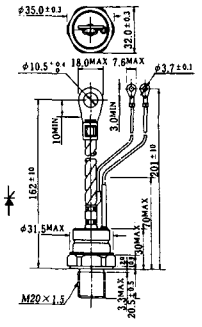

## NI-4

68RP, 88RP, 108RP, 68RS, 88RS, 78RT, 88RLD, 88RLE, 88RLF, 88RLG, 88RLH, 108RLE



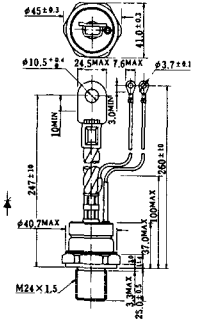

## NI-5

158RP, 208RP, 128RS, 178RS, 158RT, 178RLD, 178RLE, 178RLF, 178RLG, 178RLH, 208RLE



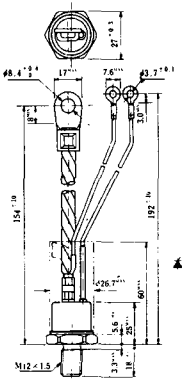

## NI-6

308RP, 408RP, 508RP, 278RS, 358RS, 258RT, 258RLD, 258RLG, 258RLH, 308RLE, 308RLF, 358RLE



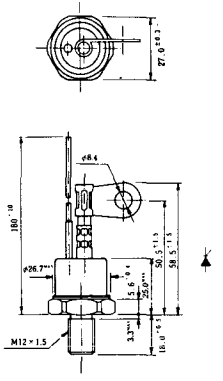

## NI-7

89RW
129RW




## NI-8

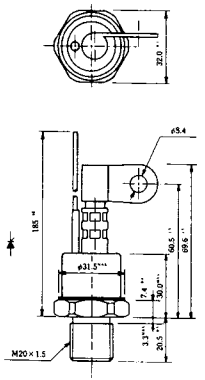
89RW
129RW




《寸法図単位:mm》

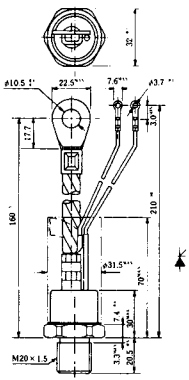
## NI-9

259RW
309RW



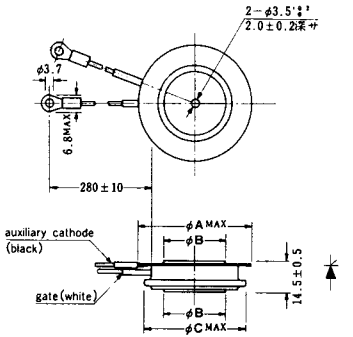

## NI-10

259RW「」L
309RW「」L




## NI-11

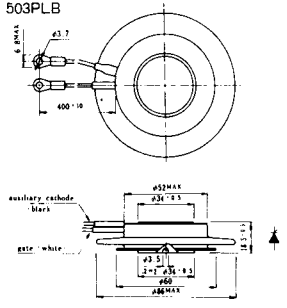
103PA
253PA
503PA
553PA
803PA
103PLE
103PLG
103PLH
203PLG
253PLE
253PLH
353PLG
403PLE
403PLH




| 型名 / 寸法 | 103PA, 103PLE 103PLG, 103PLH | 253PA, 203PLG 253PLE, 253PLH | 503PA, 553PA 353PLG, 403PLE 403PLH | 803PA |
|---|---|---|---|---|
| A | 40 | 46 | 55.5 | 55.5 |
| B | 16 | 22 | 30 | 32 |
| C | 36 | 42 | 50.5 | 50.5 |

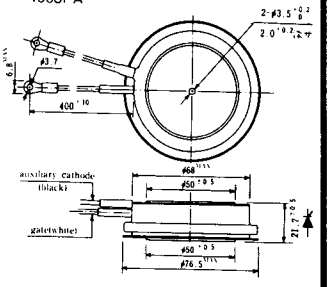
## NI-12

403PAB
503PAB
503PLB



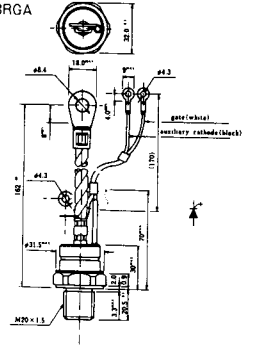

## NI-13

1003PA
1003PAB
1003PLF
1003PLH
1503PA



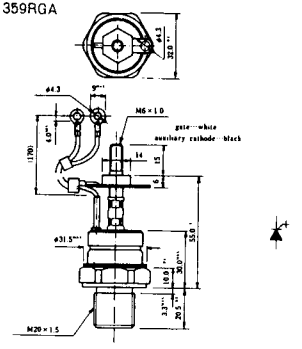

## NI-14

358RGA




## NI-15

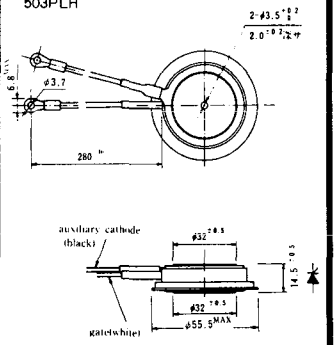
359RGA




《寸法図単位:mm》

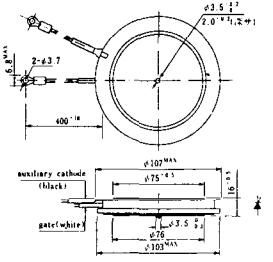
## NI-16

503PLF
503PLH



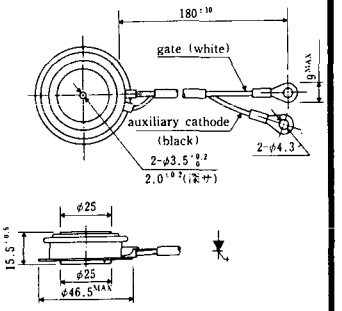

## NI-17

3003PA



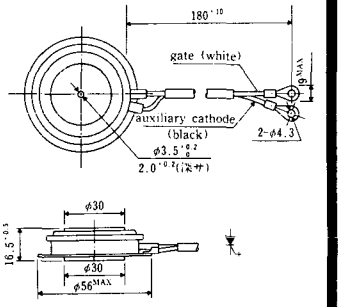

## NI-18

353PGA「」E



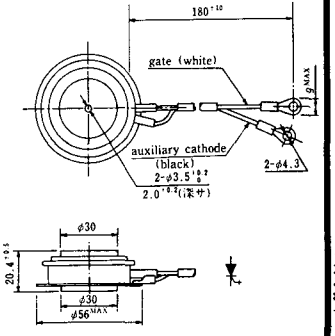

## NI-19

603PGA, 603PGA「」A, 803PGA



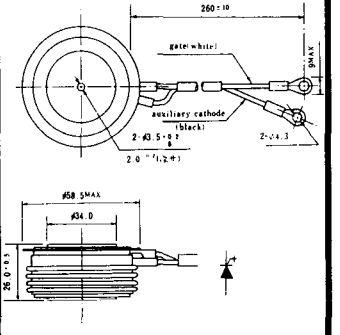

## NI-20

603PGA「」E



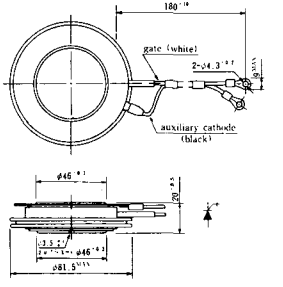

## NI-21

1001PGB「」E



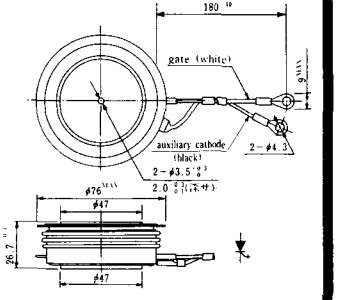

## NI-22

1201PGA, 1201PGA「」A, 1401PGA




## NI-23

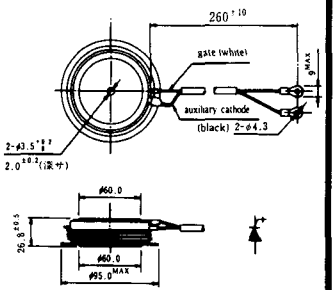
1201PGA「」E




《寸法図単位:mm》

## NI-24

2001PGB[ ]E

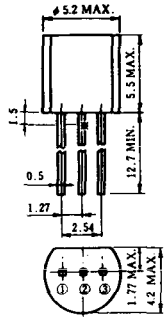



## NI-25

## NI-26

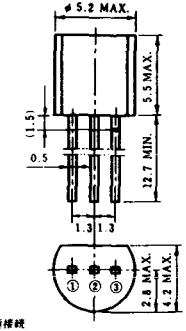
《寸法図単位:mm》

## NT-1



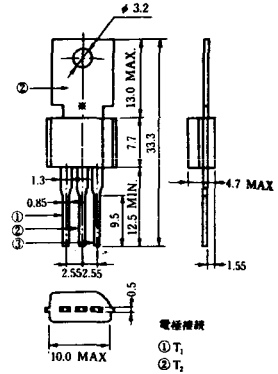

電極接続
①$T_1$
②ゲート
③$T_2$

## NT-2



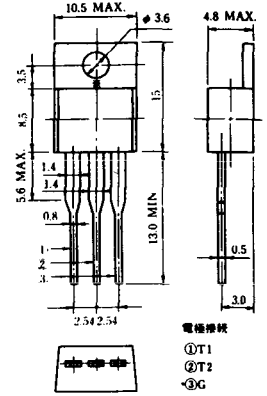

電極接続
①$T_1$
②ゲート
③$T_2$

## NT-3



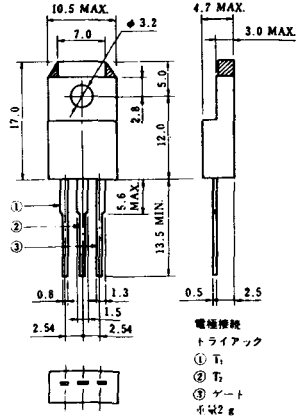

電極接続
①$T_1$
②$T_2$
③ゲート

## NT-4



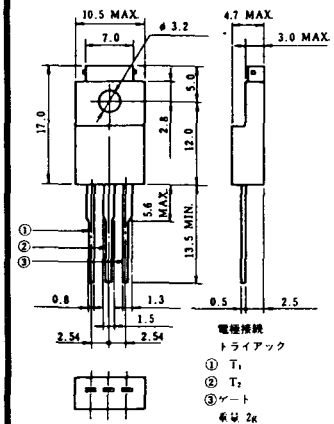

電極接続
①T1
②T2
③G

## NT-5



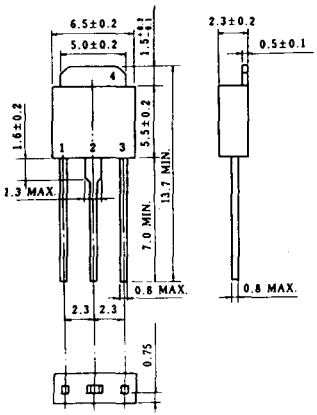

電極接続
トライアック
① $T_1$
② $T_2$
③ ゲート
形式2 g

## NT-6

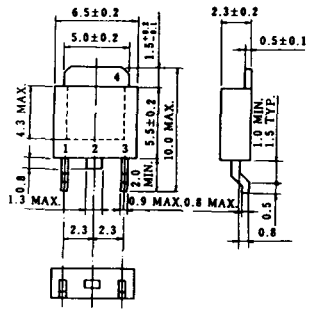



電極接続
トライアック
① $T_1$
② $T_2$
③ゲート
形式 2K

## NT-7



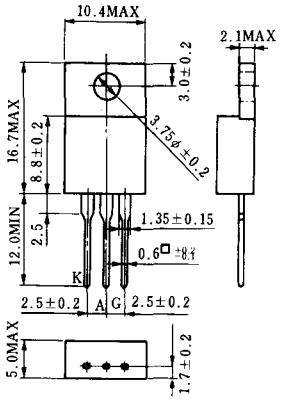

## NT-8



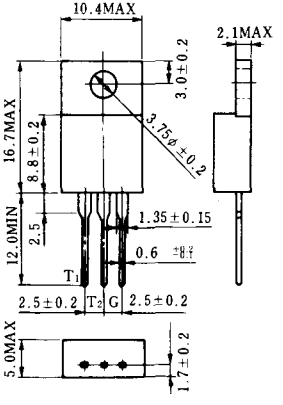

電極接続
① $T_1$
② $T_2$
③ G
④ フィン($T_2$)

《寸法図単位：mm》

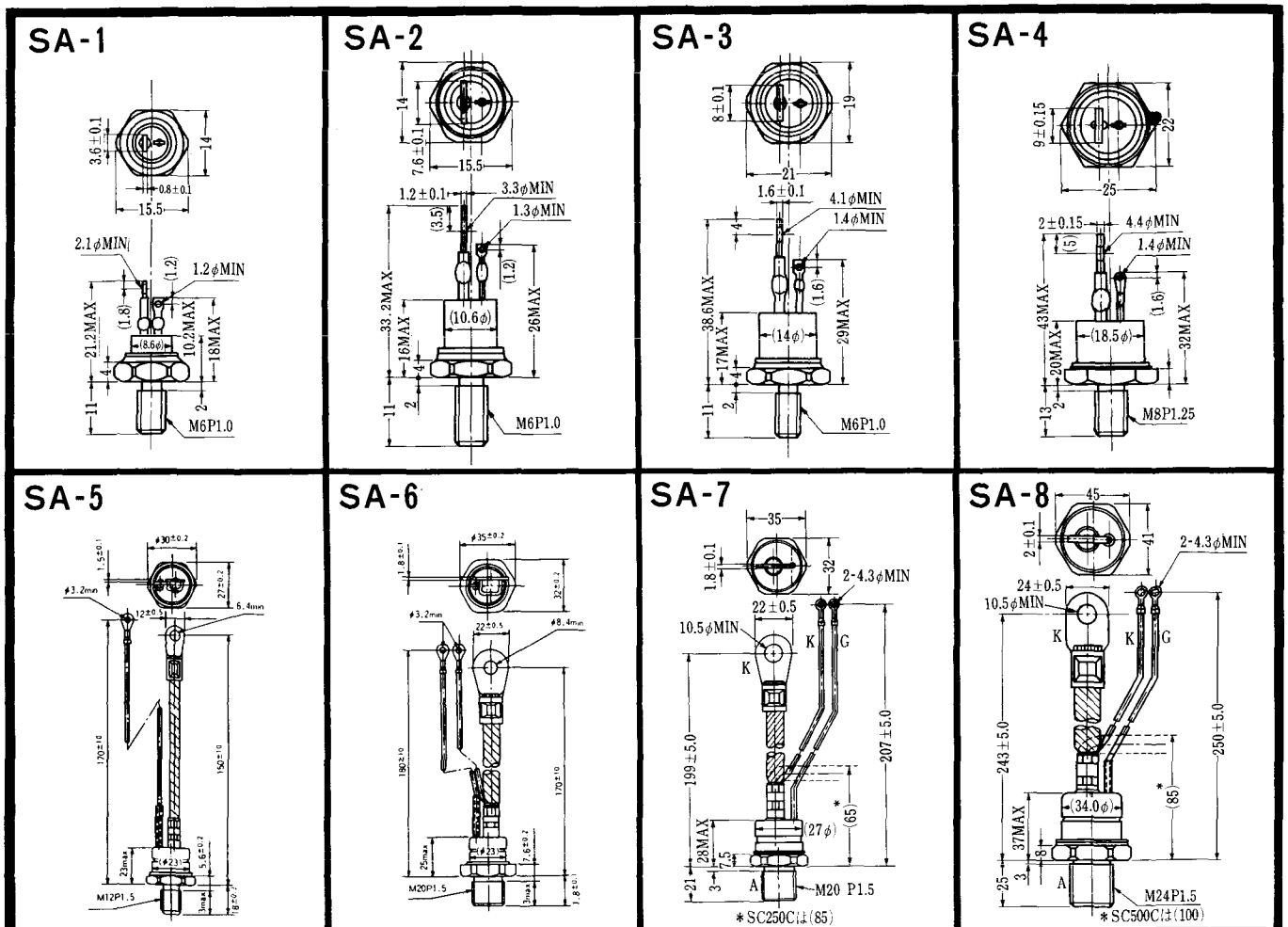
## S-1




## ST-1

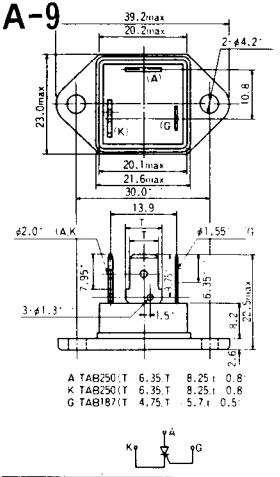



《寸法図単位：mm》

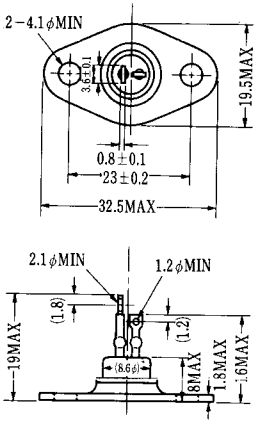

SA-1
3.6±0.1
14
0.8±0.1
15.5
2.1φMIN
(1.2)
1.2φMIN
(1.8)
21.2MAX
(8.6φ)
10.2MAX
18MAX
4
11
2
M6P1.0
SA-2
14
7.6±0.1
15.5
1.2±0.1
3.3φMIN
(3.5)
1.3φMIN
(1.2)
33.2MAX
(10.6φ)
26MAX
16MAX
4
11
2
M6P1.0
SA-3
8±0.1
19
21
1.6±0.1
4.1φMIN
1.4φMIN
4
(1.6)
38.6MAX
(14φ)
29MAX
17MAX
4
11
2
M6P1.0
SA-4
9±0.15
22
25
2±0.15
(5)
4.4φMIN
1.4φMIN
43MAX
(1.6)
(18.5φ)
32MAX
20MAX
13
2
M8P1.25
SA-5
φ30±0.2
1.5±0.1
27±0.2
φ3.2min
12±0.5
6.4min
170±10
150±10
23max
(φ23)
5.6±0.2
3max
1.8±0.1
M12P1.5
SA-6
φ35±0.2
1.8±0.1
32±0.2
φ3.2min
22±0.5
φ8.4min
190±10
170±10
25max
(φ23)
7.6±0.2
3max
1.8±0.1
M20P1.5
SA-7
35
1.8±0.1
32
2-4.3φMIN
22±0.5
10.5φMIN
K
K
G
199±5.0
207±5.0
*
(65)
(27φ)
28MAX
7.5
21
3
A
M20 P1.5
*SC250Cは(85)
SA-8
45
2±0.1
41
2-4.3φMIN
24±0.5
10.5φMIN
K
K
G
243±5.0
250±5.0
*
(85)
(34.0φ)
37MAX
8
25
3
A
M24P1.5
*SC500Cは(100)

