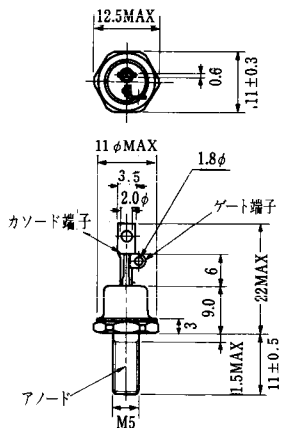


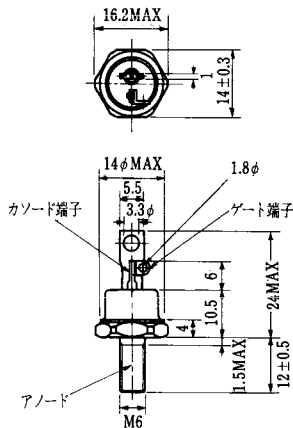
| SG2700 R, U, W, EX22 | | | | | ■外形図番号 T-36 (13-120E1A) | | | | | | |
|----------------------|-----------------------------------------------------------------------------------------------------------------------|-----------|-----------|------------|-------------------------|------------|----------------------------------------------------------------------------|-----|-----|------|-----------------------------|
| ■最大定格 | | | | | ■電気的特性 | | | | | | |
| 記号 | SG2700R22 | SG2700U22 | SG2700W22 | SG2700EX22 | 単位 | 記号 | 測定条件 | Min | Typ | Max | 単位 |
| V_{RRM} | 15 | | | | V | I_{RRM} | $T_J=125^{\circ}\text{C}$, $V_D=V_{RRM}$ | | | 100 | mA |
| V_{DRM} | 1300 | 1600 | 1800 | 2500 | | I_{DRM} | $T_J=125^{\circ}\text{C}$, $V_D=V_{DRM}$, $R_{GK}=10\Omega$ | | | 60 | mA |
| I_{TQRM} | 2700 ($V_D=\frac{1}{2}V_{DRM}$, $V_{DM}=\frac{2}{3}V_{DRM}$, $C_s=6\mu\text{F}$, $R_s=5\Omega$) | | | | A | V_{TM} | $T_c=25^{\circ}\text{C}$, $I_{FM}=2700\text{A}$ | | | 3 | V |
| I_{TRMS} | 800 ($T_J=70^{\circ}\text{C}$) | | | | | V_{GT} | $T_c=25^{\circ}\text{C}$, $V_D=24\text{V}$ | | | 1.2 | V |
| I_{TSM} | 20000/22000 (50Hz/60Hz, 正弦半波1サイクル) | | | | A ² S | I_{GT} | $R_L=0.1\Omega$ | | | 3.5 | A |
| $I^2 \cdot t$ | | | | | | V_{GD} | $T_c=125^{\circ}\text{C}$, $V_D=\frac{1}{2}V_{DRM}$ | 0.3 | | | V |
| di/dt | 300 ($I_{CP}=30\text{A}$, $t_r=1\mu\text{s}$, $V_D=\frac{1}{2}V_{DRM}$, $I_{FM}=2700\text{A}$, $f=50\text{Hz}$) | | | | A/ μs | I_{GD} | | 10 | | | mA |
| I_{GFM} | 100 (パルス幅: max. 30 μs , duty: max. 20%) | | | | A | t_d | $T_c=25^{\circ}\text{C}$, $V_D=\frac{1}{2}V_{DRM}$, $I_{CP}=30\text{A}$ | | | 4 | μs |
| $P_{G(FAV)}$ | 20 | | | | W | t_{dt} | $I_{FM}=2700\text{A}$, $di/dt=300\text{A}/\mu\text{s}$ | | | 15 | |
| I_{GRRMS} | 90 | | | | A | dv/dt | $T_J=125^{\circ}\text{C}$, $V_D=\frac{1}{2}V_{DRM}$, $V_{GR}=-4\text{V}$ | 500 | | | V/ μs |
| P_{CRM} | 15000 (パルス幅: max. 50 μs , duty: max. 2%) | | | | W | I_H | $T_c=25^{\circ}\text{C}$, $R_L=0.1\Omega$ | | 40 | | A |
| V_{GRM} | 15 | | | | V | t_s | $T_c=120^{\circ}\text{C}$, $I_{FM}=2700\text{A}$ | | 20 | | |
| T_J | 125 | | | | $^{\circ}\text{C}$ | t_{ss} | $V_D=\frac{1}{2}V_{DRM}$, $V_{DM}=\frac{2}{3}V_{DRM}$ | | | 25 | μs |
| T_{stg} | -40~125 | | | | $^{\circ}\text{C}$ | t_{tail} | $C_s=6\mu\text{F}$, $R_s=5\Omega$ | | | 80 | |
| | | | | | | I_{GR} | $dig/dt=-50\text{A}/\mu\text{s}$ | | 600 | 660 | A |
| | | | | | | R_{th} | 接合-フィン間, DC | | | 0.02 | $^{\circ}\text{C}/\text{W}$ |

| SG15 G, J, 41 | | | | | ■外形図番号 T-53 (13-10E1B) | | | | | | |
|-------------------------------------------------------------------|--------------------------------------------------------------------------------------------|---------|--|----|----------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------|------|-----|-----|-----------------------------|
| ○可制御オン電流 15A ○臨界オフ電圧上昇率 3000V/ μs ○TO-220ABパッケージ | | | | | ■電気的特性 ($T_c=25^{\circ}\text{C}$, $R_{GK}=500\Omega$) | | | | | | |
| 記号 | SG15G41 | SG15J41 | | 単位 | 記号 | 測定条件 | Min | Typ | Max | 単位 | |
| V_{RRM} | 500 | 720 | | V | I_{DRM} | $T_J=125^{\circ}\text{C}$, $V_D=V_{DRM}$ | | | 3 | mA | |
| V_{DRM} | 400 | 600 | | | I_{GRM} | | | | | | mA |
| I_{TQRM} | 15 ($V_D=\frac{1}{2}V_{DRM}$, $V_{GR}=7\text{V}$, $T_J=125^{\circ}\text{C}$) | | | | A | V_{TM} | $I_{FM}=5\text{A}$, $I_{GF}=0.1\text{A}$ | | | 3.3 | V |
| I_{TRMS} | 5 (平均オン電流) | | | | | V_{GT} | $V_D=30\text{V}$, $R_L=6\Omega$ | | | 1.5 | V |
| I_{TSM} | 55/60 (50Hz/60Hz, 1サイクル) | | | | A ² S | dv/dt | | | | 100 | mA |
| $I^2 \cdot t$ | 15 ($t=2\sim 10\text{ms}$) | | | | | V_{GT} | $T_c=125^{\circ}\text{C}$, $V_D=\frac{1}{2}V_{DRM}$ | 0.3 | | | V |
| di/dt | 50 ($I_G=0.5\text{A}$, $t_r=1\mu\text{s}$, $V_D=\frac{1}{2}V_{DRM}$, $f=50\text{Hz}$) | | | | A/ μs | I_{GT} | | 0.2 | | | mA |
| I_{GFM} | 3 | | | | A | t_d | $V_D=\frac{1}{2}V_{DRM}$ | | | 0.3 | μs |
| $P_{G(FAV)}$ | 0.7 | | | | W | t_{dt} | $I_G=0.5\text{A}$, $t_r=0.2\mu\text{s}$ | | | 1.5 | |
| I_{GRM} | | | | | A | dv/dt | $T_J=125^{\circ}\text{C}$, $V_D=V_{DRM}$, $V_{GR}=7\text{V}$ | 3000 | | | V/ μs |
| P_{CRM} | 50 ($t_w=10\mu\text{s}$, $T_J=125^{\circ}\text{C}$) | | | | W | I_H | $R_L=10\Omega$ | | 2 | | A |
| V_{GRM} | 10 | | | | V | t_s | $I_{FM}=5\text{A}$, $V_D=\frac{1}{2}V_{DRM}$, $I_{GR}=3\text{A}$ | | | 0.5 | μs |
| T_J | 125 | | | | $^{\circ}\text{C}$ | t_f | $dig/dt=-6\text{A}/\mu\text{s}$, $dv/dt=400\text{V}/\mu\text{s}$ | | | 0.3 | |
| T_{stg} | -40~125 | | | | $^{\circ}\text{C}$ | I_{GR} | $T_J=125^{\circ}\text{C}$, $dv/dt=40\text{V}/\mu\text{s}$ | | 1 | | A |
| | | | | | | R_{th} | 接合-ケース間, DC | | | 2.5 | $^{\circ}\text{C}/\text{W}$ |