《寸法図単位:mm》

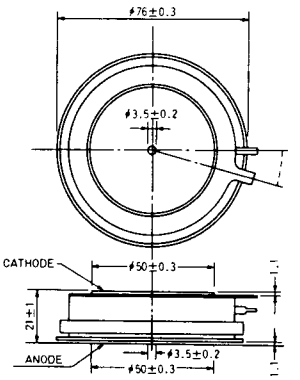
## SA-9



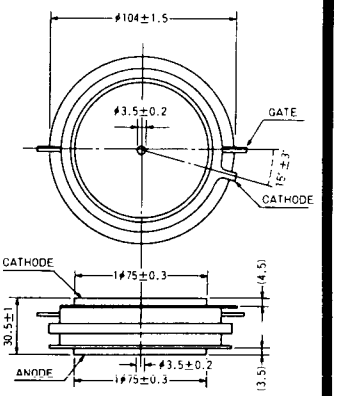

## SA-10




## SA-11

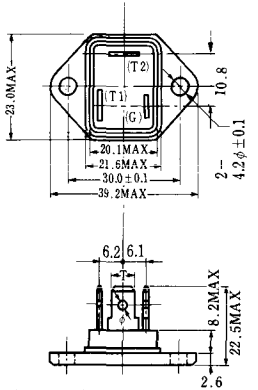



## SA-12



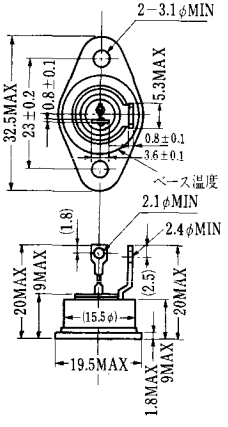

《寸法図単位:mm》

## SAT-1

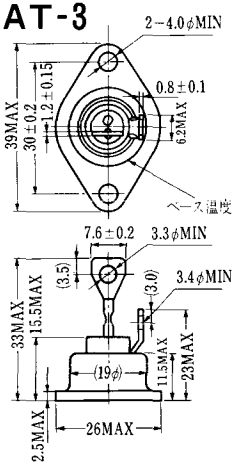



T1端子：ファストン250(T=6.35, t=0.8, φ=1.65)
T2端子：ファストン250(T=6.35, t=0.8, φ=1.65)
G 端子：ファストン187(T=4.75, t=0.5, φ=1.3)

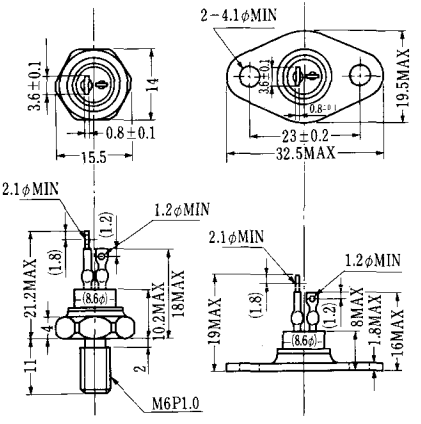
## SAT-2



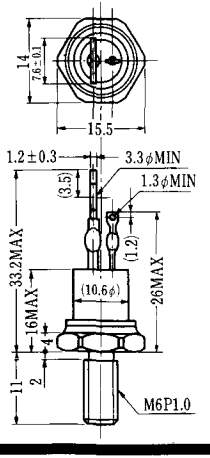

## SAT-3



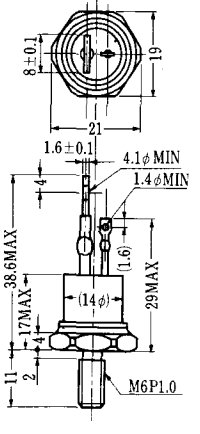

## SAT-4



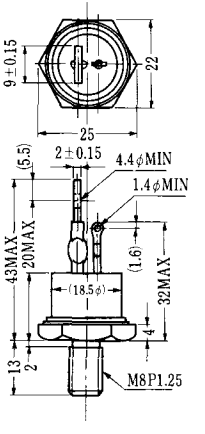

## SAT-5



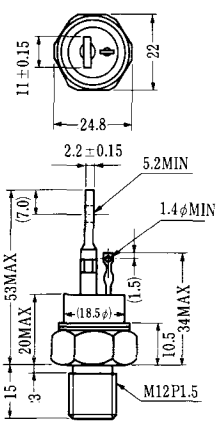

## SAT-6



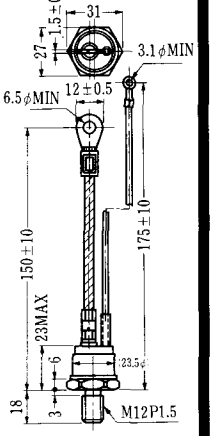

## SAT-7




## SAT-8

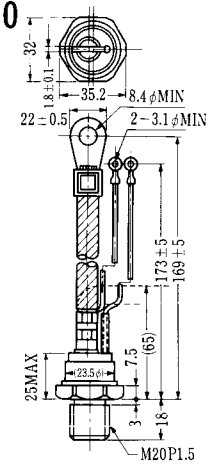



## SAT-9

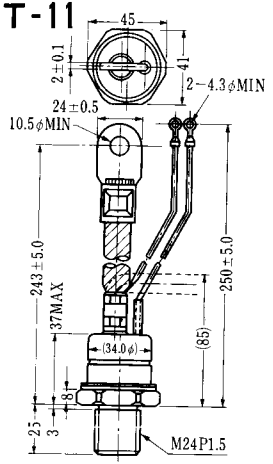



《寸法図単位：mm》

## SAT-10

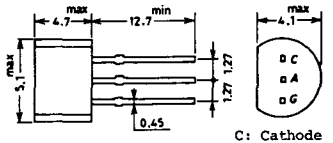



## SAT-11



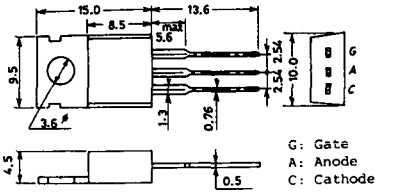

《寸法図単位：mm》

## SY-1 (1096A)



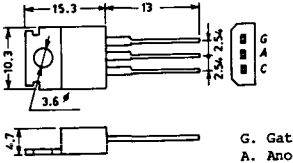

C: Cathode
A: Anode
G: Gate

## SY-2 (1151)



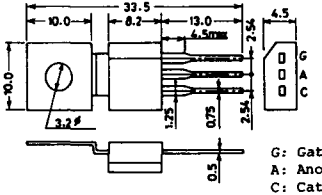

G: Gate
A: Anode
C: Cathode

## SY-3 (1104)




G. Gate
A. Anode
C. Cathode

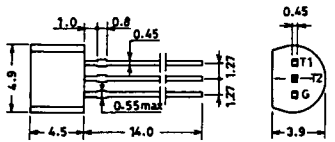
## SY-4 (1150)




G: Gate
A: Anode
C: Cathode

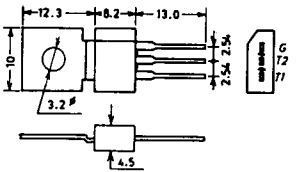
《寸法図単位:mm》

## 1097A

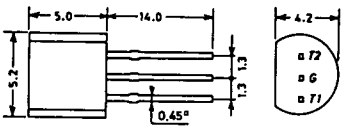



G: Gate

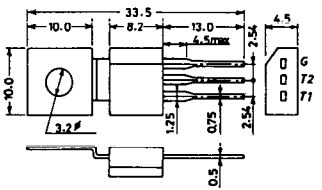
## 1102



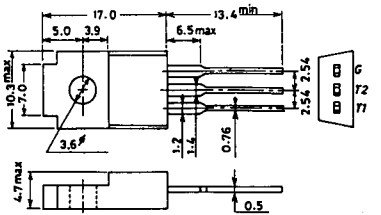

## 1141



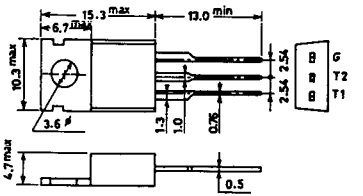

## 1142



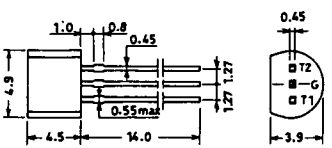

## 1144




## 1155



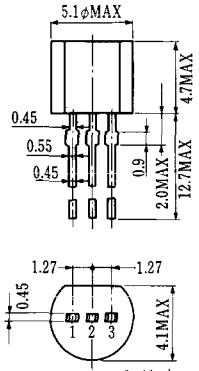

## 1192A




G: Gate

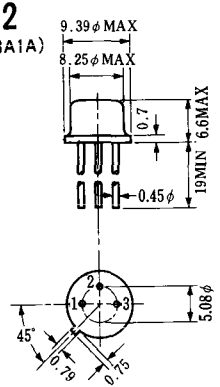
《寸法図単位:mm》

## T-1 (13-5A1A)



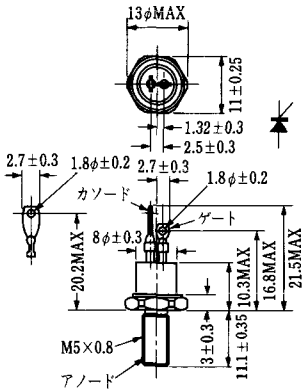

1 ゲート
2 アノード
3 カソード

## T-2 (13-8A1A)

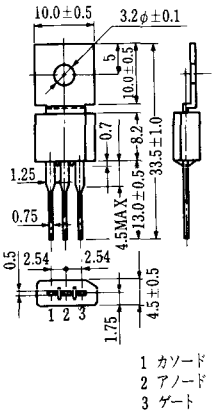



1. カソード
2. ゲート
3. アノード(ケース)

## T-3 (13-8C1A)

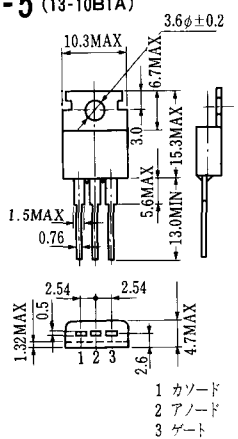



## T-4 (13-10A1A)



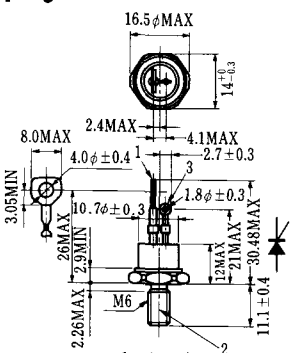

1 カソード
2 アノード
3 ゲート

## T-5 (13-10B1A)



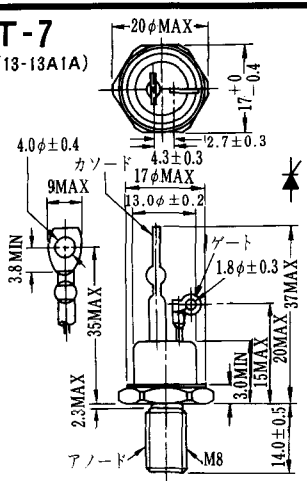

1 カソード
2 アノード
3 ゲート

## T-6 (13-11D1A)

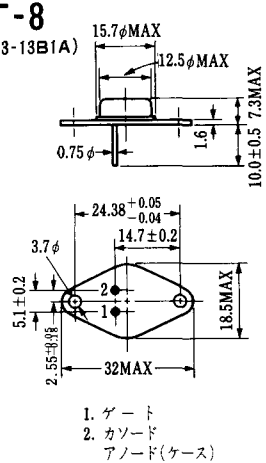



1 カソード
2 アノード
3 ゲート

## T-7 (13-13A1A)



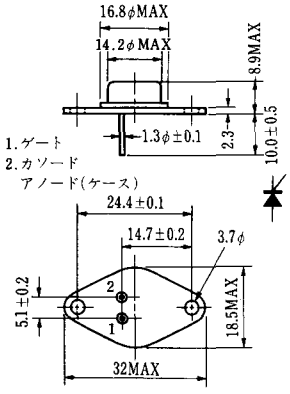

## T-8 (13-13B1A)



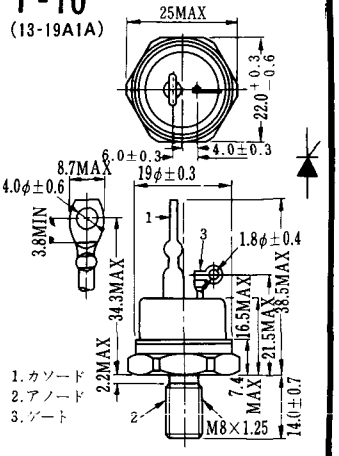

1. ゲート
2. カソード
アノード(ケース)

《寸法図単位：mm

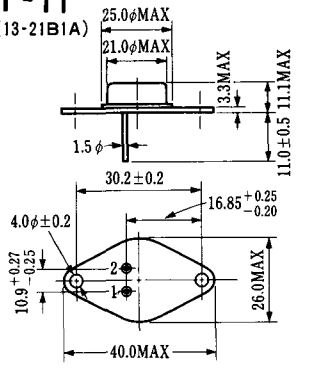
## T-9 (13-14A1A)



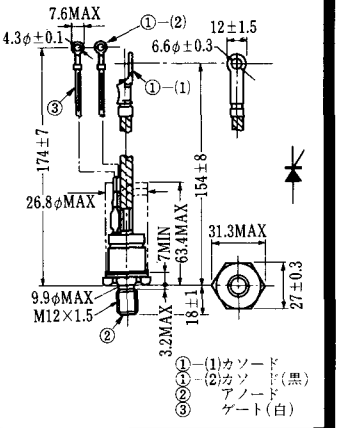

## T-10 (13-19A1A)



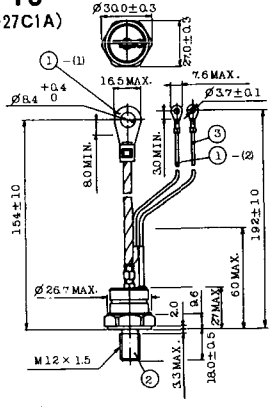

## T-11 (13-21B1A)



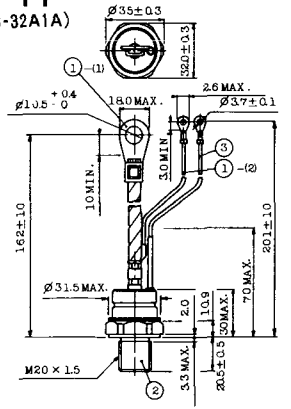

## T-12 (13-27B1B)



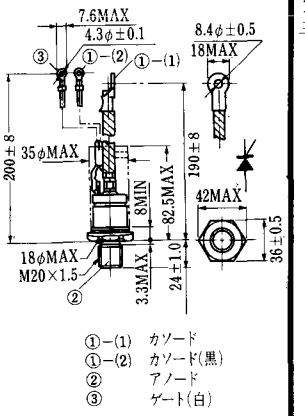

## T-13 (13-27C1A)



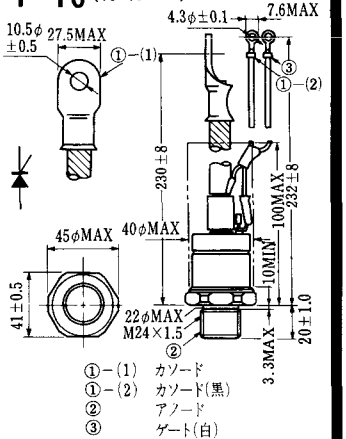

## T-14 (13-32A1A)




## T-15 (13-35C1B)

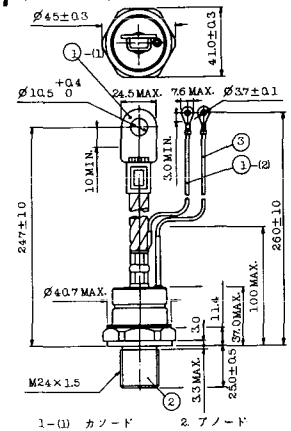



## T-16 (13-40B1A)



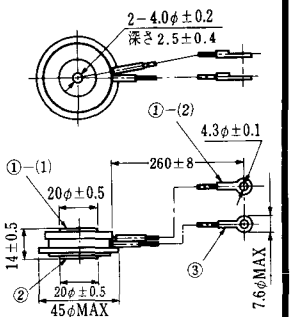

《寸法図単位：mm》

## T-17 (13-42A1A)



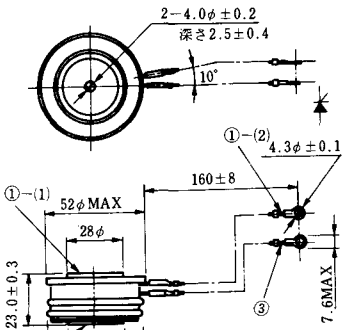

1-(1) カソード　2. アノード
1-(2) カソード(黒)　3. ゲート(白)

## T-18 (13-45D1A)



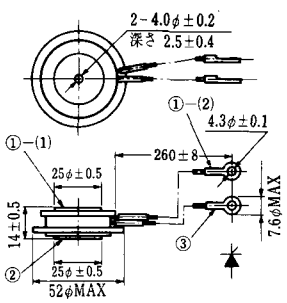

①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

## T-19 (13-52B1A)



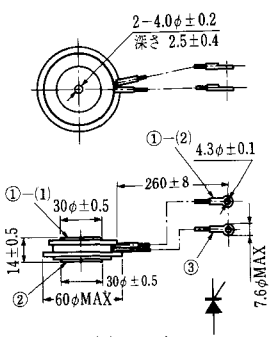

①-カソード
①-カソード(黒)
② アノード
③ ゲート(白)

## T-20 (13-52C1A)



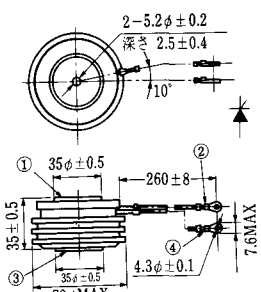

①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

## T-21 (13-60A1A)



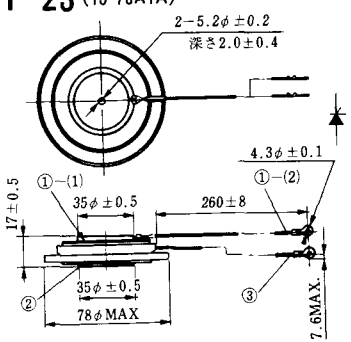

1-(1) カソード
1-(2) カソード(黒)
2 アノード
3 ゲート(白)

## T-22 (13-70C1A)



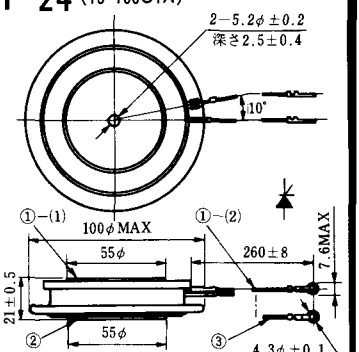

① カソード(1)
② カソード(2)(黒)
③ アノード
④ ゲート(白)

## T-23 (13-78A1A)




①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

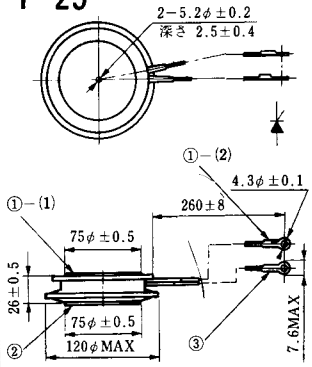
## T-24 (13-100C1A)




①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

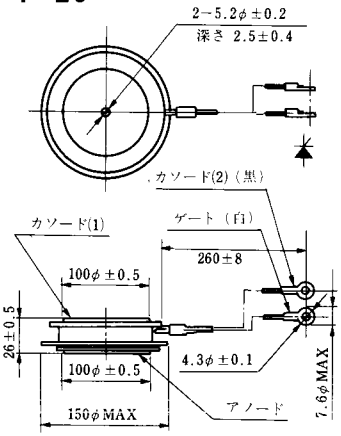
《寸法図単位：mm

## T-25 (13-120A2A)

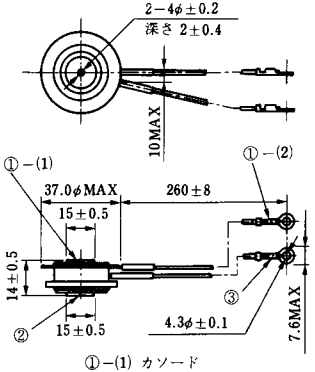



①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

## T-26 (13-150A1A)

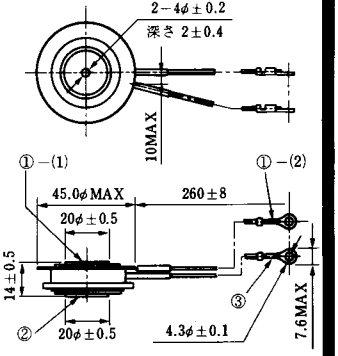



## T-27 (13-37A1A)



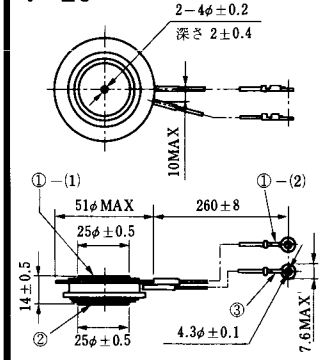

①−(1) カソード
①−(2) カソード(赤)
② アノード
③ ゲート(白)

## T-28 (13-45E1A)



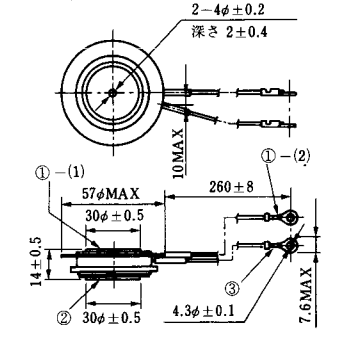

①−(1) カソード
①−(2) カソード(赤)
② アノード
③ ゲート(白)

## T-29 (13-51A1A)



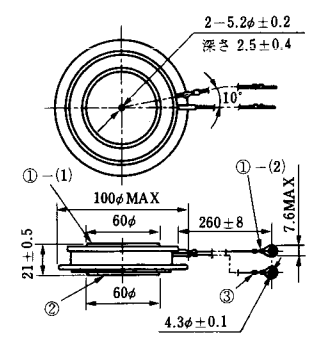

①−(1) カソード
①−(2) カソード(赤)
② アノード
③ ゲート(白)

## T-30 (13-57A1A)



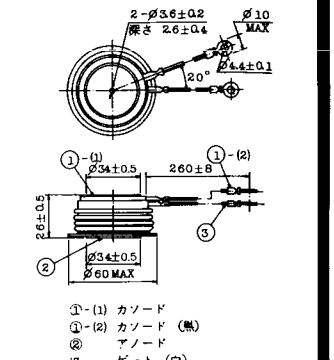

①−(1) カソード
①−(2) カソード(赤)
② アノード
③ ゲート(白)

## T-31 (13-100E1A)




①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

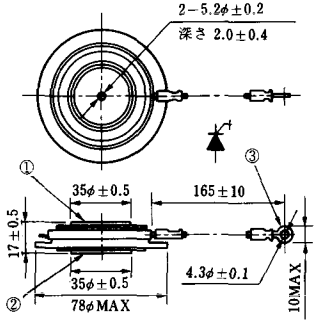
## T-32 (13-60E3A)




①-(1) カソード
①-(2) カソード (黒)
② アノード
③ ゲート (白)

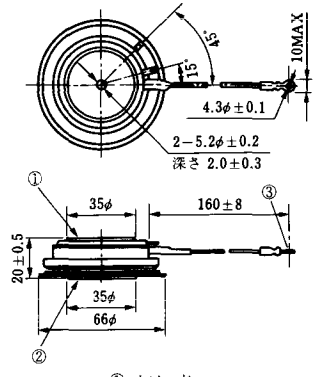
《寸法図単位：mm》

## T-33 (13-78B1A)



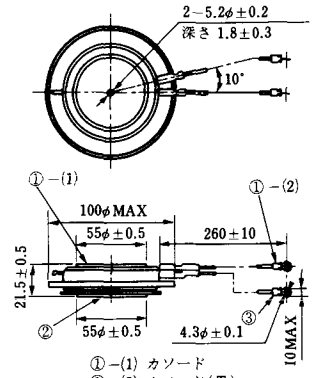

① カノード
② アノード
③ ゲート

## T-34 (13-66A1A)



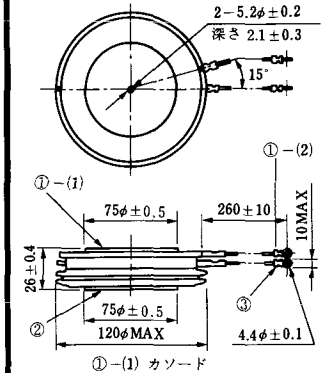

① カソード
② アノード
③ ゲート

## T-35 (13-100D1A)



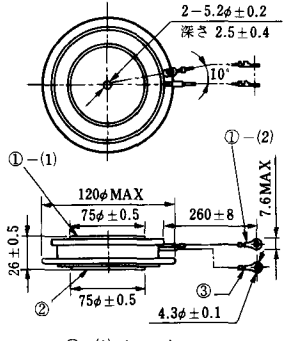

①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

## T-36 (13-120E1A)



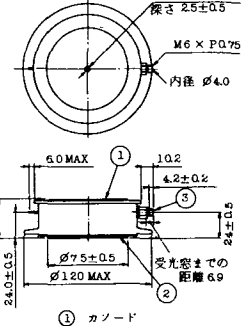

①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

## T-37 (13-120A1A)



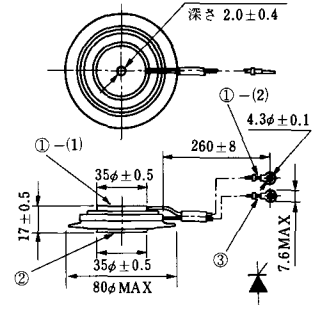

①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

## T-38 (13-120C1A)



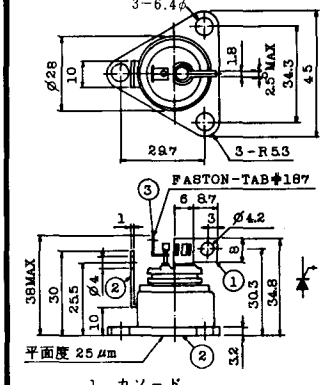

① カソード
② アノード
③ ゲート

## T-39 (13-80B1A)




①−(1) カソード
①−(2) カソード(黒)
② アノード
③ ゲート(白)

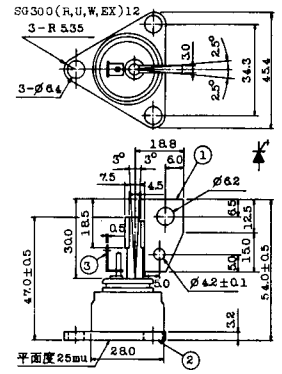
## T-40 (13-28A1A)




1. カソード
2. アノード
3. ゲート

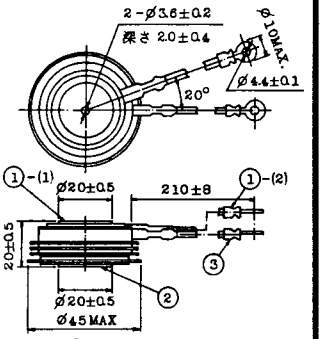
《寸法図単位：mm

## T-41 (13-28A2A)



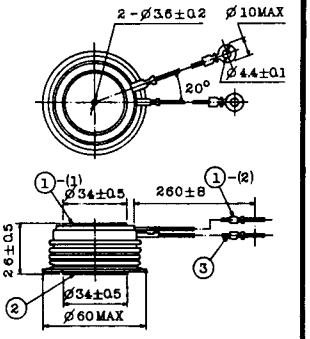

1. カソード
2. アノード
3. ゲート

## T-42 (13-45F1A)



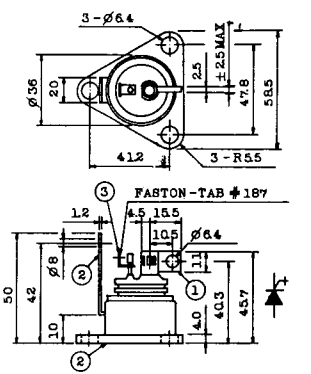

①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

## T-43 (13-60E2A)



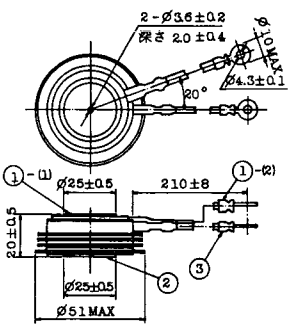

①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

## T-44 (13-36A1A)



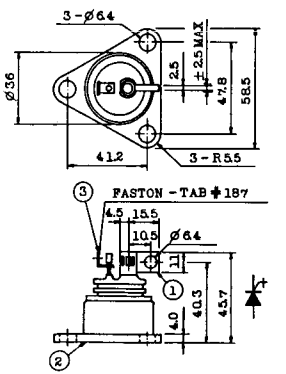

1. カソード
2. アノード
3. ゲート

## T-45 (13-51B1A)



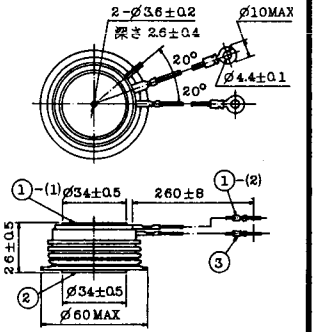

①-(1) カソード
①-(2) カソード (黒)
② アノード
③ ゲート (白)

## T-46 (13-36B1A)



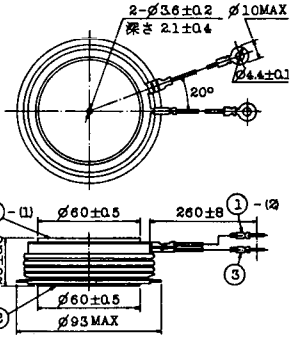

1. カソード
2. アノード
3. ゲート

## T-47 (13-60E1A)




①-(1) カソード
①-(2) カソード(黒)
② アノード
③ ゲート(白)

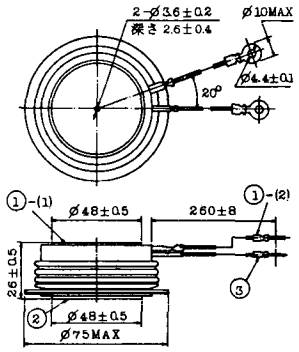
## T-48 (13-93C1A)




①-(1) カソード
①-(2) カソード(黒色)
② アノード
③ ゲート(白色)