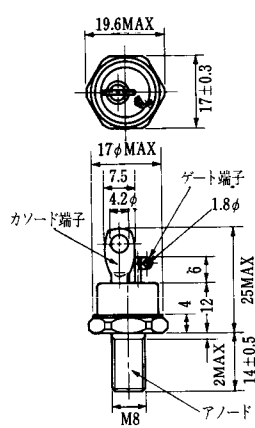
FD-1



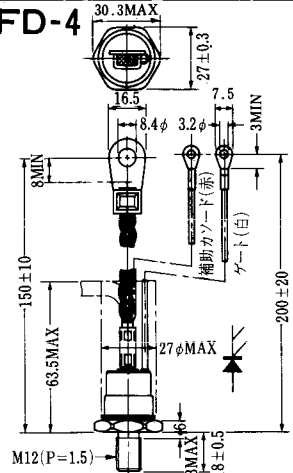
FD-2



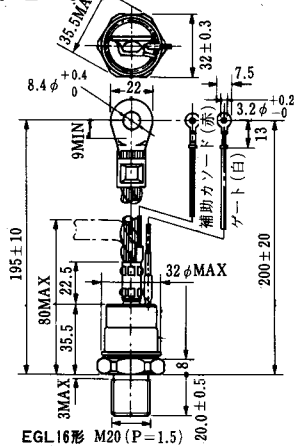
FD-3



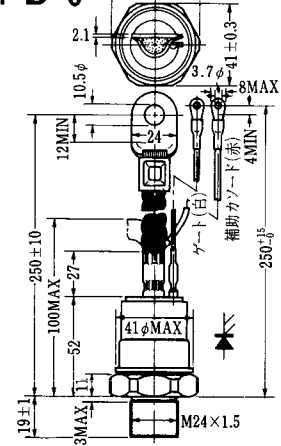
FD-4



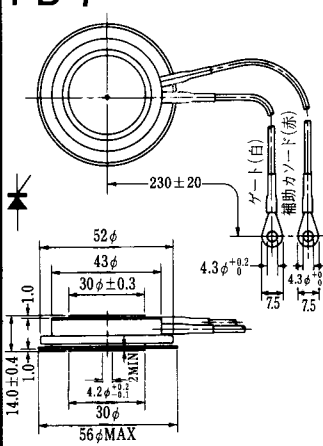
FD-5



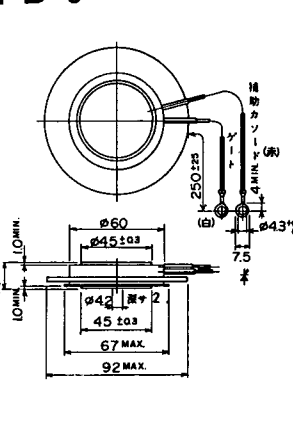
FD-6



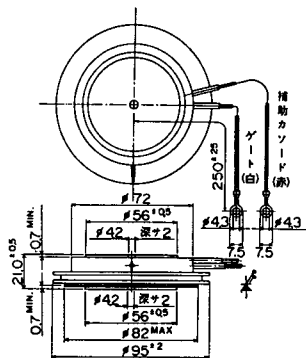
FD-7



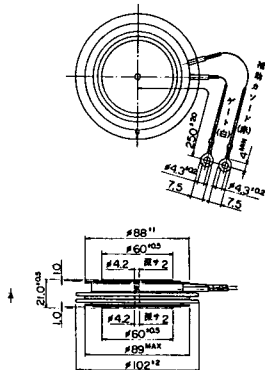
FD-8



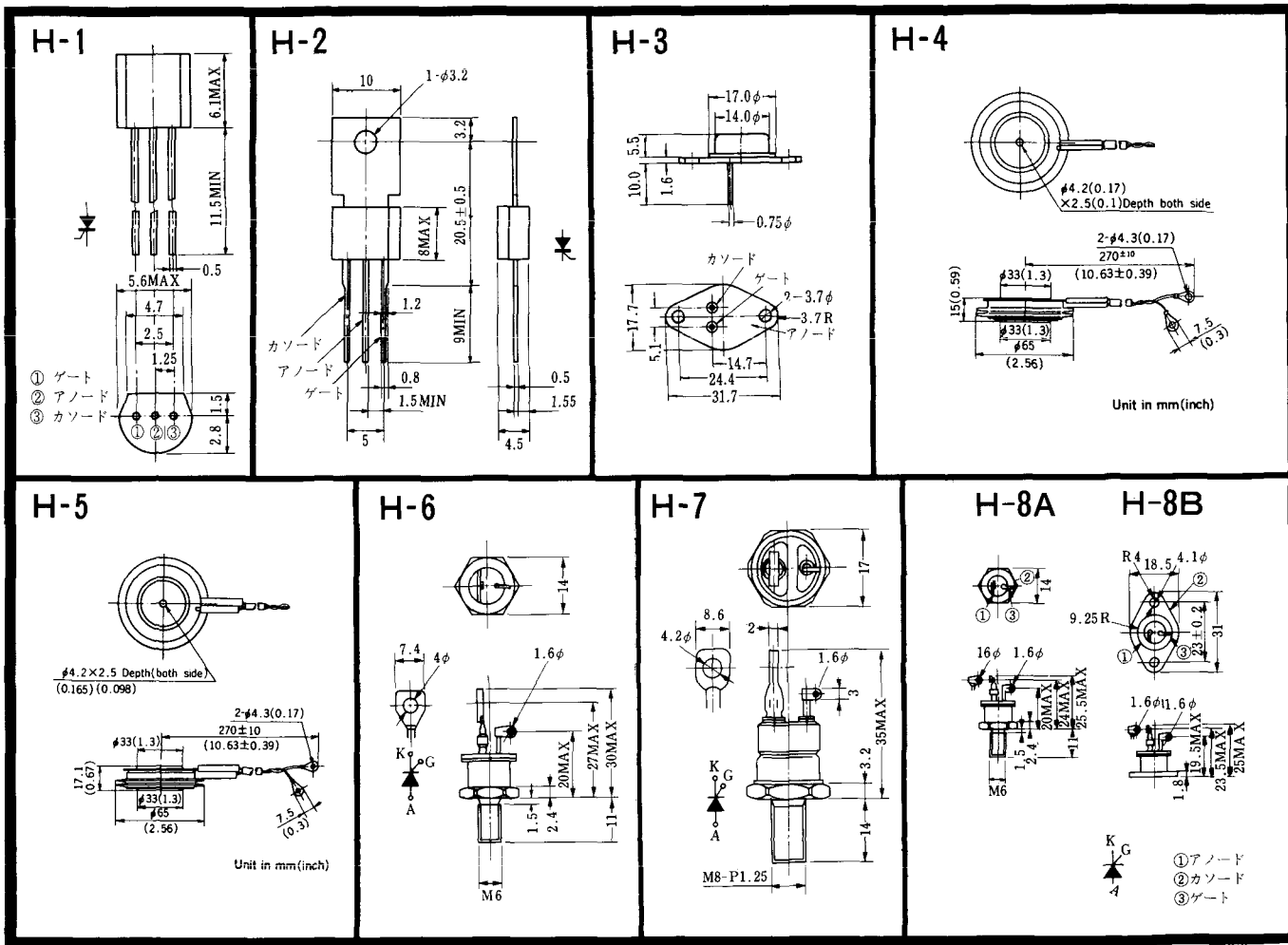
FD-9

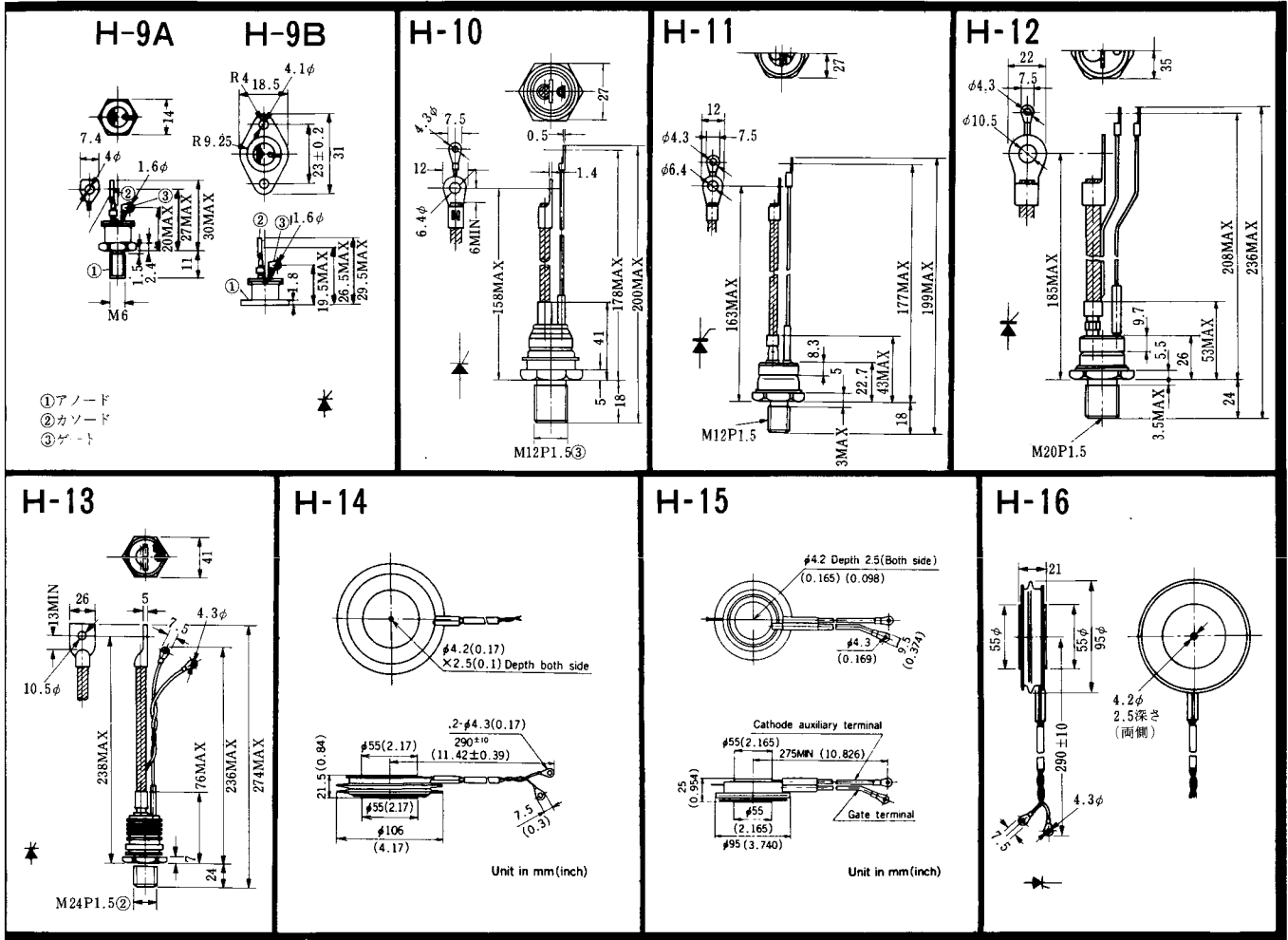


FD-10

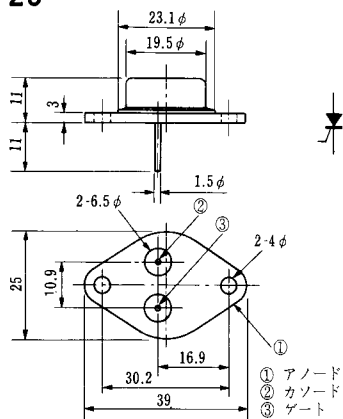


FD-12

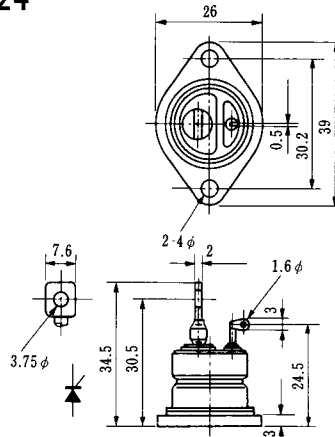




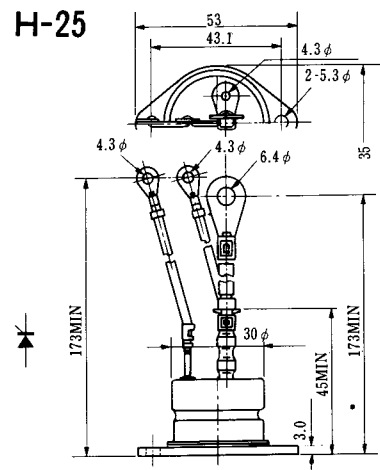
H-23



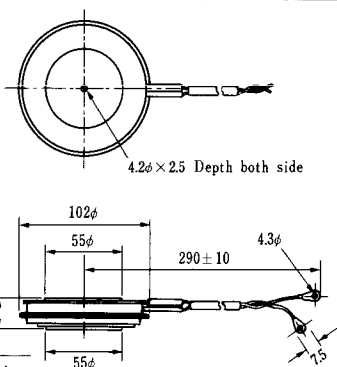
H-24



H-25

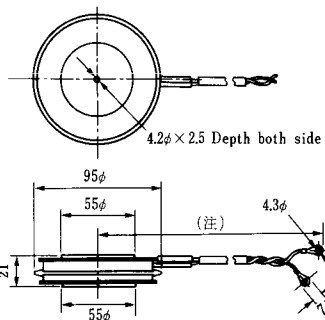


H-26



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

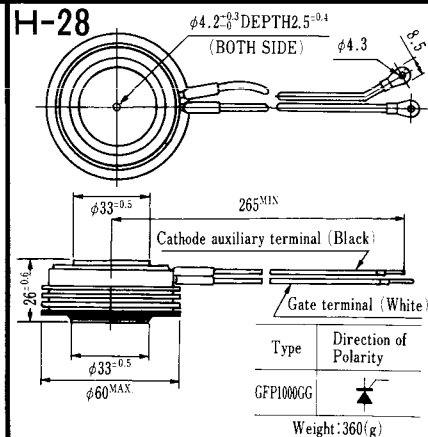
H-27



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

(注) CC11V : 400 ± 10
CF11V : 250 ± 10

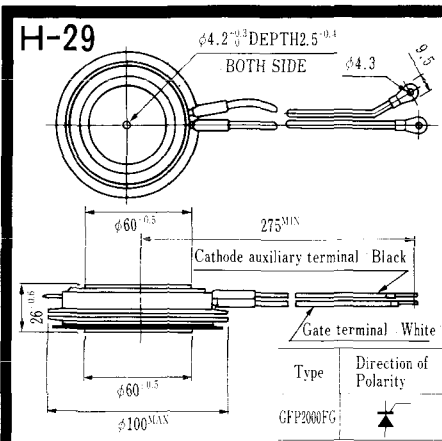
H-28



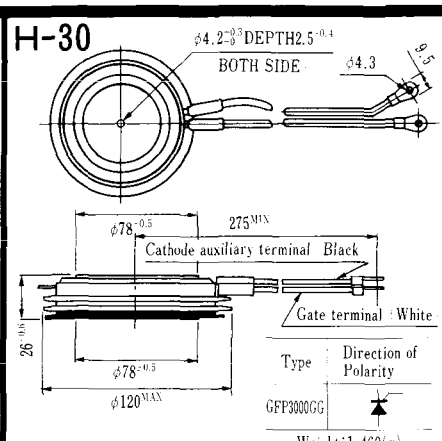
| Type | Direction of Polarity |
|----------|-----------------------|
| GFP100GG | |

Weight: 360(g)

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

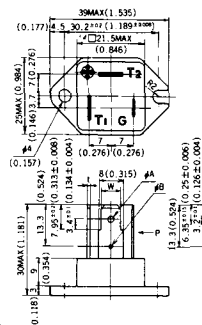


Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



Note : The thickness is a dimension in press at the rated mounting force. Weight: 1,460(g)

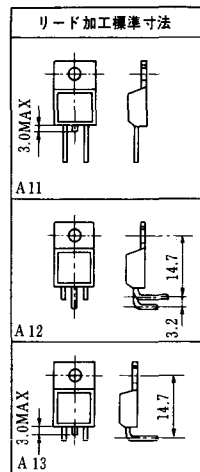
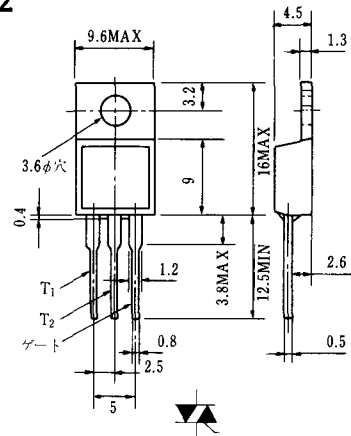
HT-1



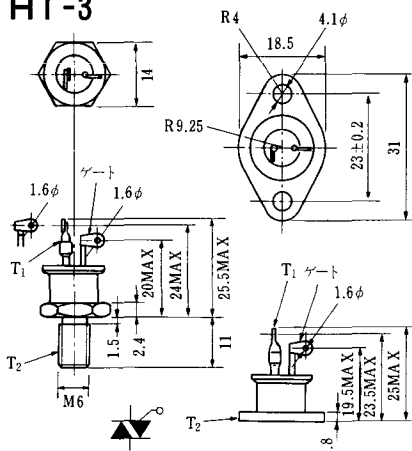
| TERMINAL | t | W | φA | φB |
|----------------|----------------------------|---------------------------|----------------------------------------------------|----------------|
| T ₁ | 0.8±0.025 (0.031±0.001) | 6.35±0.1 (0.250±0.004) | 2.00 ^{+0.1} ₀ (0.079±0.004) | 1.3 (0.051) |
| T ₂ | 0.8±0.025 (0.031±0.001) | 6.35±0.1 (0.250±0.004) | 2.00 ^{+0.1} ₀ (0.079±0.004) | 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) | 1.3 (0.051) |

Unit in mm (inch)

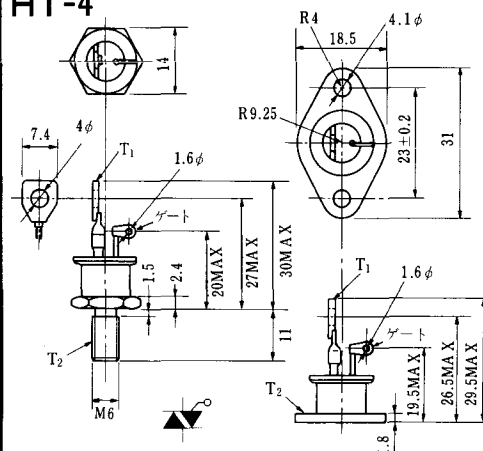
HT-2



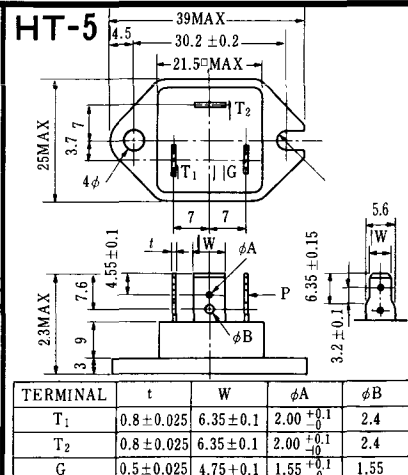
HT-3



HT-4



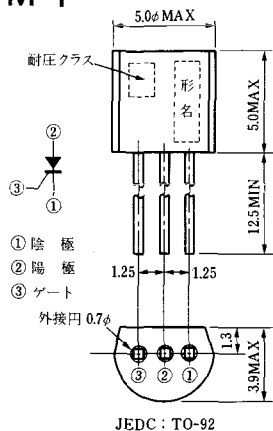
HT-5



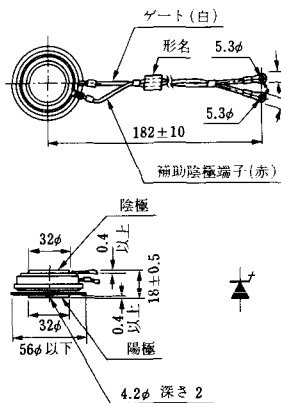
| TERMINAL | t | W | φA | φB |
|----------------|-----------|----------|-----------------------------------|------|
| T ₁ | 0.8±0.025 | 6.35±0.1 | 2.00 ^{+0.1} ₀ | 2.4 |
| T ₂ | 0.8±0.025 | 6.35±0.1 | 2.00 ^{+0.1} ₀ | 2.4 |
| G | 0.5±0.025 | 4.75±0.1 | 1.55 ^{+0.1} ₀ | 1.55 |