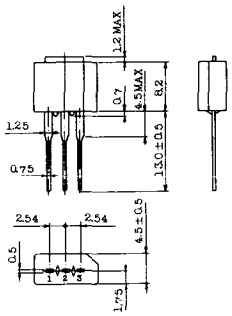
《寸法図単位：mm》

## T-49 (13-75A1A)



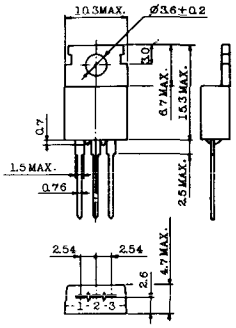

1-(1) カソード
1-(2) カソード（黒）
2 アノード
3 ゲート（白）

## T-50 (13-10A3A)



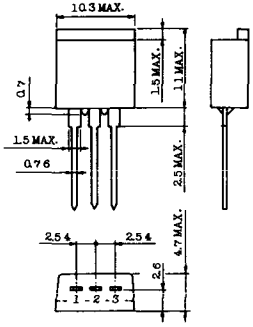

1. カソード
2. アノード
3. ゲート

## T-51 (13-10D1A)



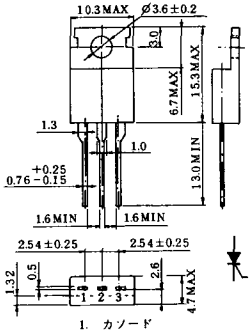

1. カソード
2. アノード
3. ゲート

## T-52 (13-10D2A)



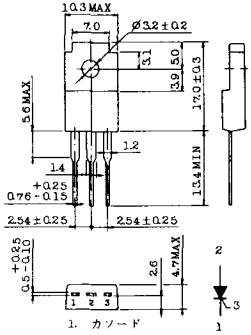

1. カソード
2. アノード
3. ゲート

## T-53 (13-10E1B)



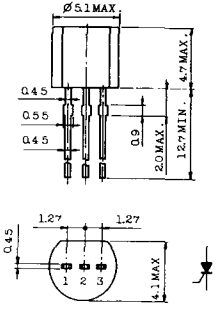

1. カソード
2. アノード
3. ゲート

## T-54 (13-10F1B)



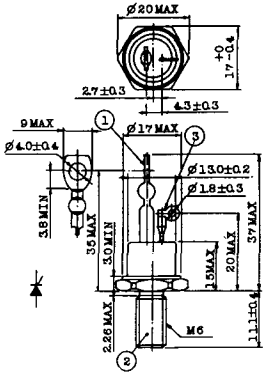

1. カソード
2. アノード
3. ゲート

## T-55 (13-5A1D)




1. カソード
2. ゲート
3. アノード

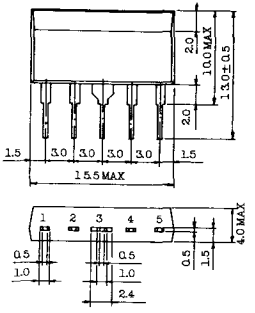
## T-56 (13-13C1A)




1. カソード
2. アノード
3. ゲート

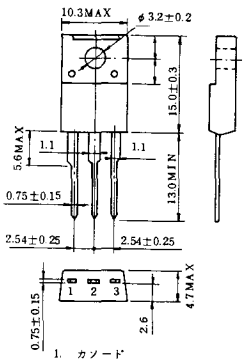
〈寸法図単位：mm〉

## T-57 (12-16C1A)



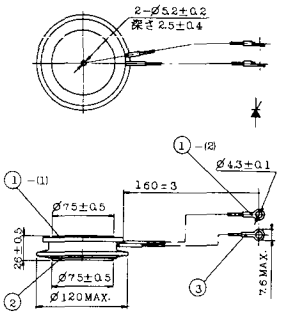

1. アノード（主）
2. ゲート（主）
3. カソード（共通）
4. ゲート（補助）
5. アノード（補助）

## T-58 (13-10H1B)



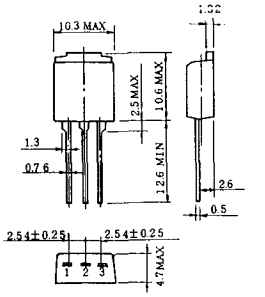

1. カソード
2. アノード
3. ゲート

## T-59 (13-120A1A)



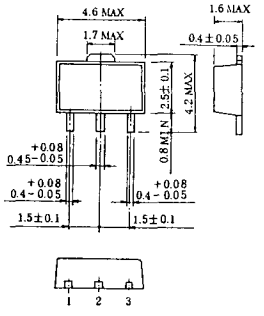

1 −(1) カソード
1 −(2) カソード(黒)
2. アノード
3. ゲート (白)

## T-60



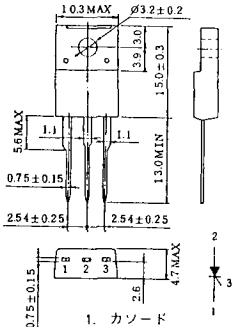

1. カソード
2. アノード
3. ゲート

## T-61 (13-5B1A)



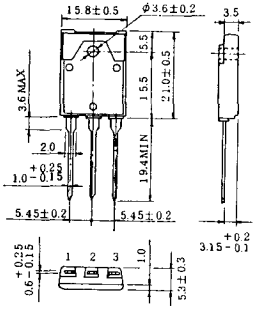

1. ゲート
2. アノード
3. カソード

## T-62 (13-10H1A)




1. カソード
2. アノード
3. ゲート

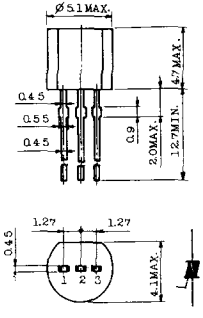
## T-63 (13-16A1B)




1. カソード
2. アノード
3. ゲート

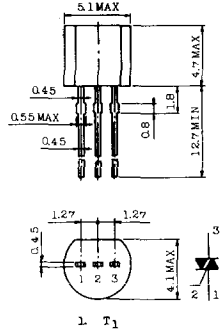
《寸法図単位:mm》

## TT-1



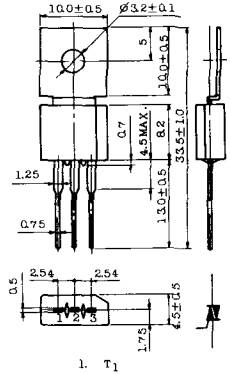

1. ゲート
2. $T_2$
3. $T_1$

## TT-2



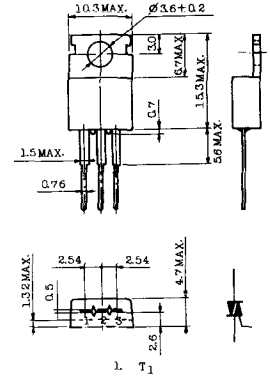

1. $T_1$
2. ゲート
3. $T_2$

## TT-3



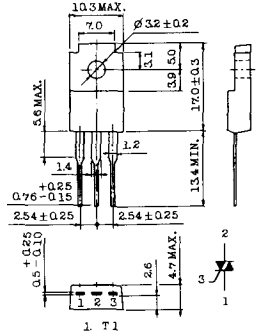

1. $T_1$
2. $T_2$
3. ゲート

## TT-4



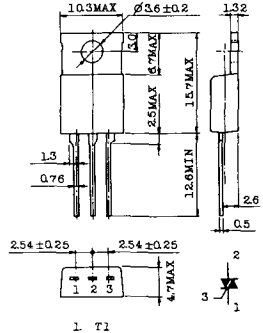

1. $T_1$
2. $T_2$
3. ゲート

## TT-5



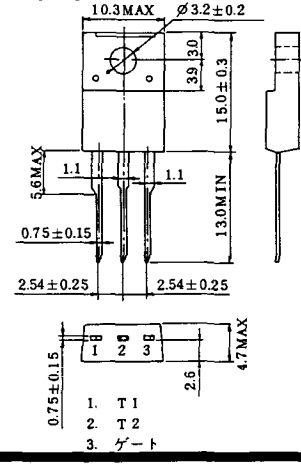

1. T1
2. T2
3. ゲート

## TT-6



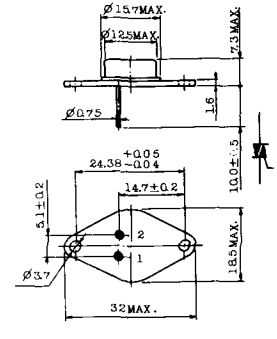

1. T1
2. T2（放熱板）
3. ゲート

## TT-7




1. T1
2. T2
3. ゲート

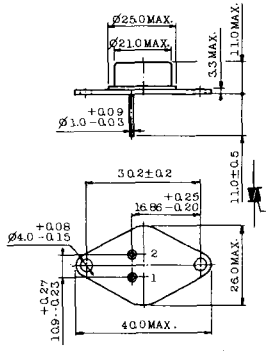
## TT-8




1. ゲート
2. $T_1$
$T_2$（ケース）

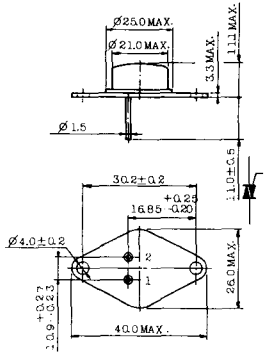
〈寸法図単位：mm

## TT-9



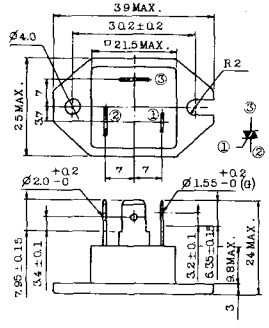

1. ゲート
2. $T_1$
3. $T_2$（ケース）

## TT-10



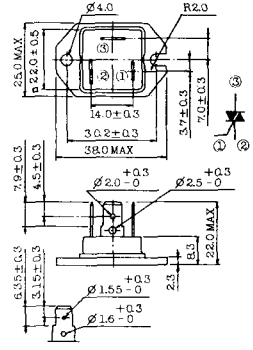

1. ゲート
2. $T_1$
3. $T_2$（ケース）

## TT-11



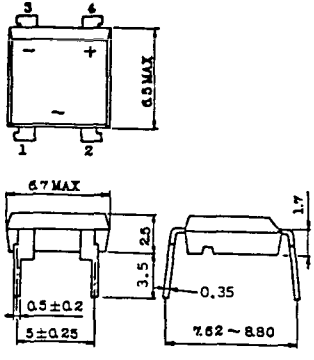

1. ゲート（ファストン端子＃187）
2. $T_1$（〃 ＃250）
3. $T_2$（〃 ＃250）

## TT-12



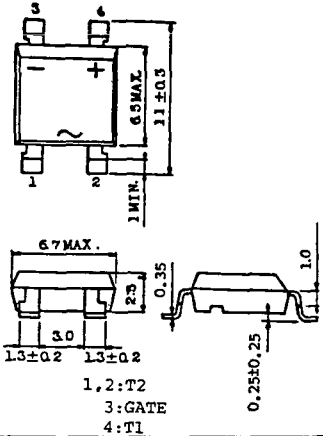

① ゲート（ファストン端子 ＃187）
② T1（〃 ＃250）
③ T2（〃 ＃250）

## TT-13



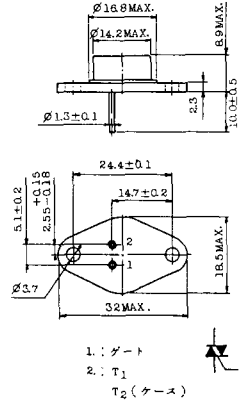

1,2:T2
3:GATE
4:T1

## TT-14



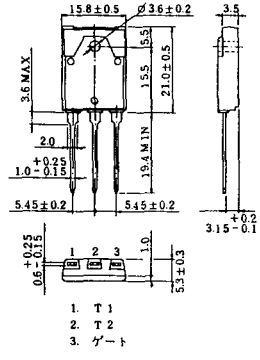

1,2:T2
3:GATE
4:T1

## TT-15 (13-14A1B)




1.：ゲート
2.：$T_1$
$T_2$（ケース）

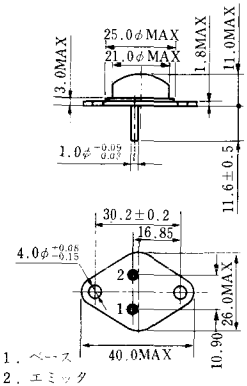
## TT-16 (13-16A1A)




1. T1
2. T2
3. ゲート

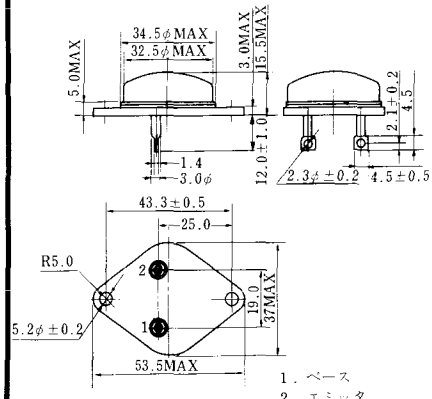
《寸法図単位：mm》

## TS-1



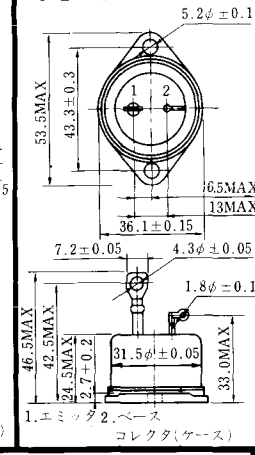

1．ベース
2．エミッタ
コレクタ(ケース)

## TS-2



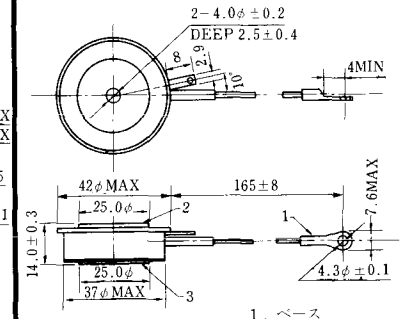

1．ベース
2．エミッタ
コレクタ(ケース)

## TS-3



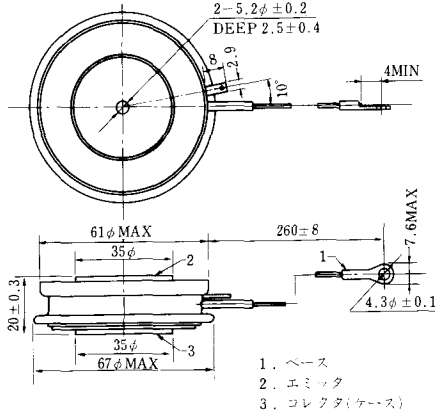

1.エミッタ 2.ベース
コレクタ(ケース)

## TS-4



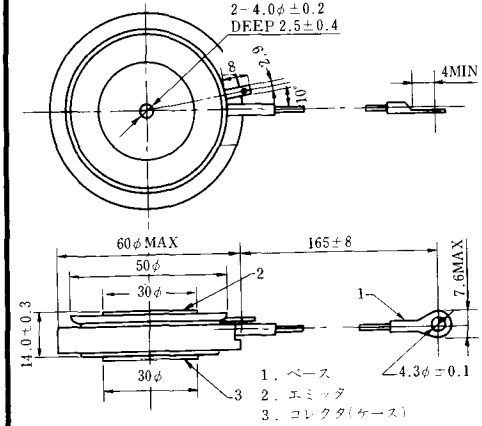

1．ベース
2．エミッタ
3．コレクタ(ケース)

## TS-5



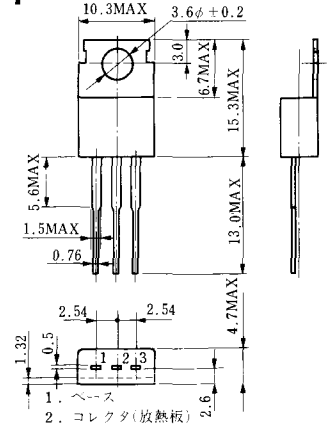

1．ベース
2．エミッタ
3．コレクタ(ケース)

## TS-6




1．ベース
2．エミッタ
3．コレクタ(ケース)

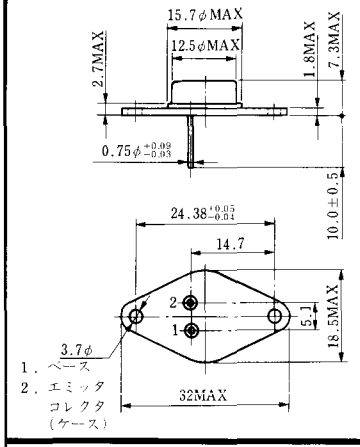
## TS-7




1．ベース
2．コレクタ(放熱板)
3．エミッタ

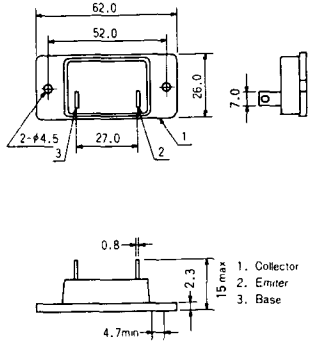
《寸法図単位：mm》

## TS-8

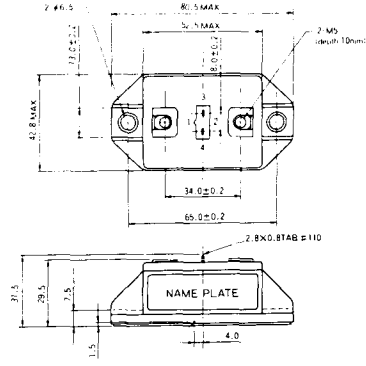

15.7φMAX
12.5φMAX
2.7MAX
1.8MAX
7.3MAX
0.75φ +0.09 −0.03
10.0±0.5
24.38 +0.05 −0.01
14.7
2
1
5.1
18.5MAX
3.7φ
1．ベース
2．エミッタ
コレクタ
（ケース）
32MAX

《寸法図単位：mm》

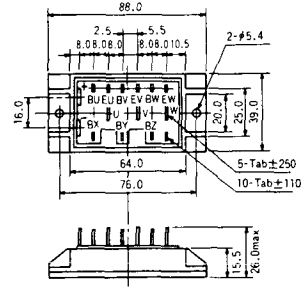
## S-62A1A



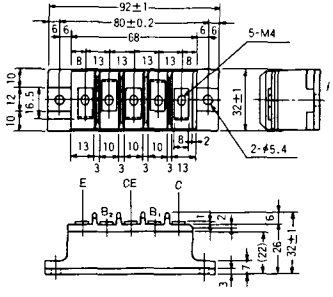

## S-80A1A



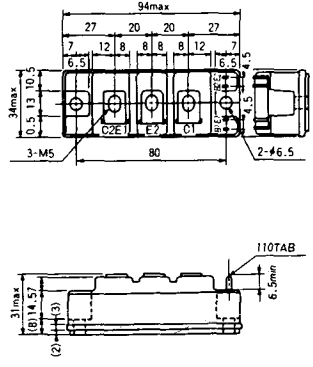

## S-88D1A



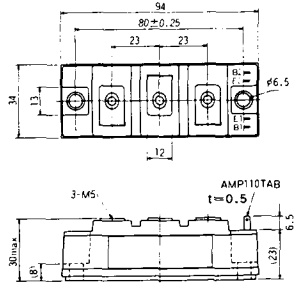

## S-92B1A




## S-94B1A

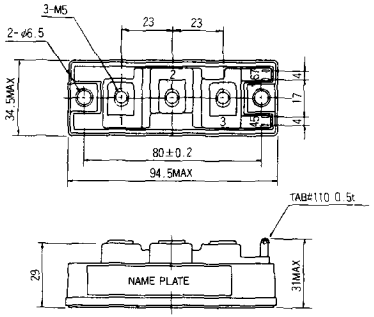



## S-94B1B

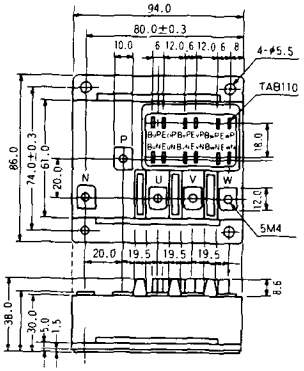



〈寸法図単位：mm〉

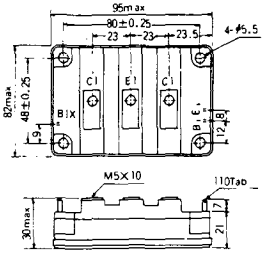
## S-94B2A



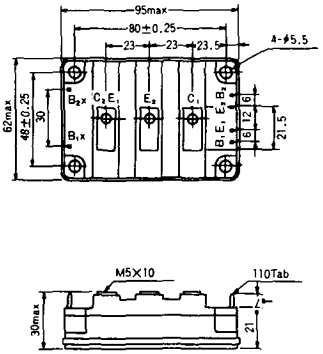

## S-94D1A



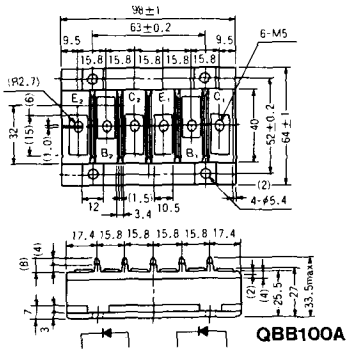

## S-95A1A



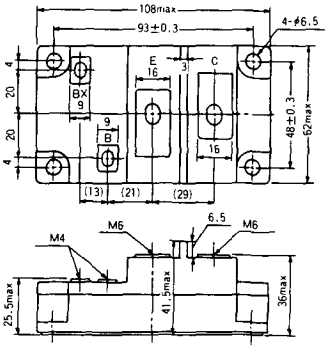

## S-95B1A




## S-98B1B

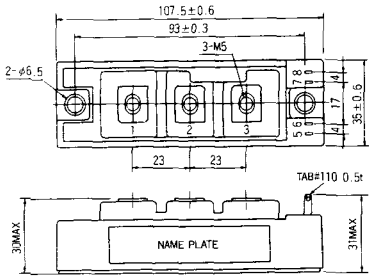



## S-108A2A

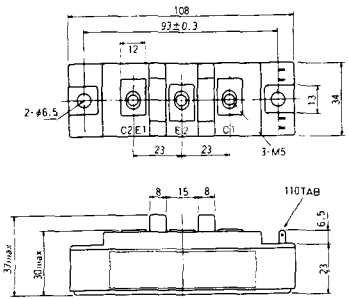



《寸法図単位：mm》

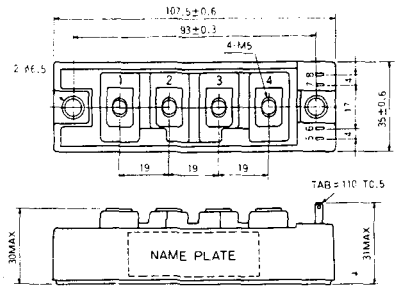
## S-108B1A



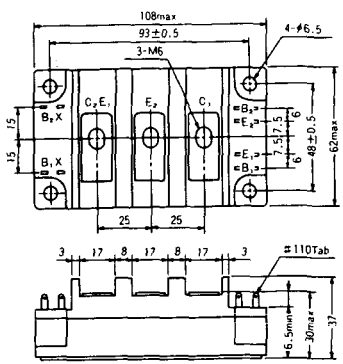

## S-108B1B



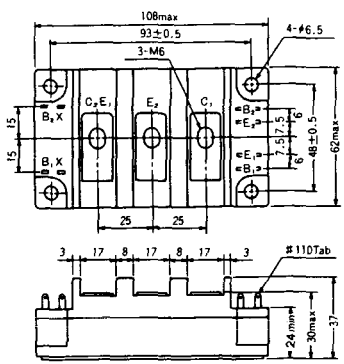

## S-108B1C




## S-108B2A

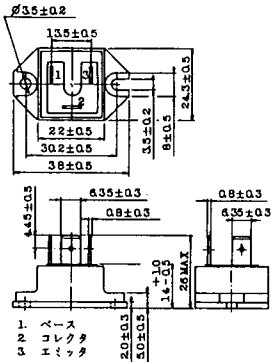



## S-108B2B

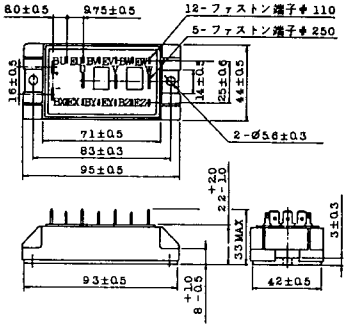



〈寸法図単位:mm〉

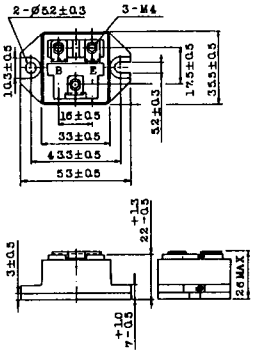
## 2-22B1A



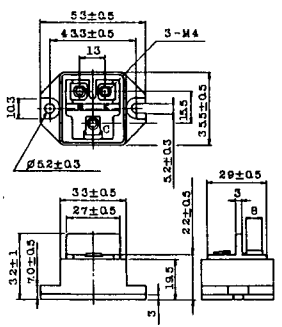

## 2-27A4A



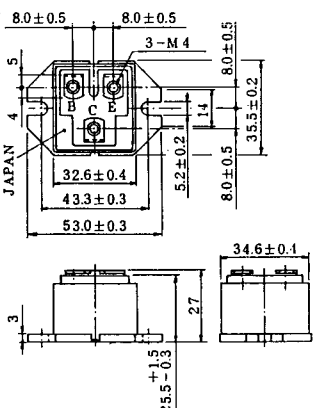

## 2-33C1A



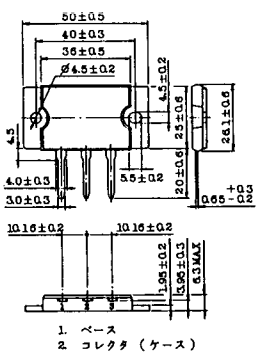

## 2-33D1A




## 2-33F1A

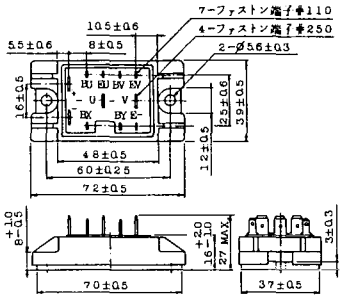



## 2-37A1A

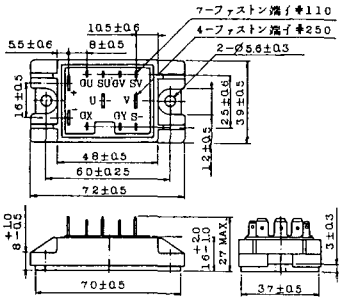



《寸法図単位：mm》

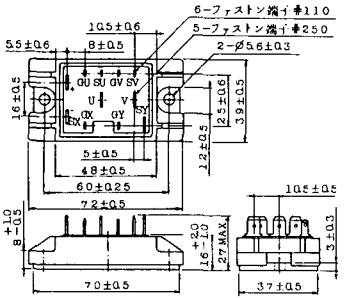
## 2-48A3A



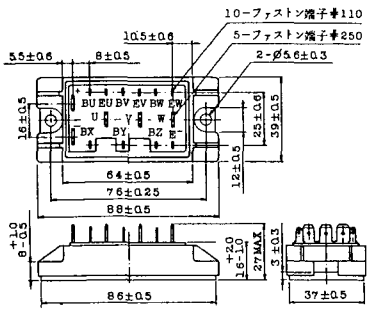

## 2-48A3B



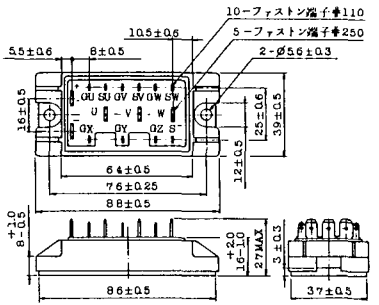

## 2-48A4A



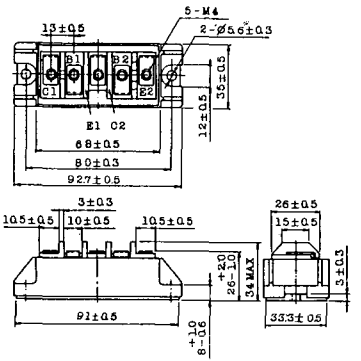

## 2-64A2A




## 2-64A2B

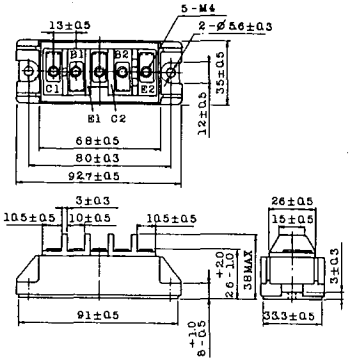



## 2-68A2A

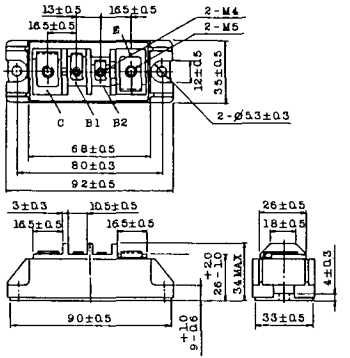



《寸法図単位：mm》

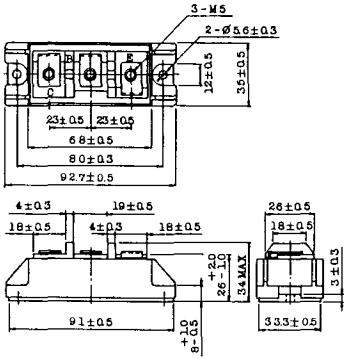
## 2-68B2A



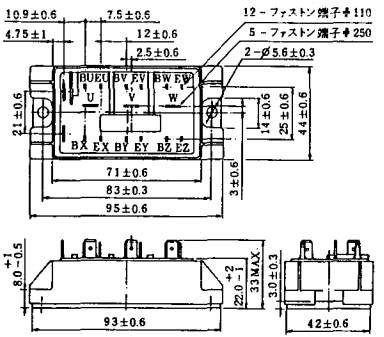

## 2-68C1A



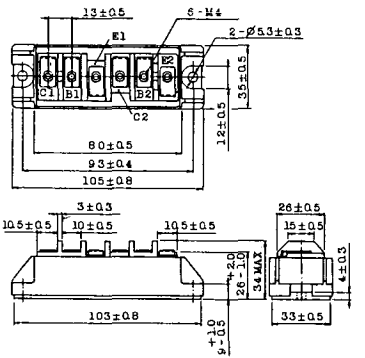

## 2-68D2A



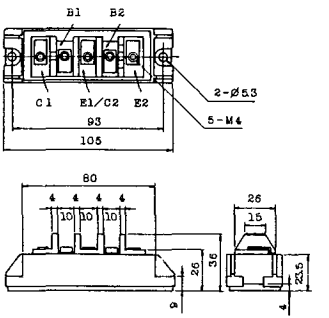

## 2-72A3A




## 2-80A1A

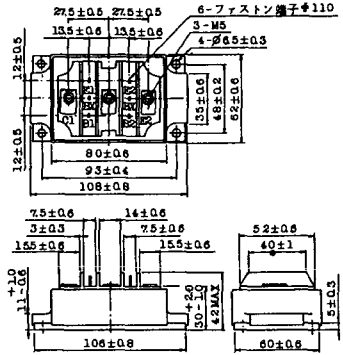



## 2-80B1A

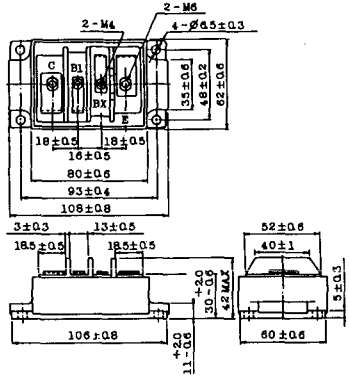



《寸法図単位：mm》

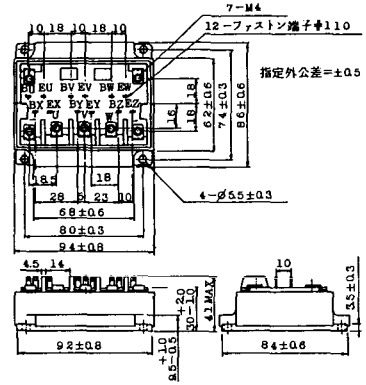
## 2-80C1A



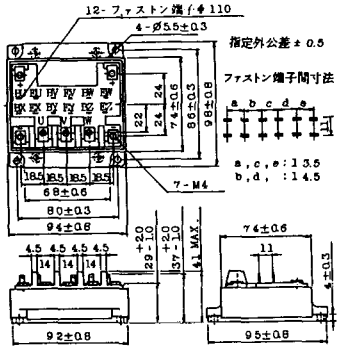

## 2-80D2A



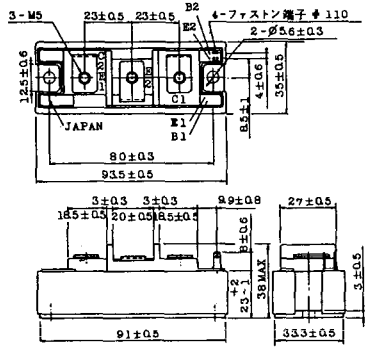

## 2-94A2A



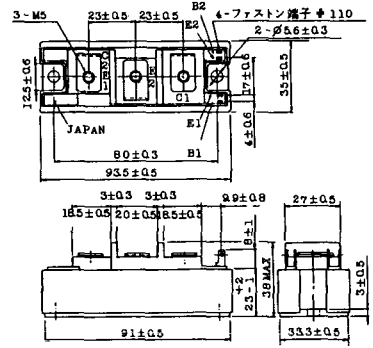

## 2-94B1A




## 2-94C2A

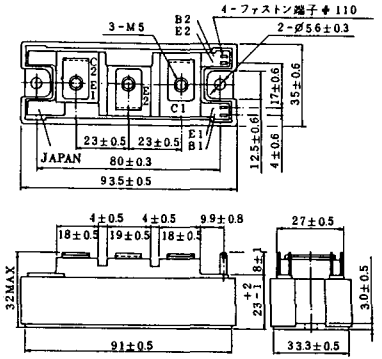



## 2-94C3A

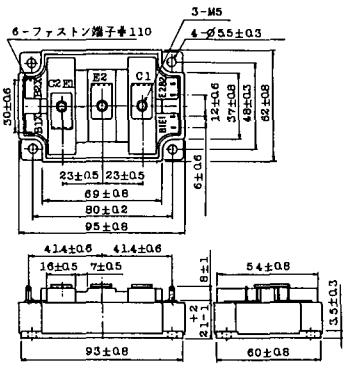



《寸法図単位：mm》

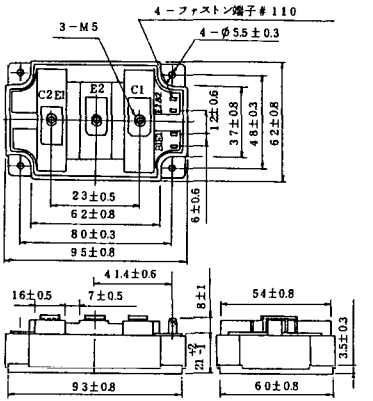