《寸法図単位：mm》

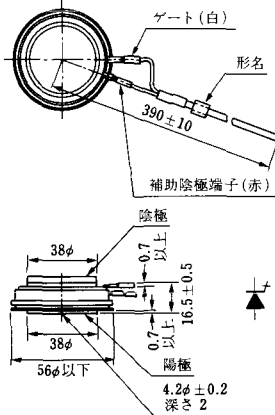
M-1



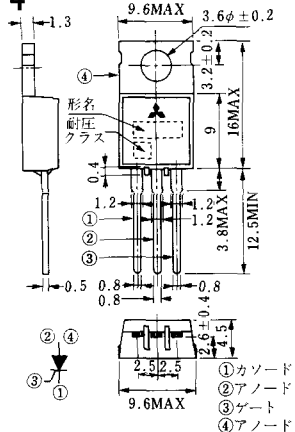
M-2



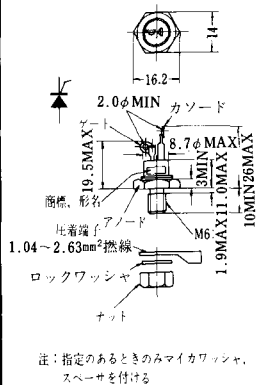
M-3



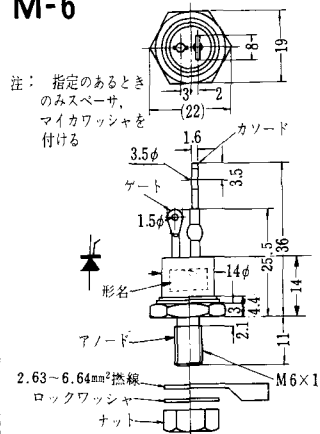
M-4



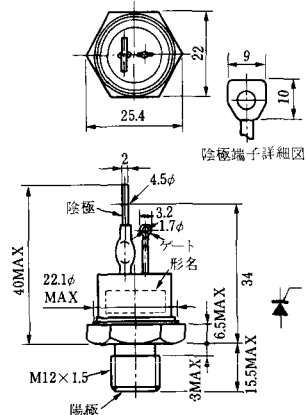
M-5



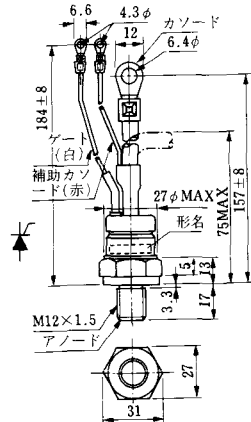
M-6



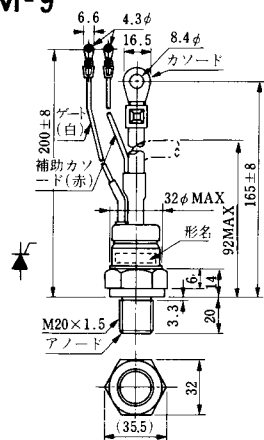
M-7



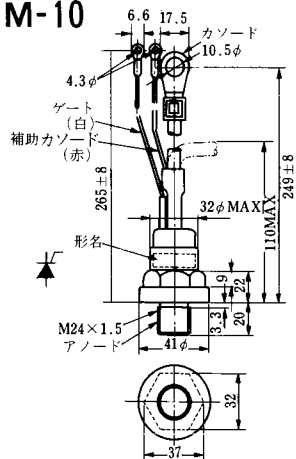
M-8



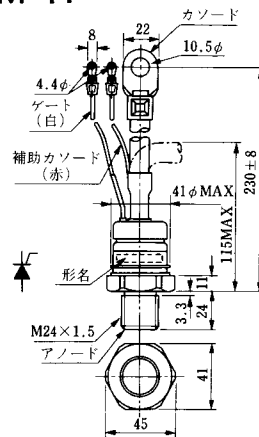
M-9



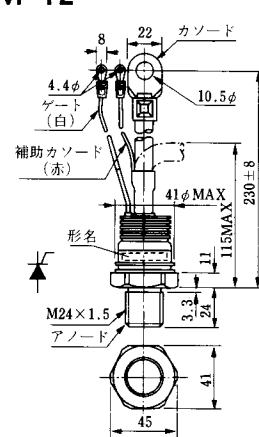
M-10



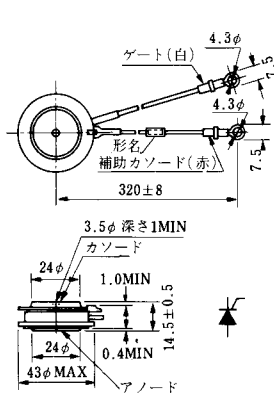
M-11



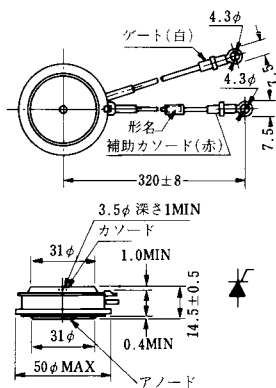
M-12



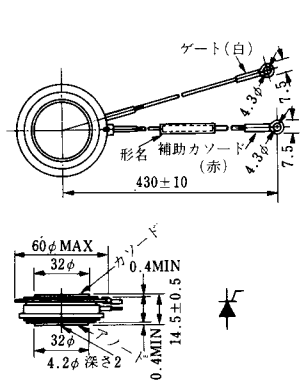
M-13



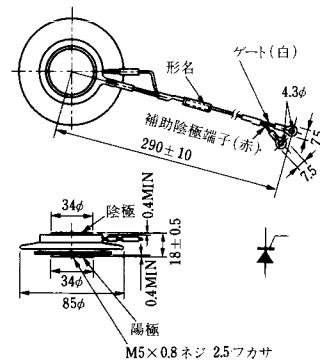
M-14

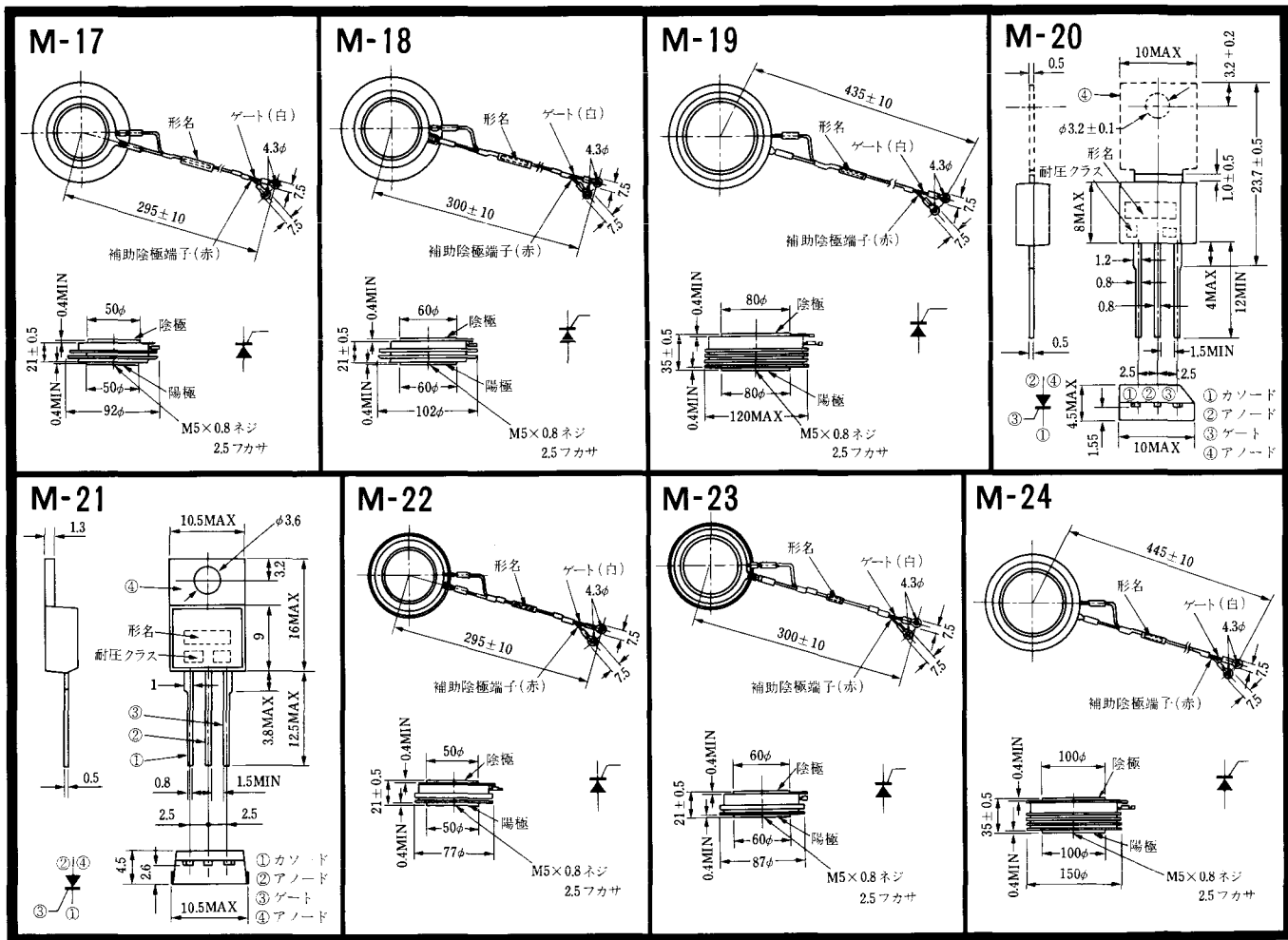


M-15

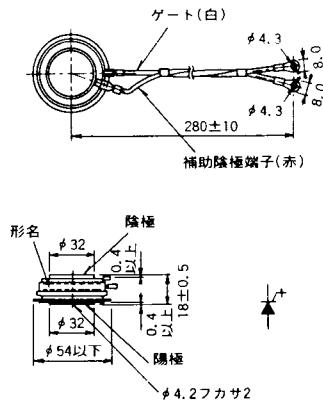


M-16

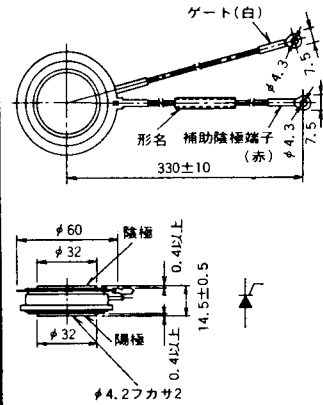




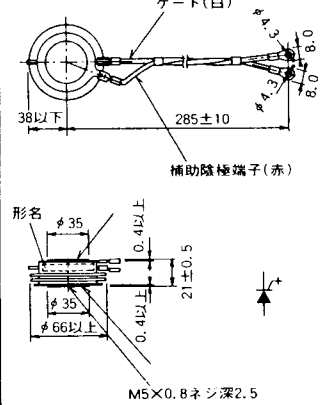
M-25



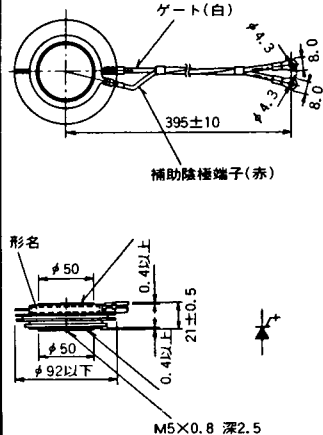
M-26



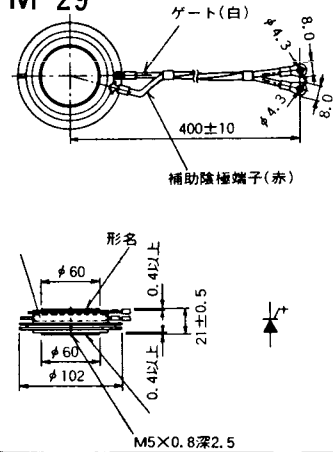
M-27



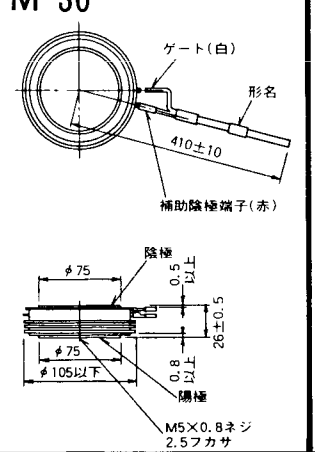
M-28



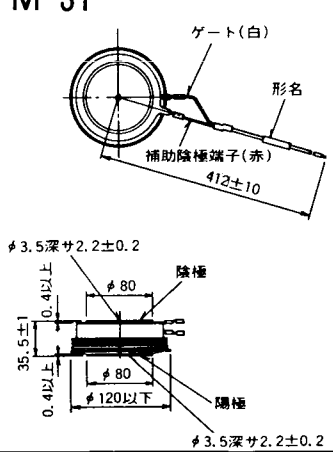
M-29



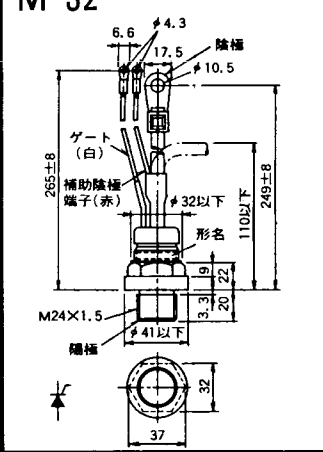
M-30



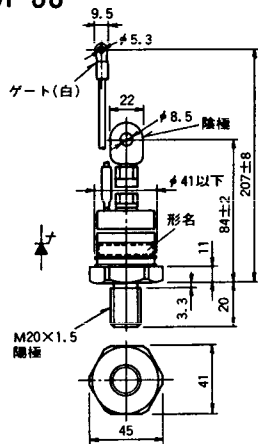
M-31



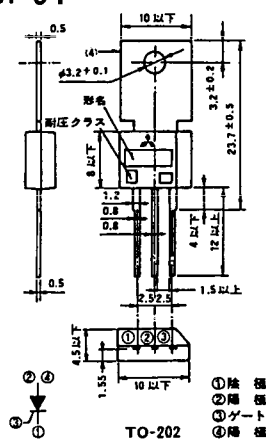
M-32



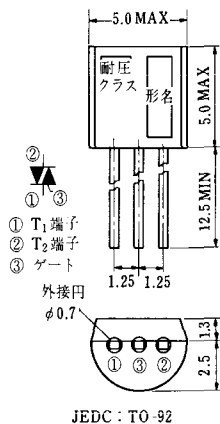
M-33



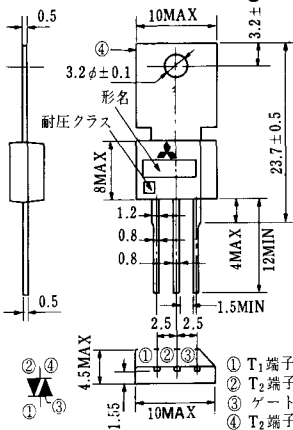
M-34



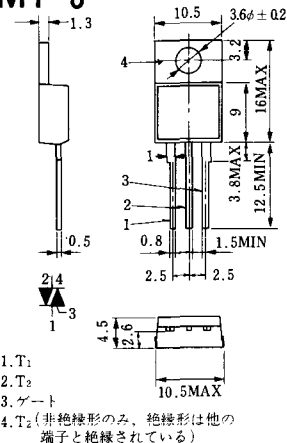
MT-1



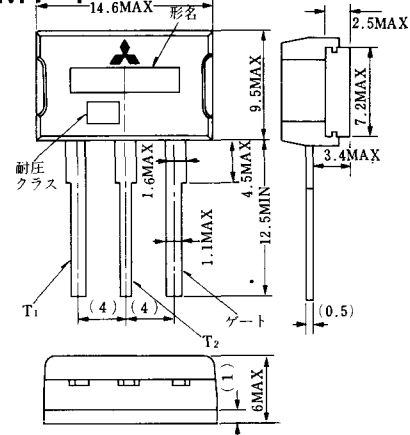
MT-2



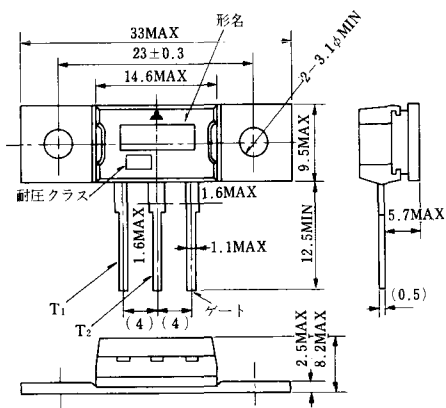
MT-3



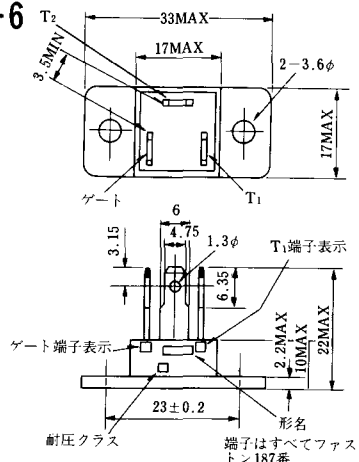
MT-4



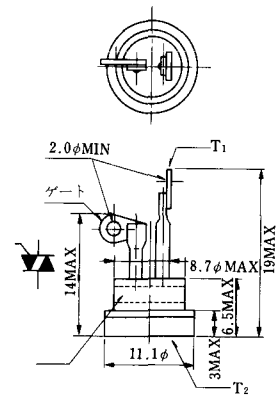
MT-5



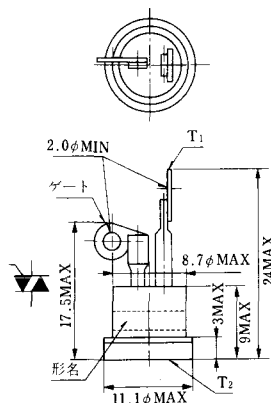
MT-6



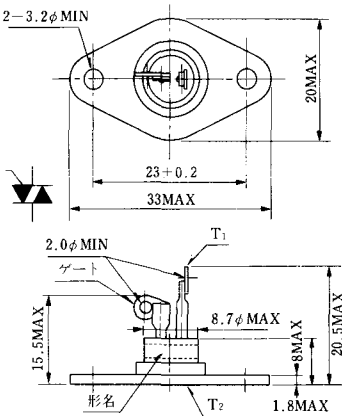
MT-7



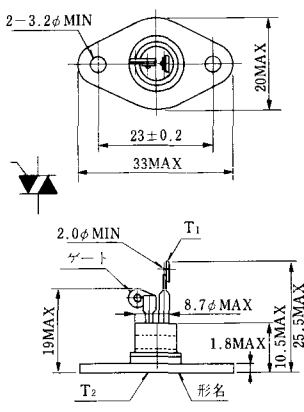
MT-8



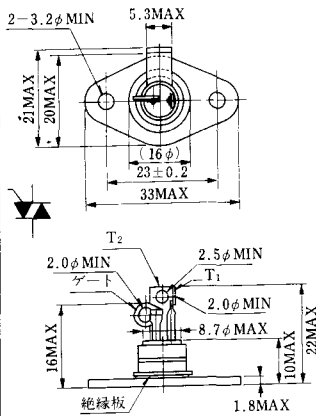
MT-9



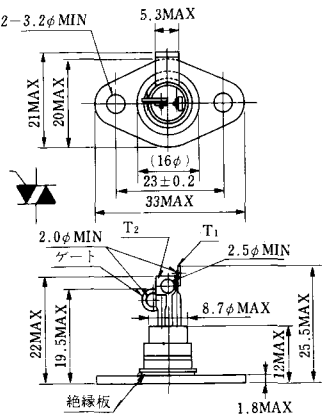
MT-10



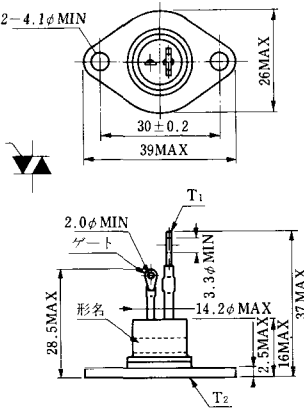
MT-11



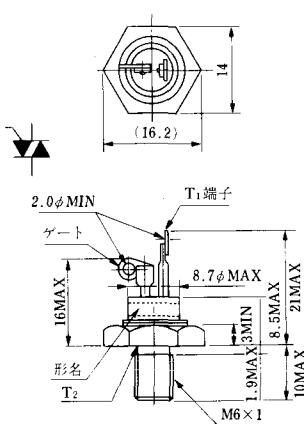
MT-12



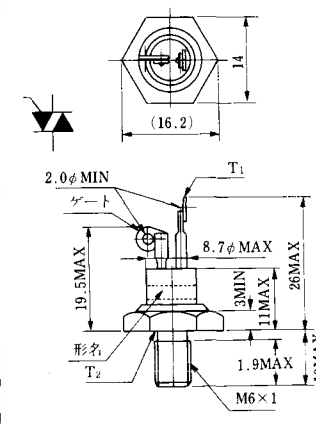
MT-13



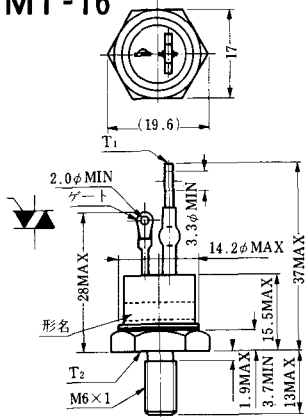
MT-14



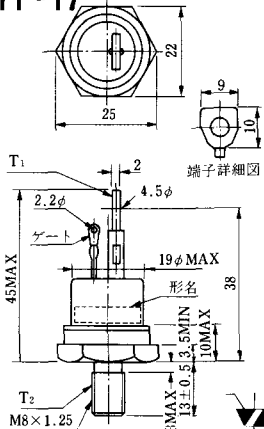
MT-15



MT-16

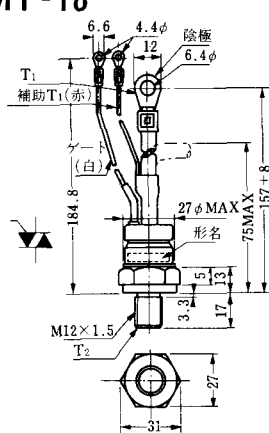


MT-17

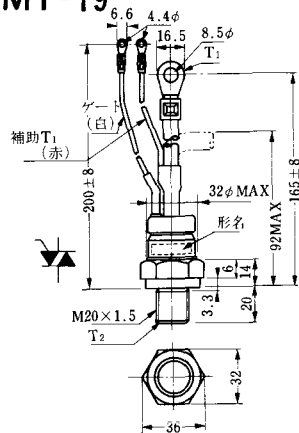


端子詳細図

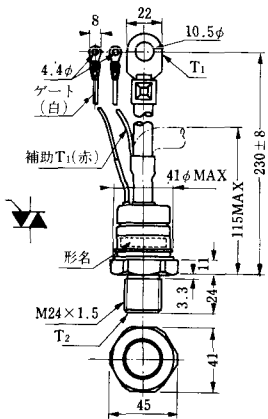
MT-18



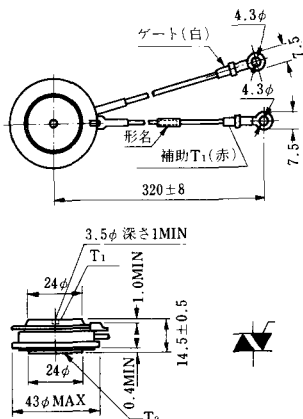
MT-19



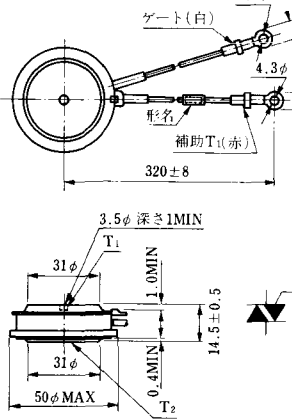
MT-20



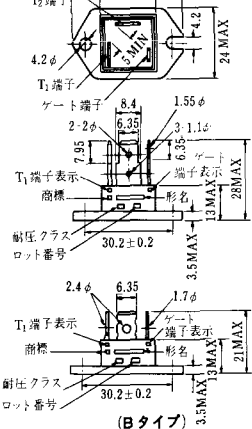
MT-21