## 2-94D1A



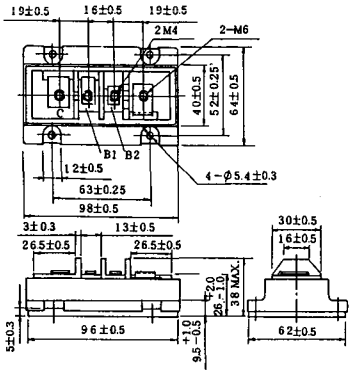

## 2-96A3A



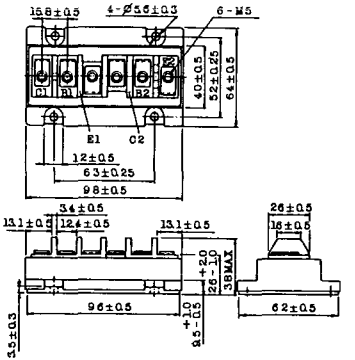

## 2-96A4A



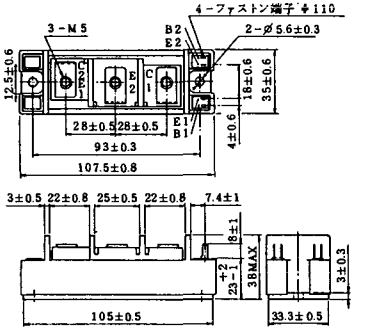

## 2-98B1A




## 2-98C2A

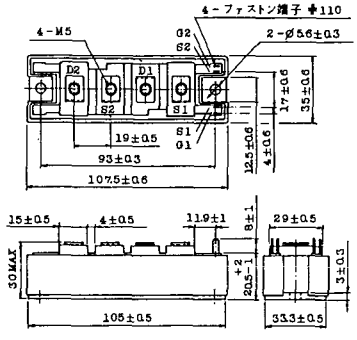



## 2-108A2A

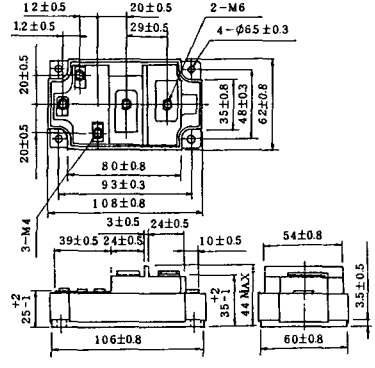



《寸法図単位：mm》

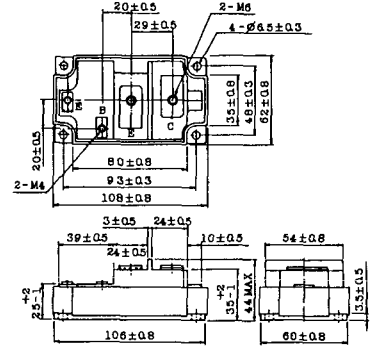
## 2-108B1A



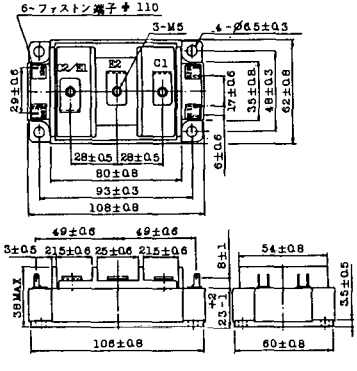

## 2-109A3A



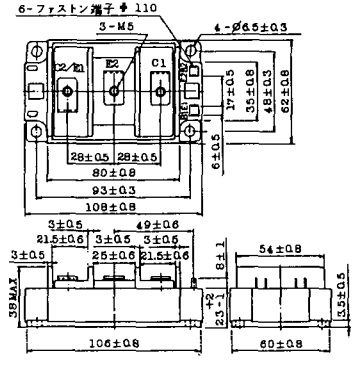

## 2-109A4A




## 2-109B3A



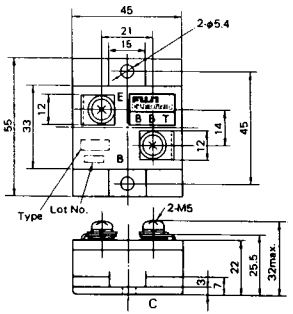

## 2-109B4A




《寸法図単位：mm》

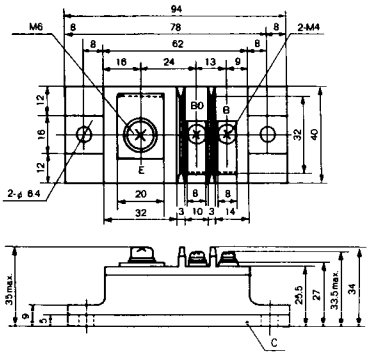
## BBT-II

BBTII
1D200A-020



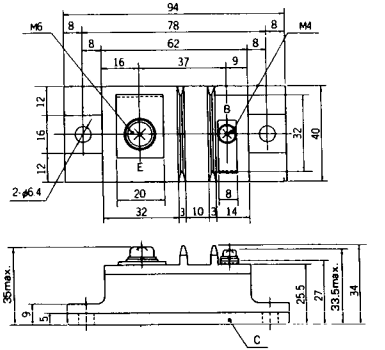

## BBT-III

BBTIII
ETN31-055
ETM36-030
ETN36-030
ETN35-030



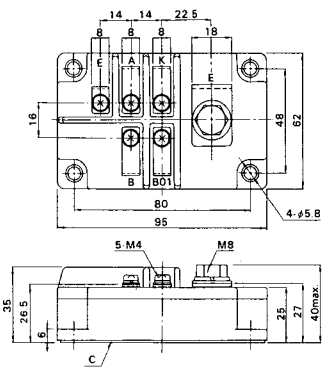

## BBT-III

BBTIII
ETN01-055
ET1257



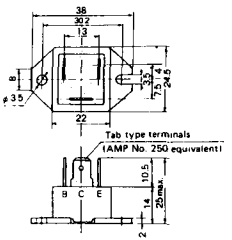

## BBT-IV

BBTIV
1D500A-030

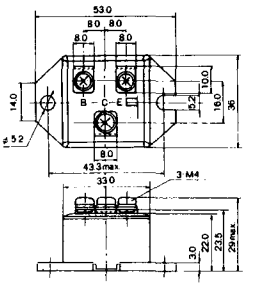



《寸法図単位:mm》

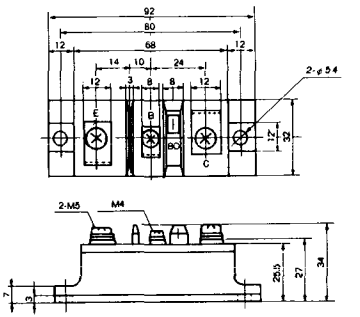
## M-101



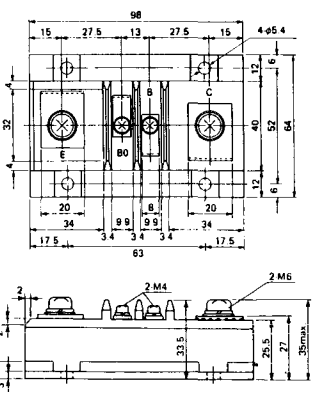

## M-102



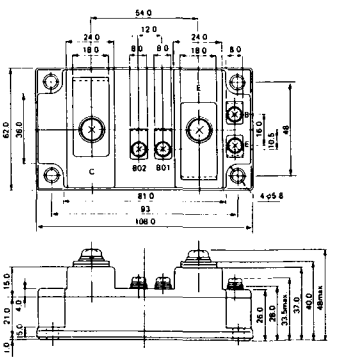

## M-103



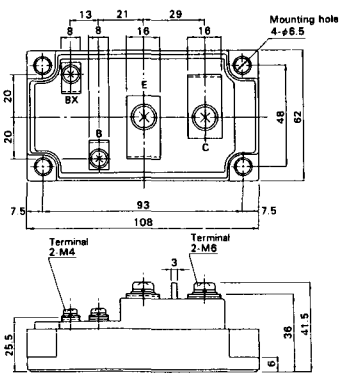

## M-104




## M-105

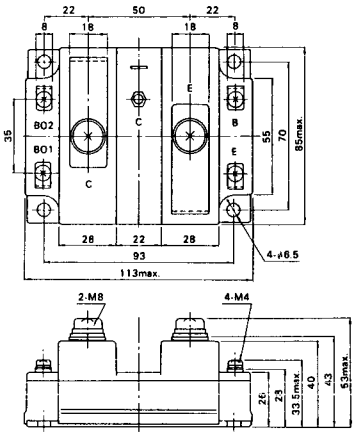



## M-106

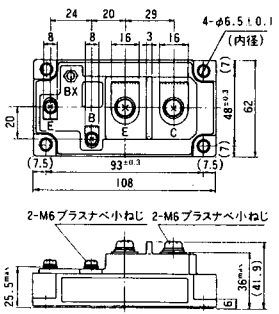



《寸法図単位：mm》

## M-107

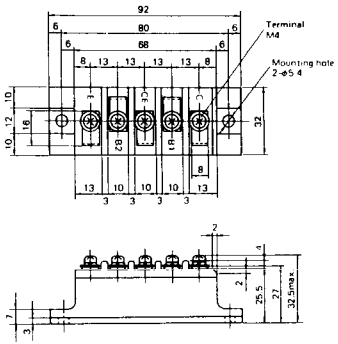



## M-116

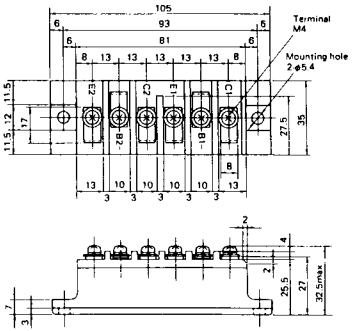



〈寸法図単位：mm〉

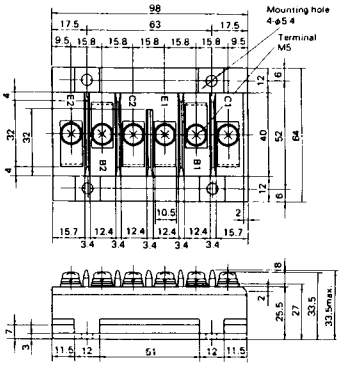
## M-201



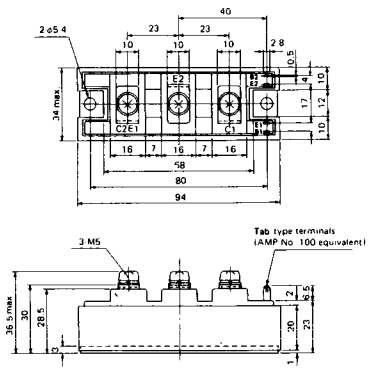

## M-202



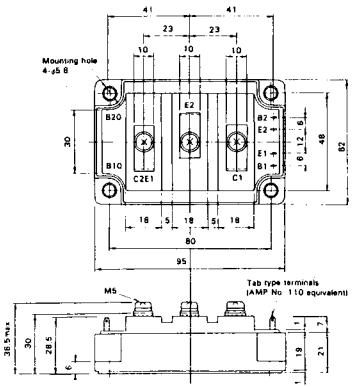

## M-203



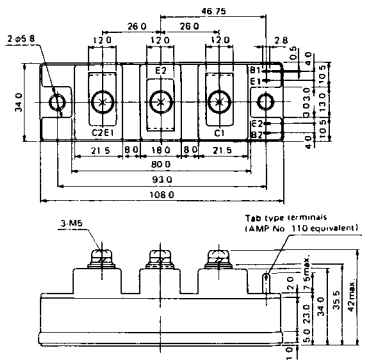

## M-204




## M-205

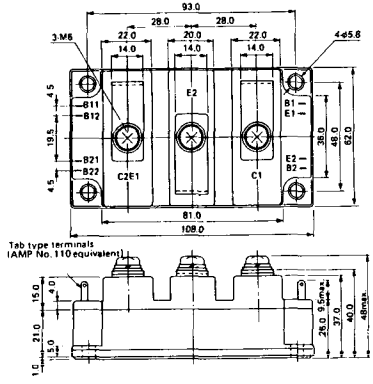



## M-206

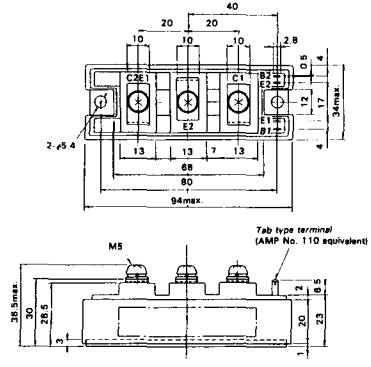



《寸法図単位：mm》

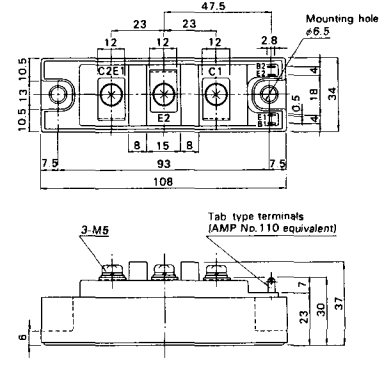
## M-207



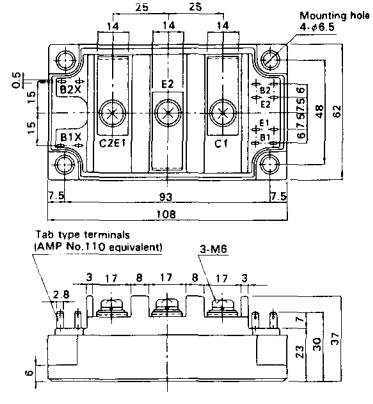

## M-208



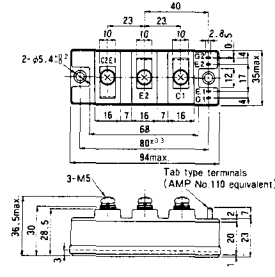

## M-209



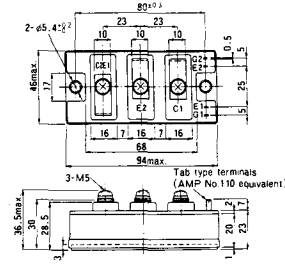

## M-210




## M-211

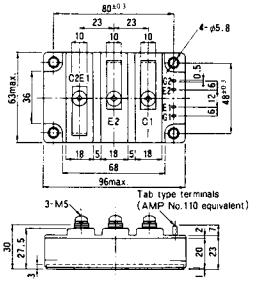



## M-212



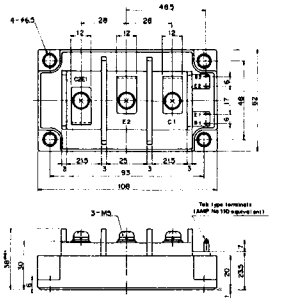

《寸法図単位：mm》

## M-213

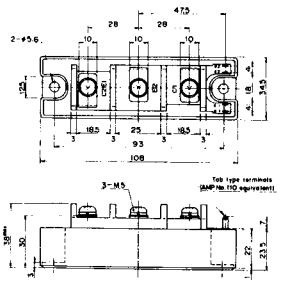



## M-214

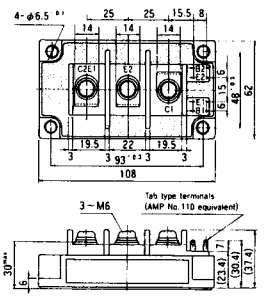
## M-215



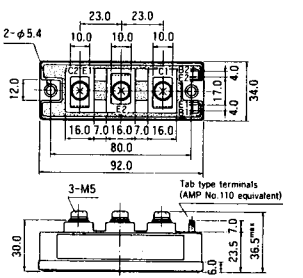

## M-216




## M-217

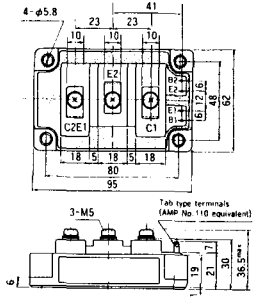



## M-218



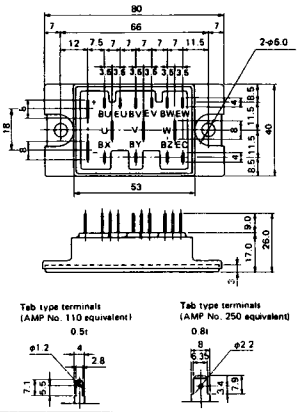

《寸法図単位:mm》

# M-219

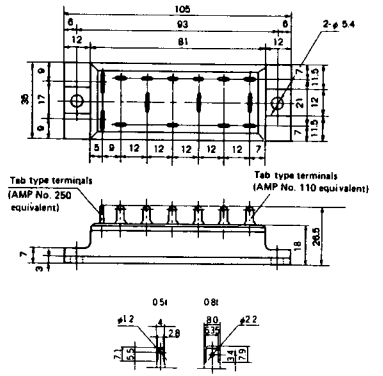



〈寸法図単位:mm〉

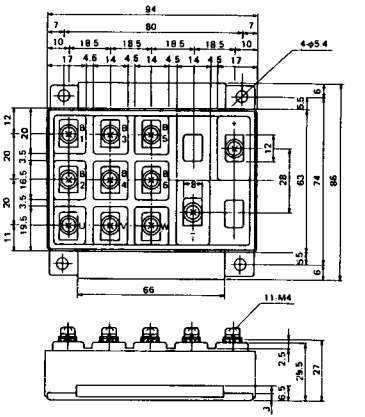