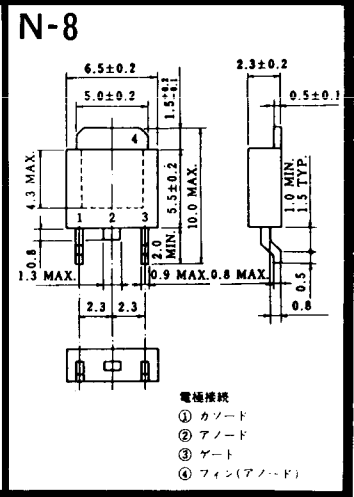
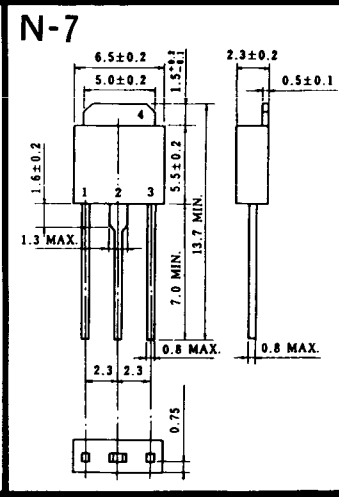
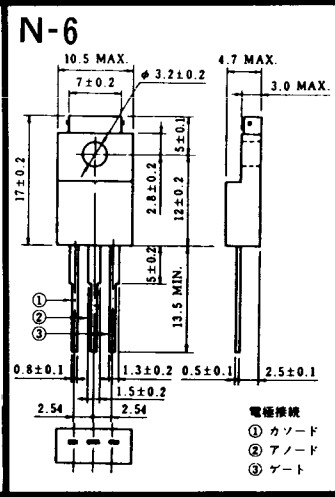
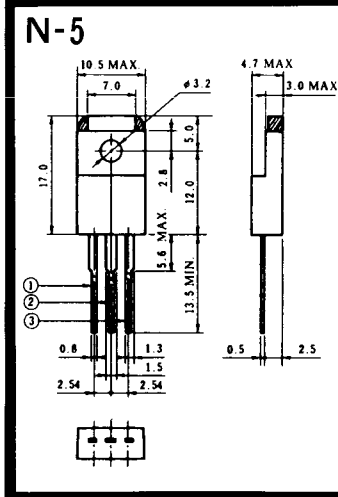
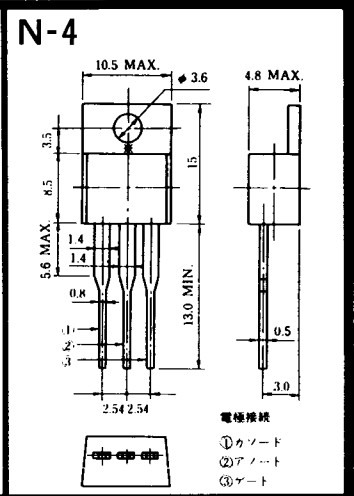
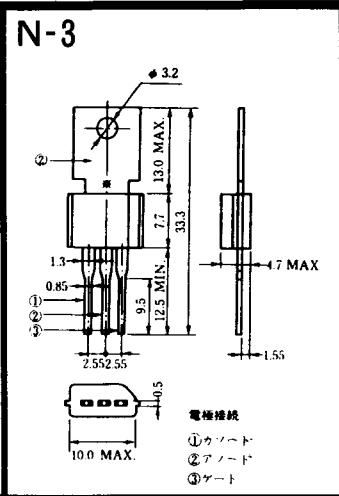
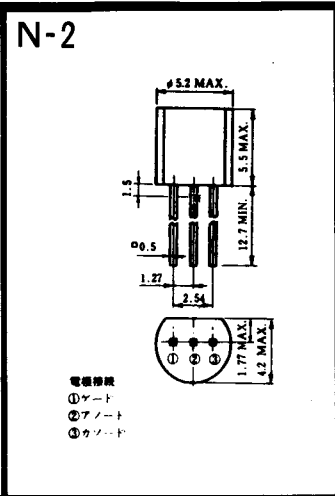
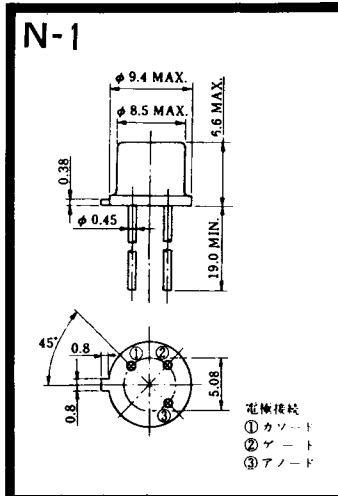


MT-22

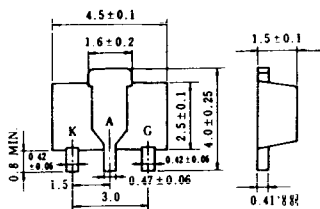


MT-23





N-9

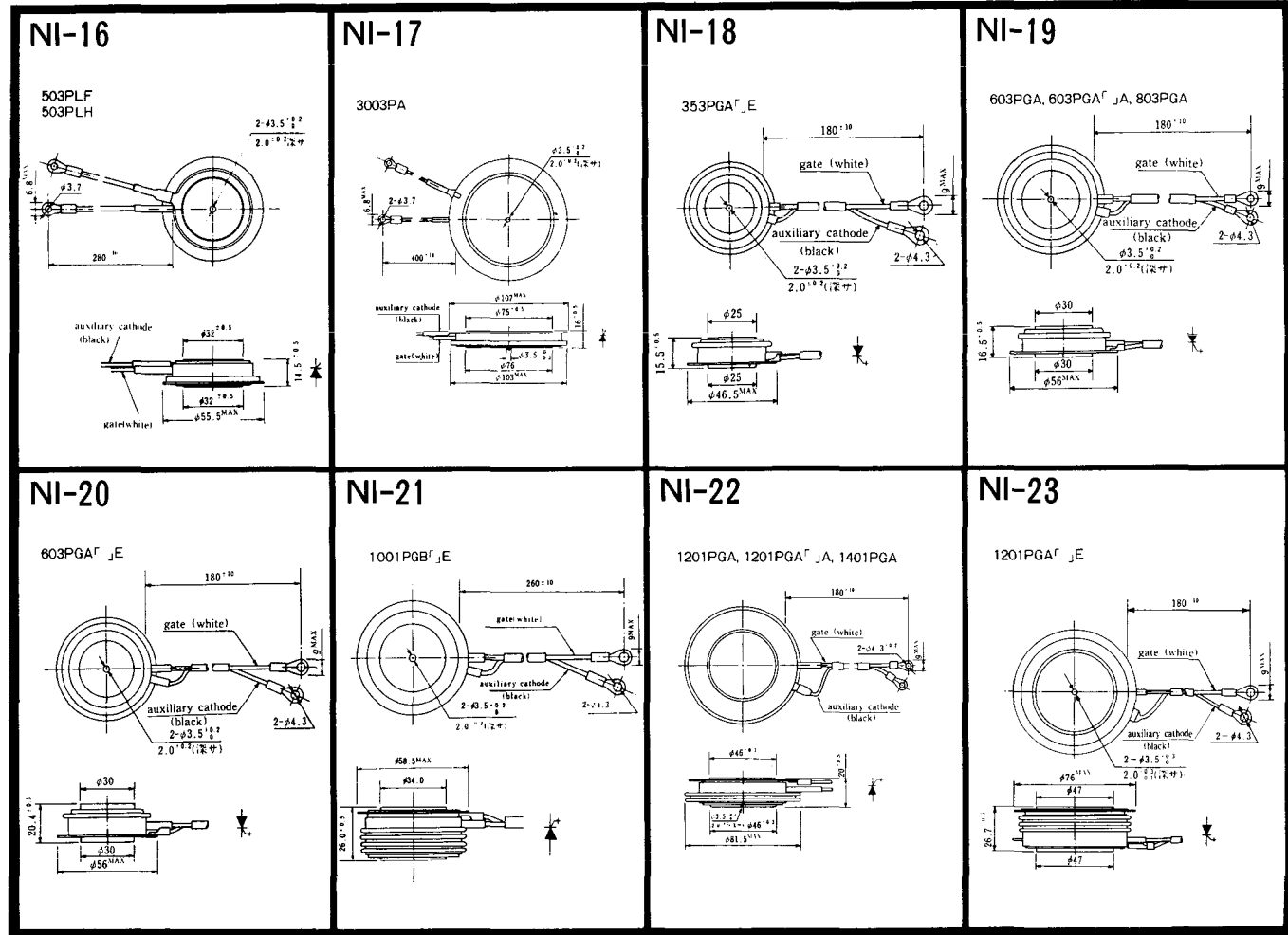


電極接続

K : カソード

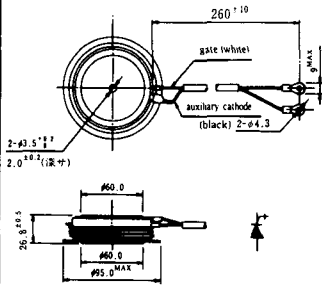
A : アノード

G : ゲート



NI-24

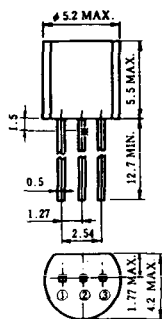
2001PGB^r JE



NI-25

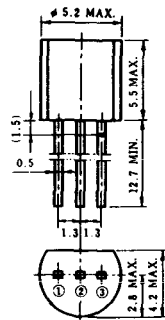
NI-26

NT-1



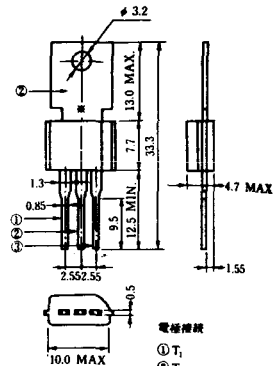
電極接続
① T₁
② ゲート
③ T₂

NT-2



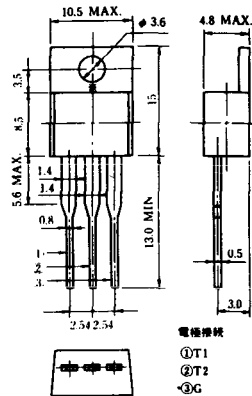
電極接続
① T₁
② ゲート
③ T₂

NT-3



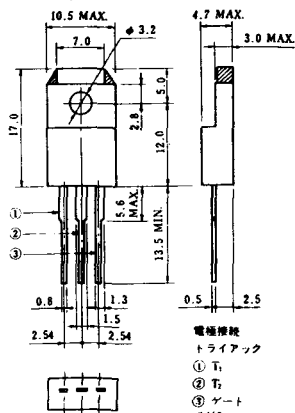
電極接続
① T₁
② T₂
③ ゲート

NT-4



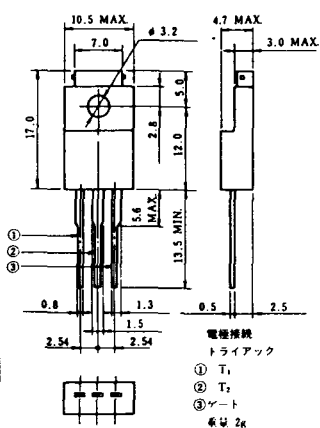
電極接続
① T₁
② T₂
③ G

NT-5



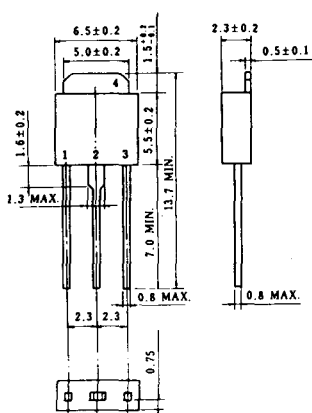
電極接続
トライアック
① T₁
② T₂
③ ゲート
④ G

NT-6

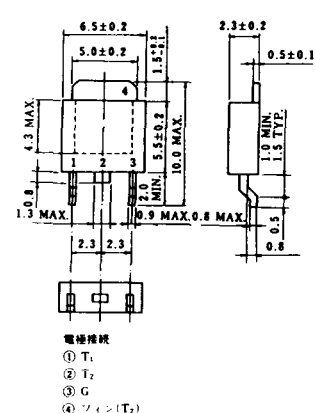


電極接続
トライアック
① T₁
② T₂
③ ゲート
④ G

NT-7

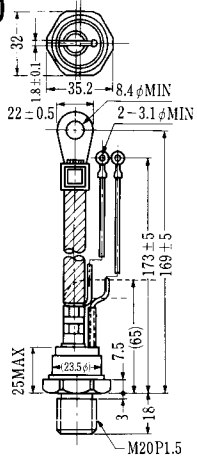


NT-8

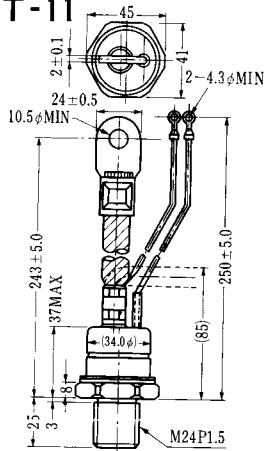


電極接続
① T₁
② T₂
③ G
④ ソフト(T₂)