## M-601



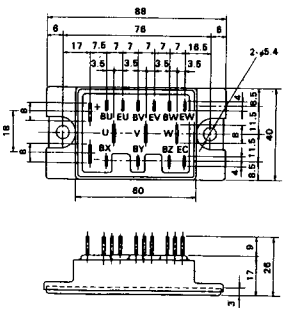

## M-602



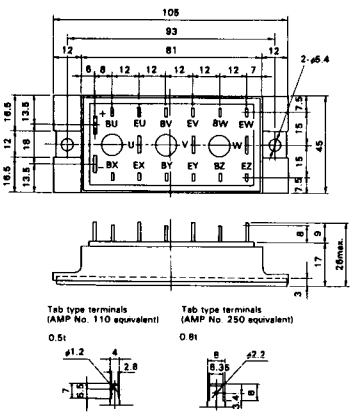

## M-603



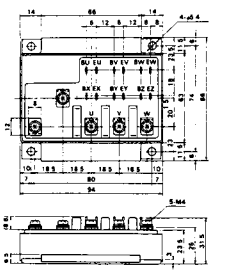
## M-604



## M-605

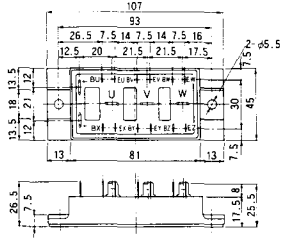



## M-606

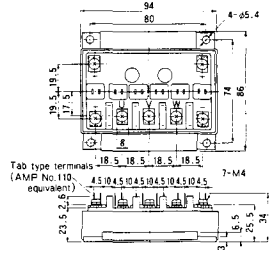


《寸法図単位：mm》

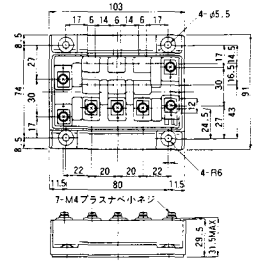
## M-607



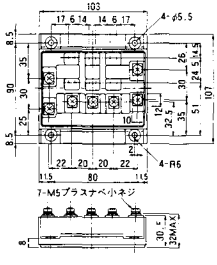

## M-608



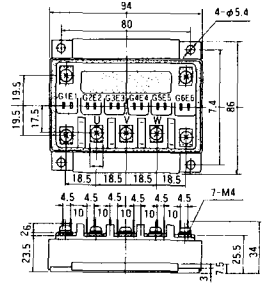

## M-609




## M-610

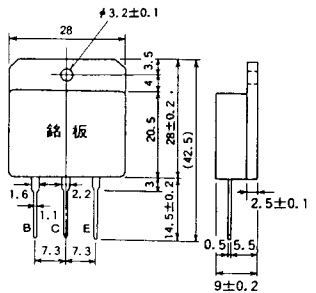



## M-616

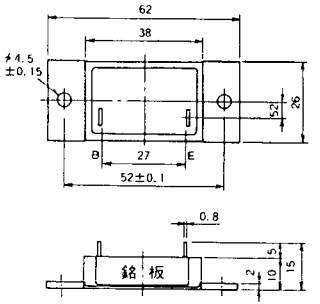



《寸法図単位:mm》

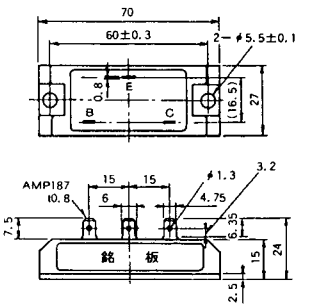
## M-1A1A



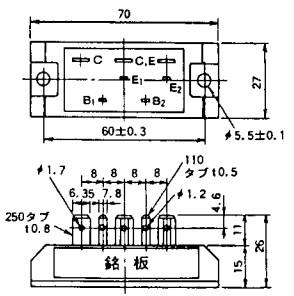

## M-2A1A



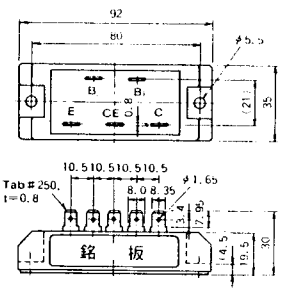

## M-2B1A



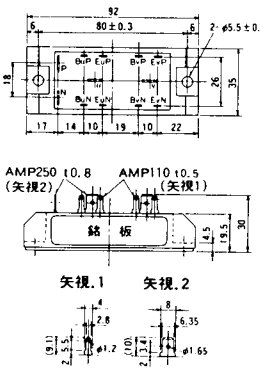

## M-2B2A




## M-2C2A

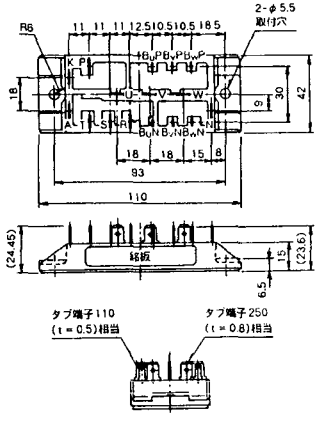



## M-2D4A

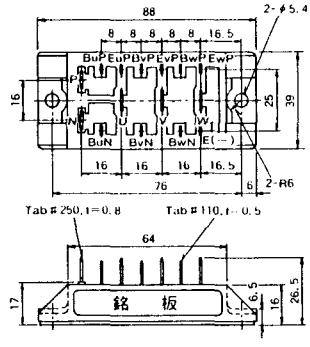



〈寸法図単位:mm〉

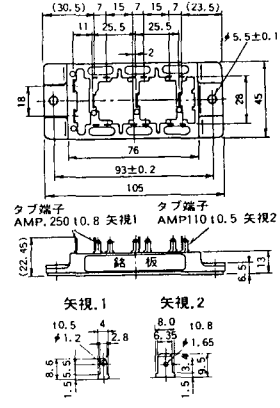
## M-2E6A



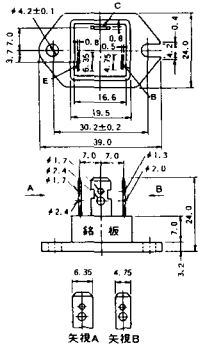

## M-2F6A



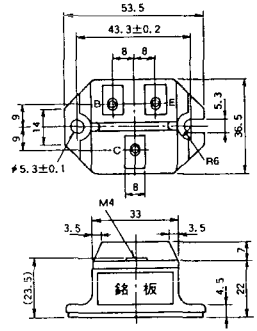

## M-2G6A



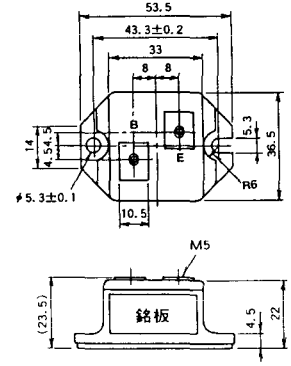

## M-3A1A




## M-3B1A

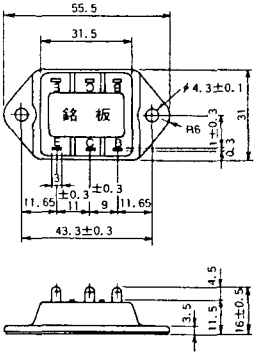



## M-3B1B

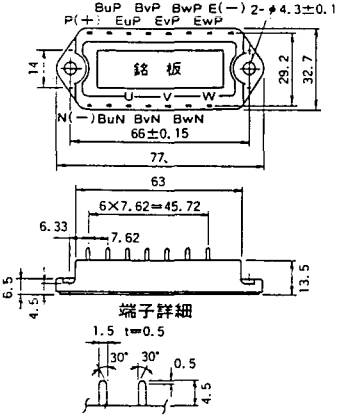



《寸法図単位:mm》

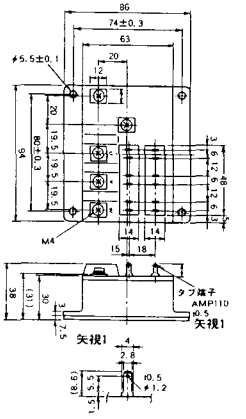
## M-3C1A



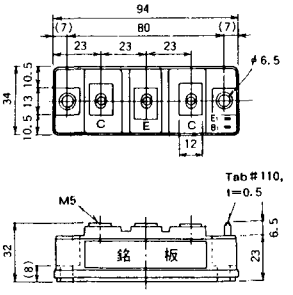

## M-3D6A



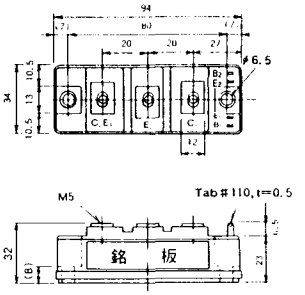

## M-3E6A



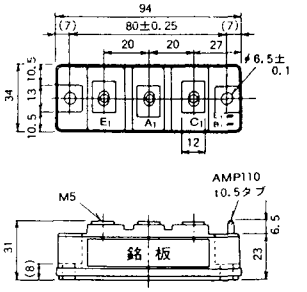

## M-4A1A




## M-4A2A

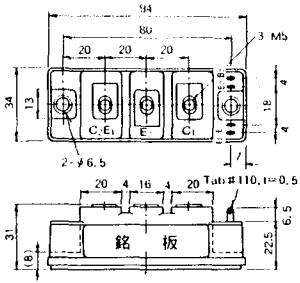



## M-4A1B

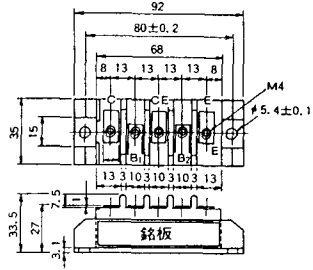



《寸法図単位:mm》

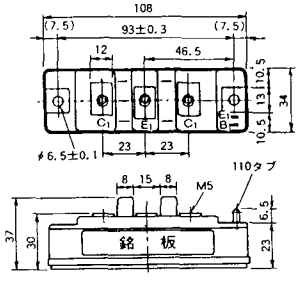
## M-4A2B



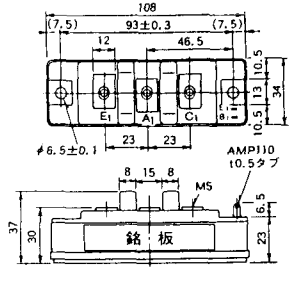

## M-4B2A



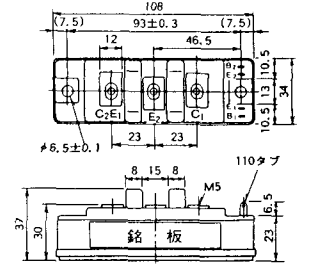

## M-5A1A



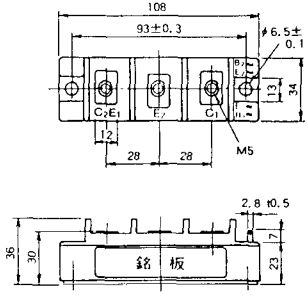

## M-5A1B




## M-5A2A

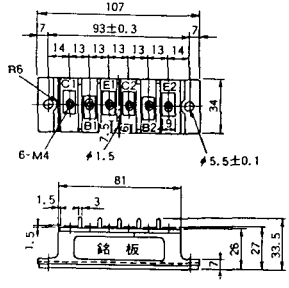



## M-5B2A

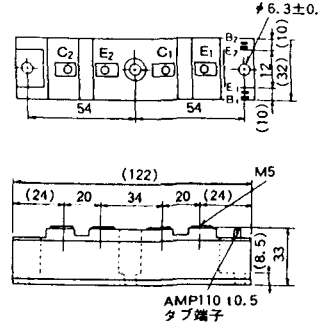



《寸法図単位:mm》

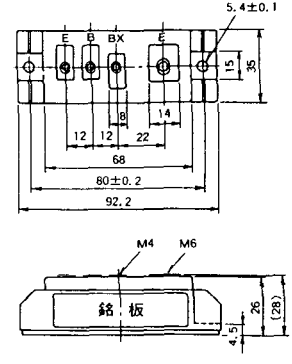
## M-5C2A



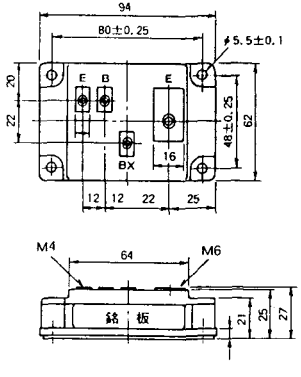

## M-5D2A



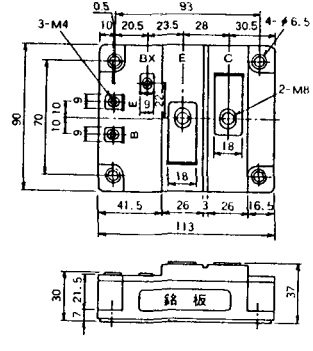

## M-6A1A



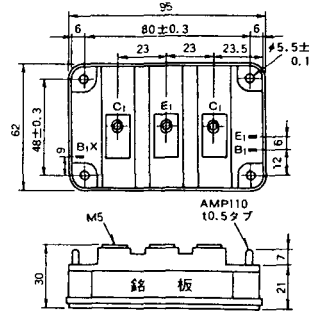

## M-7A1A




## M-7B1A

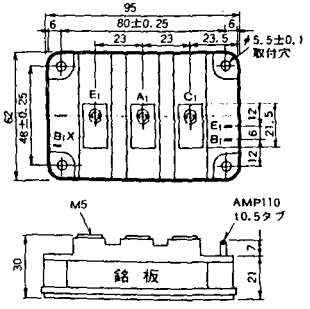



## M-8A1A

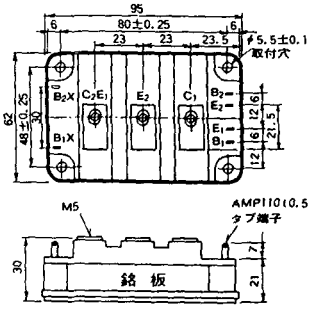



《寸法図単位:mm》

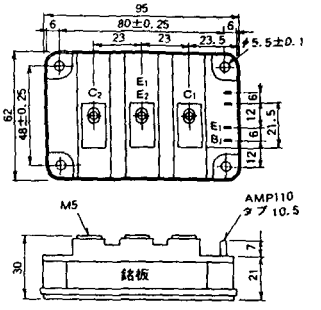
## M-8A1B



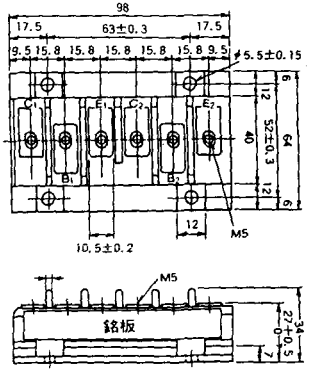

## M-8A2A



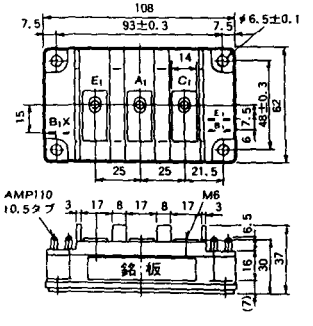

## M-8A2B



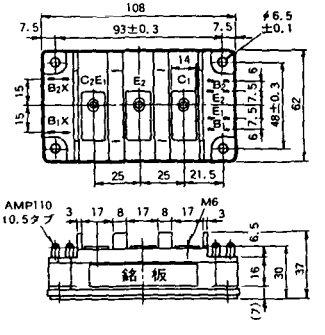