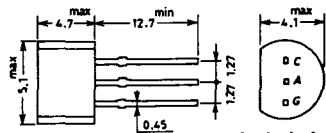
SAT-10



SAT-11

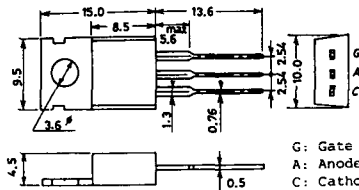


SY-1 (1096A)



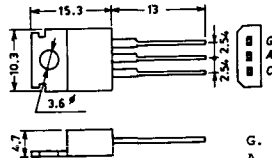
C: Cathode
A: Anode
G: Gate

SY-2 (1151)



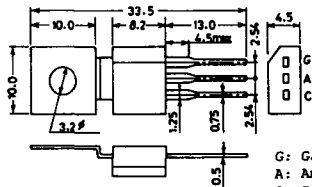
G: Gate
A: Anode
C: Cathode

SY-3 (1104)



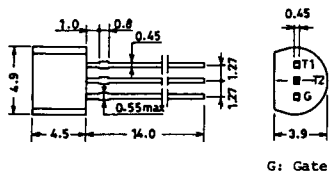
G: Gate
A: Anode
C: Cathode

SY-4 (1150)



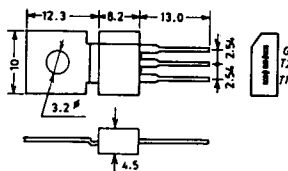
G: Gate
A: Anode
C: Cathode

1097A

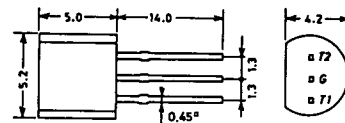


G: Gate

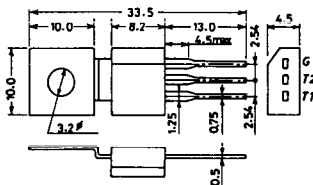
1102



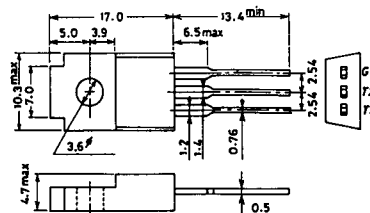
1141



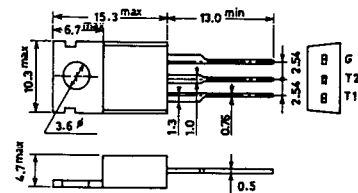
1142



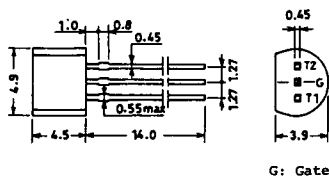
1144



1155

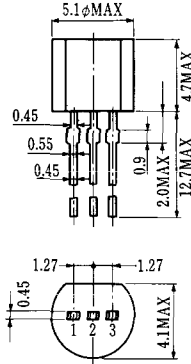


1192A



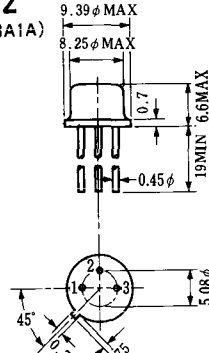
G: Gate

T-1 (13-5A1A)



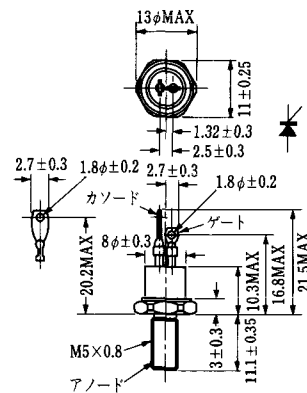
- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



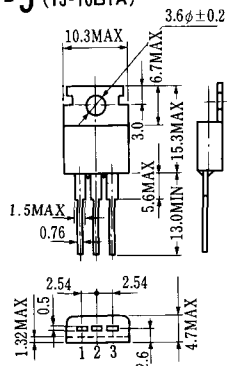
1. カソード
2. ゲート
3. アノード(ケース)

T-3 (13-8C1A)



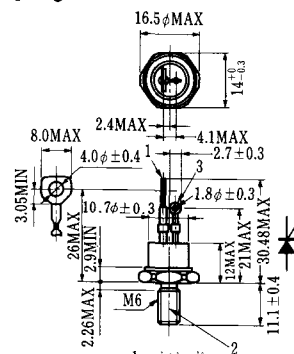
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



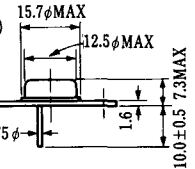
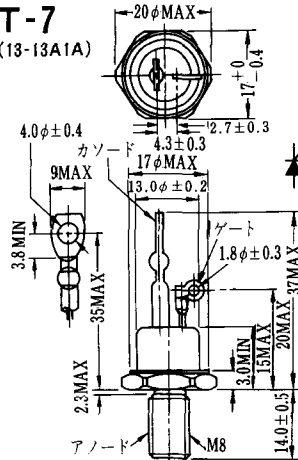
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



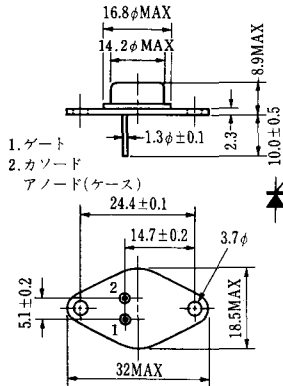
- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



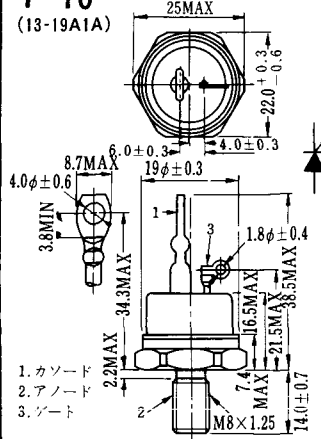
1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



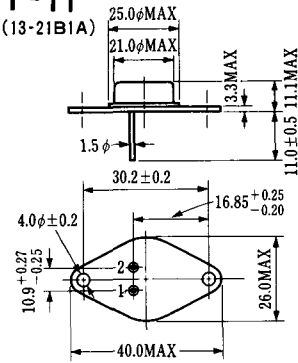
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



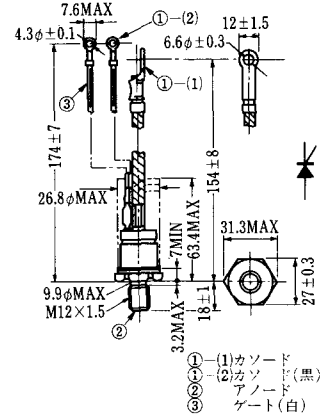
1. カソード
2. アノード
3. ゲート

T-11 (13-21B1A)



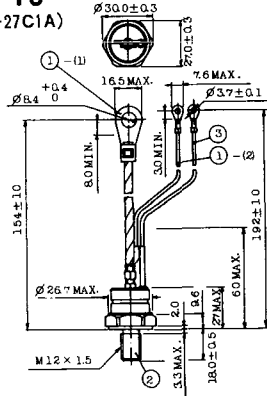
1. ゲート
2. カソード
- アノード(ケース)

T-12 (13-27B1B)



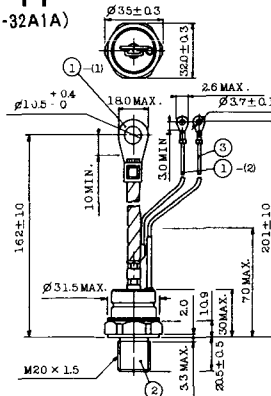
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-13 (13-27C1A)



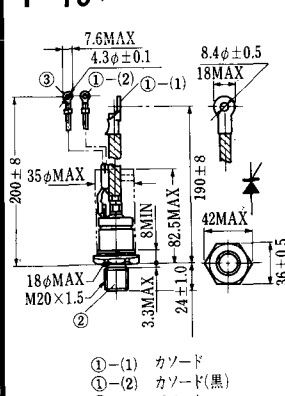
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-14 (13-32A1A)



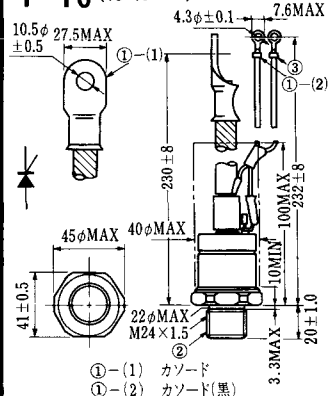
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-15 (13-35C1B)



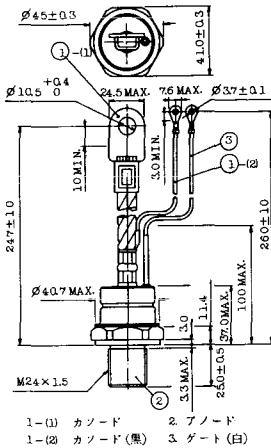
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-16 (13-40B1A)