## M-8B2A




## M-9A1A

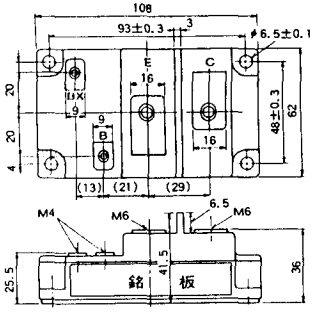



## M-9A2A

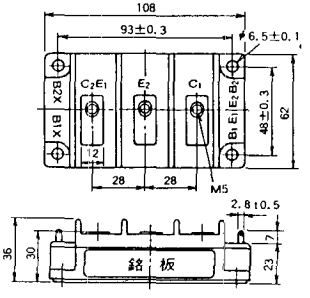



《寸法図単位:mm》

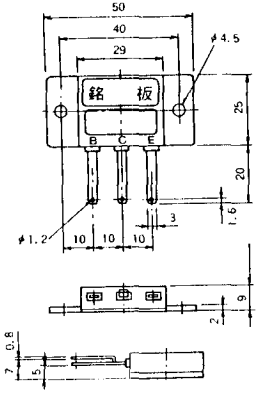
## M-9B1A



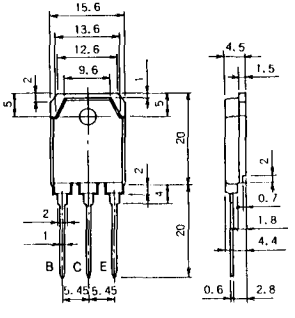

## M-9C2A



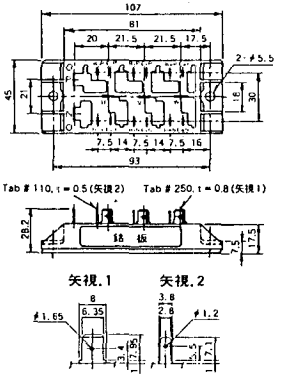

## M-1A1B



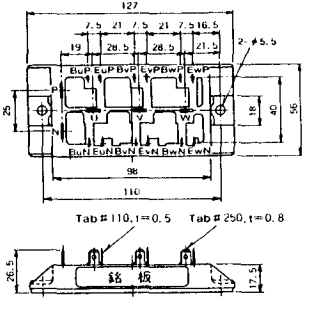

## M-1A1C




## M-2E6B

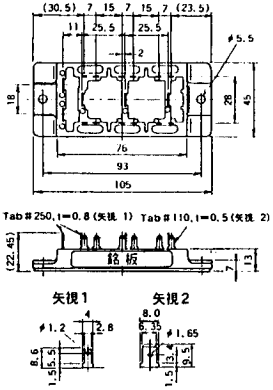



## M-2E6C

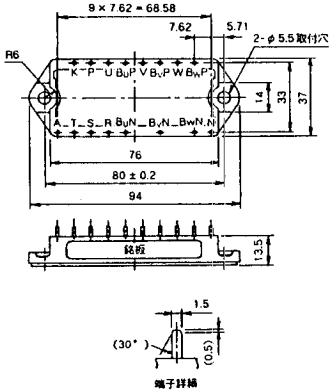



《寸法図単位:mm》

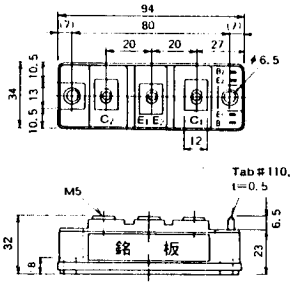
## M-2G6B



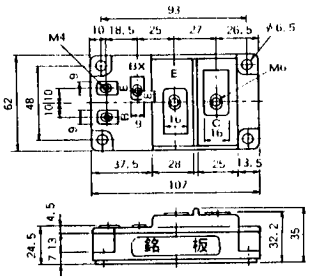

## M-3D6B



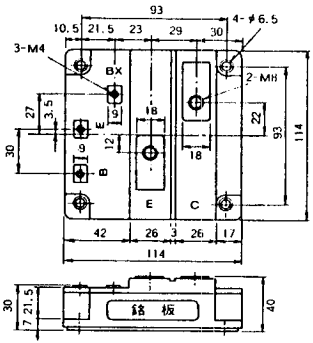

## M-4A2C



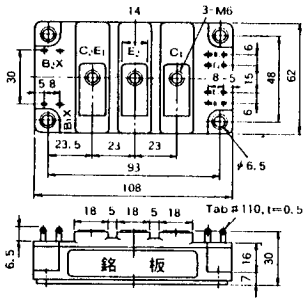

## M-7A1B




## M-7C1A

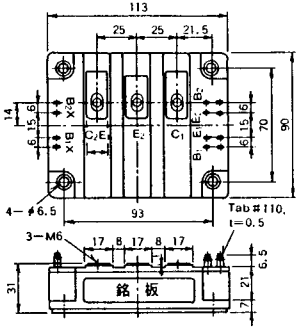



## M-8A2C

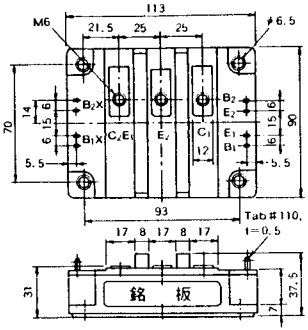



《寸法図単位：mm》

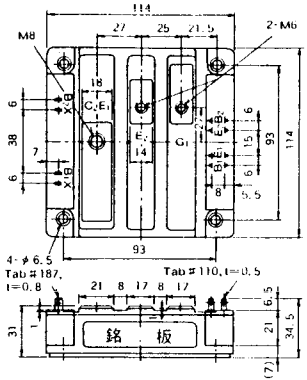
## M-10A2A



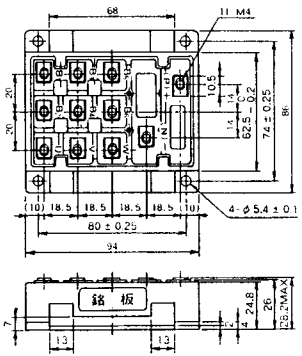

## M-10A2B



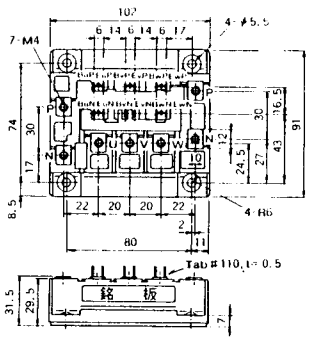

## M-11A2A



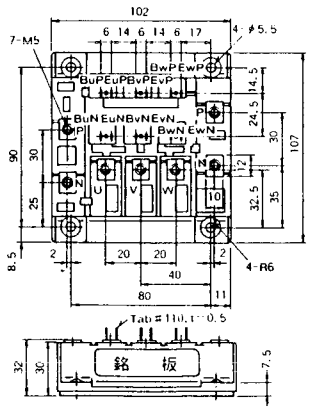

## M-12A6A




## M-12B6A

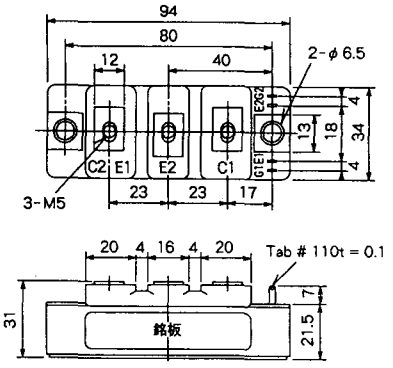



## M-12B6B

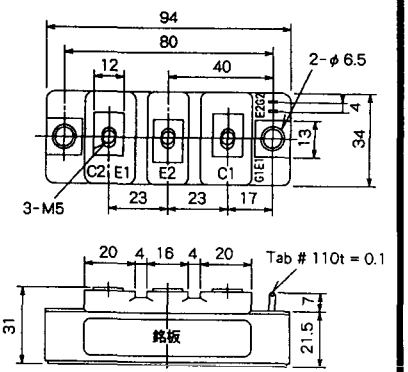



《寸法図単位：mm》

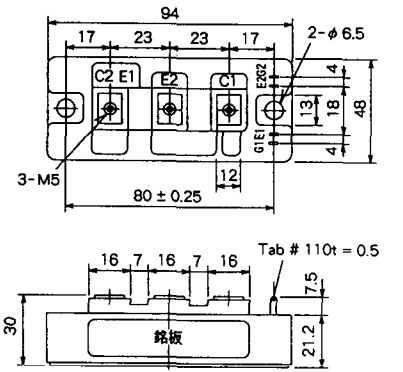
## M-4A2D



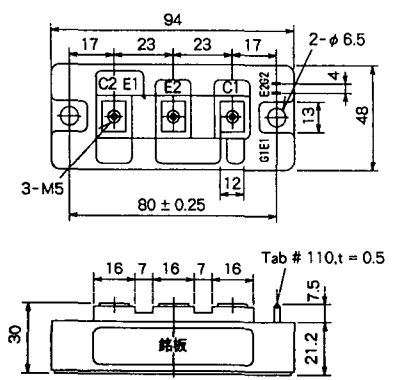

## M-4A2E



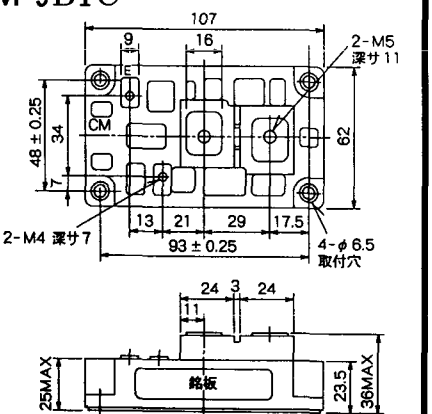

## M-4C2A



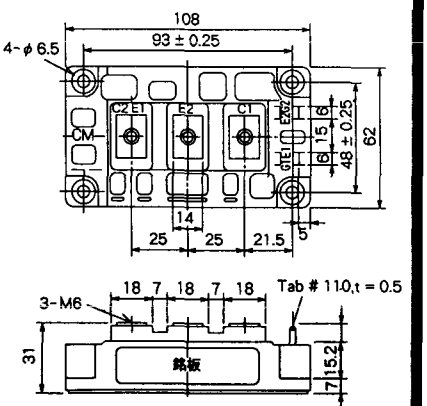

## M-4C2B




## M-9B1C

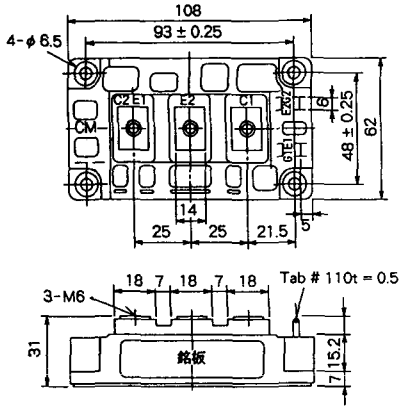



## M-9D2A

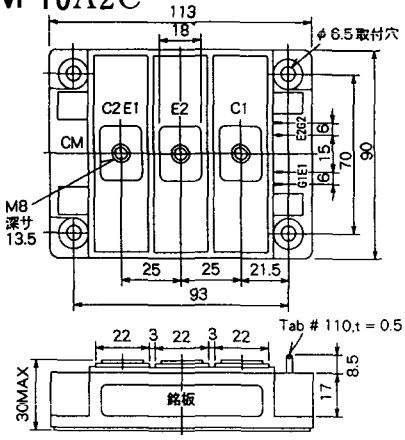



《寸法図単位：mm》

## M-9D2B

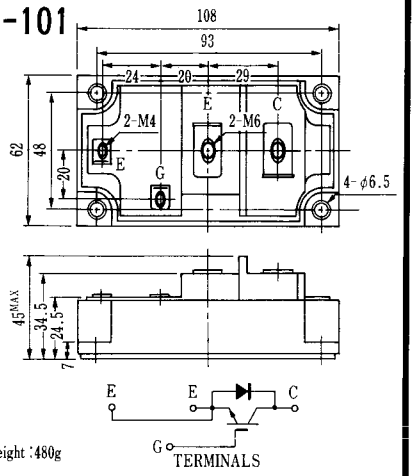



## M-10A2C




《寸法図単位：mm》

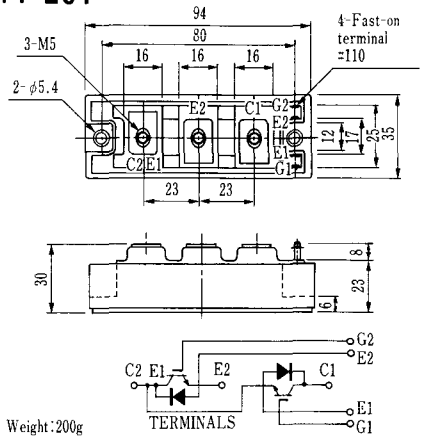
# H-101




Weight :480g

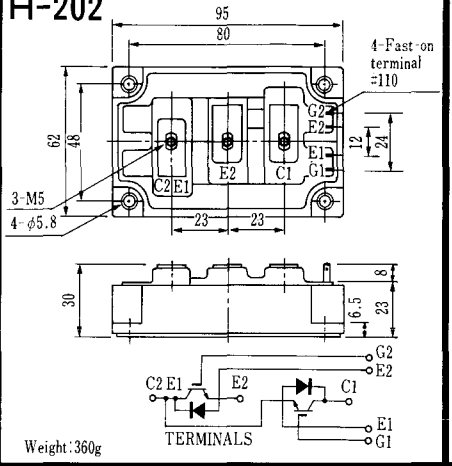
《寸法図単位:mm》

## H-201




Weight:200g

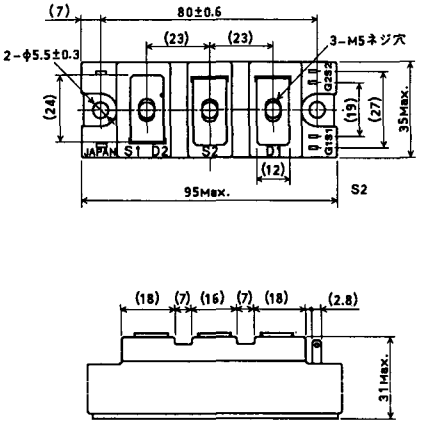
## H-202



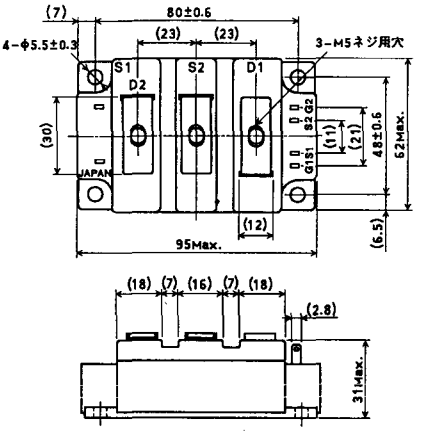

Weight:360g

《寸法図単位:mm》

## LF-J

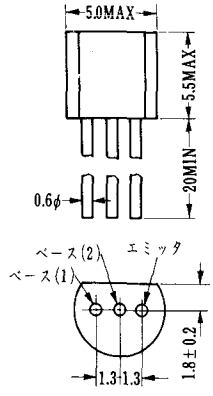



## LF-K

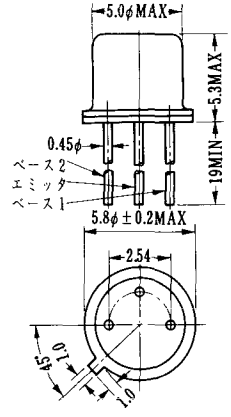



《寸法図単位：mm》

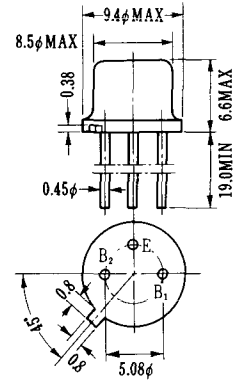
## U-1



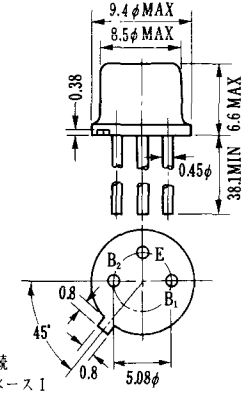

## U-2




## U-3

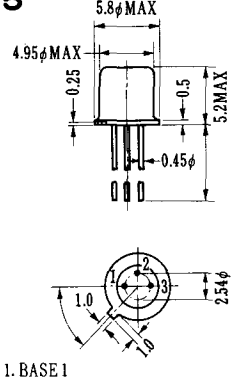



## U-4



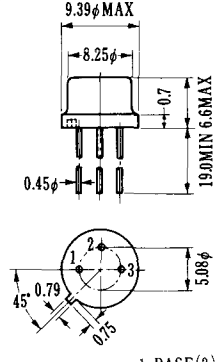

電極接続
$B_1$：ベース1
$B_2$：ベース2
E：エミッタ

## U-5



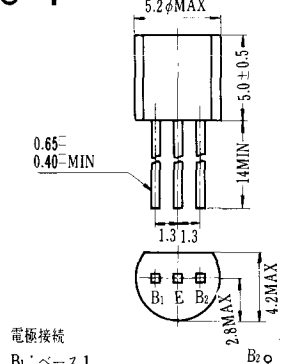

1. BASE 1
2. EMITTER
3. BASE 2 (CASE)

## U-6



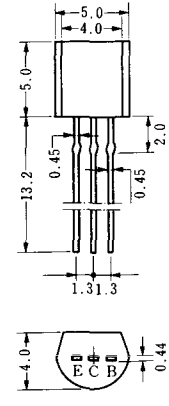

1. BASE(2)
2. EMITTER
3. BASE(1)

## U-7




電極接続
$B_1$：ベース1
E：エミッタ
$B_2$：ベース2

## U-8




〈寸法図単位：mm〉