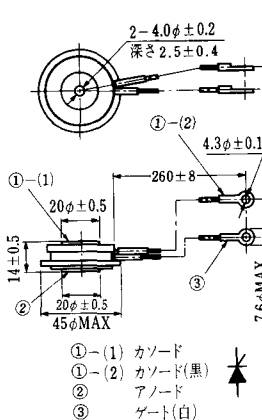


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

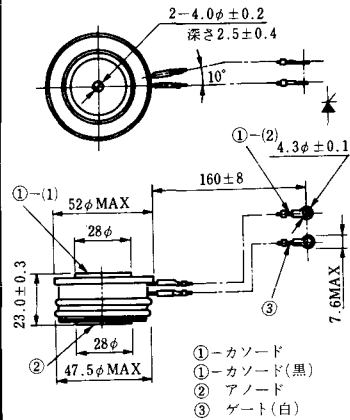
T-17 (13-42A1A)



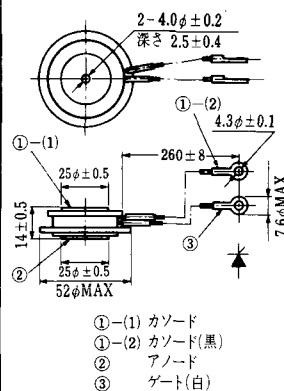
T-18 (13-45D1A)



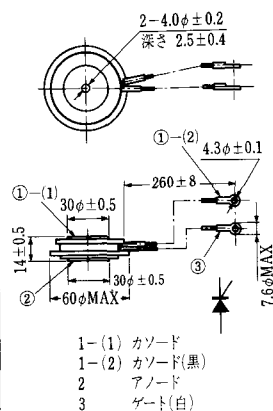
T-19 (13-52B1A)



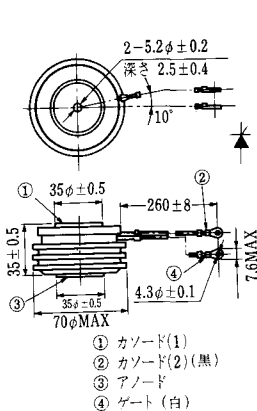
T-20 (13-52C1A)



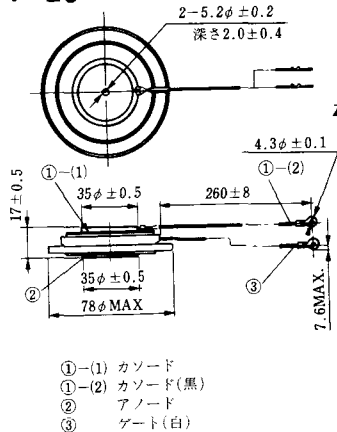
T-21 (13-60A1A)



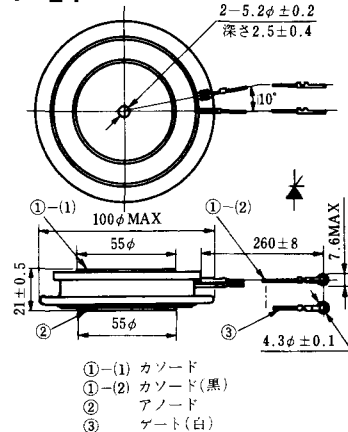
T-22 (13-70C1A)



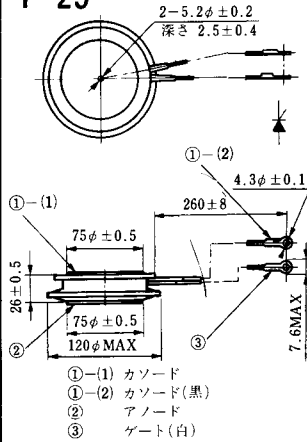
T-23 (13-78A1A)



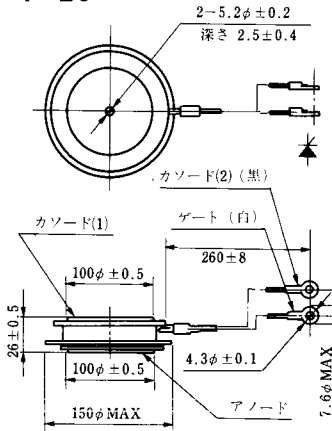
T-24 (13-100C1A)



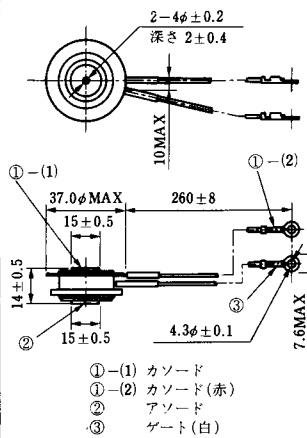
T-25 (13-120A2A)



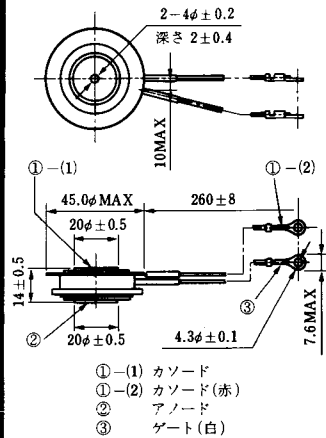
T-26 (13-150A1A)



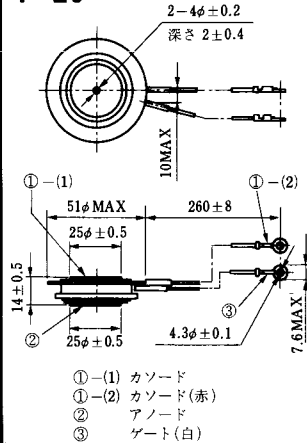
T-27 (13-37A1A)



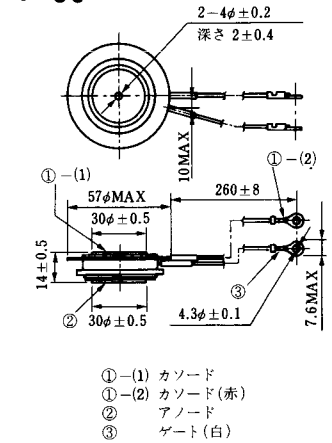
T-28 (13-45E1A)



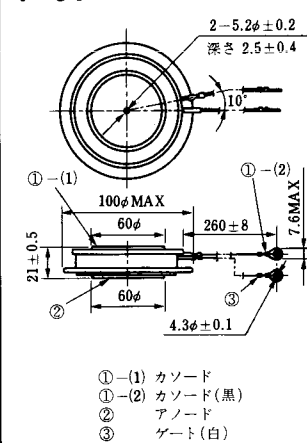
T-29 (13-51A1A)



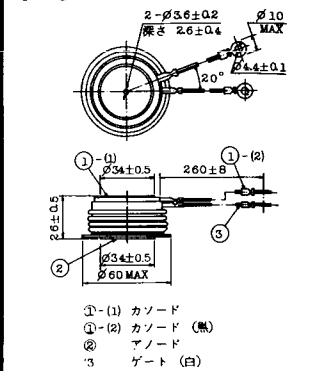
T-30 (13-57A1A)



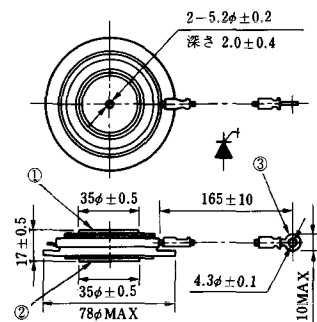
T-31 (13-100E1A)



T-32 (13-60E3A)

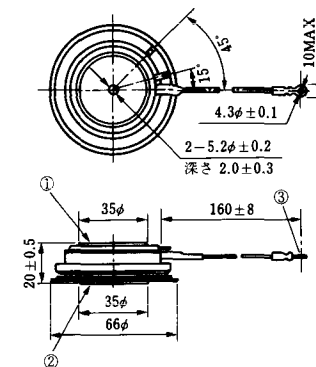


T-33 (13-78B1A)



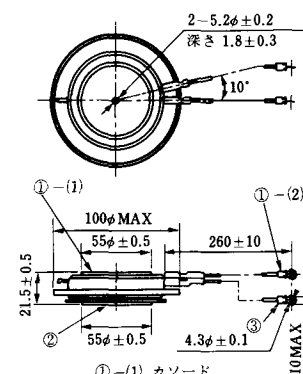
- ① カソード
- ② アノード
- ③ ゲート

T-34 (13-66A1A)



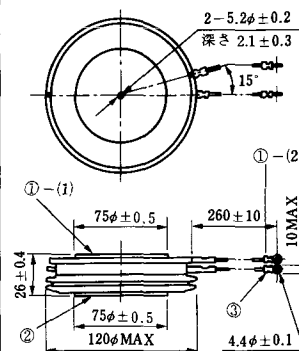
- ① カソード
- ② アノード
- ③ ゲート

T-35 (13-100D1A)



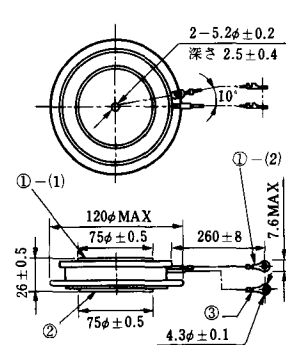
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-36 (13-120E1A)



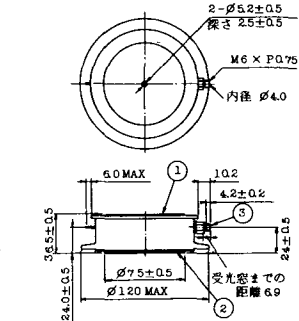
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-37 (13-120A1A)



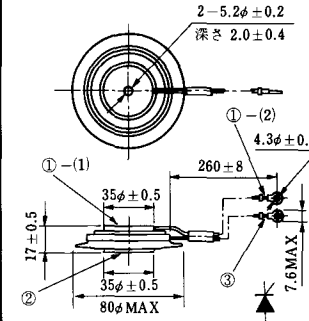
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-38 (13-120C1A)



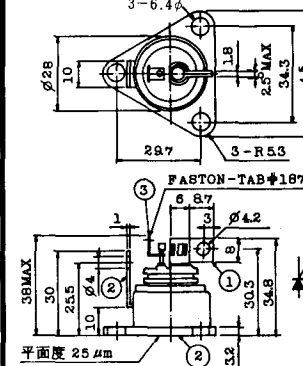
- ① カソード
- ② アノード
- ③ ゲート

T-39 (13-80B1A)



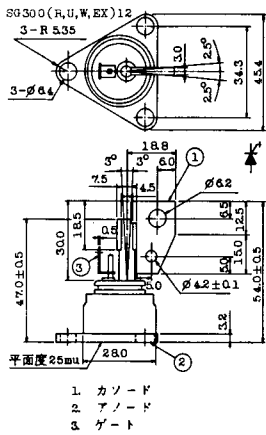
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-40 (13-28A1A)

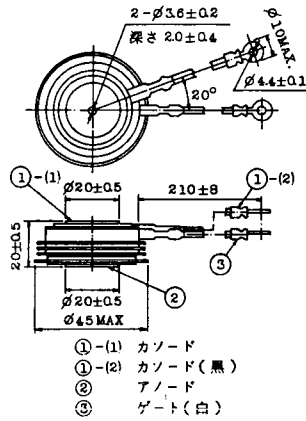


- 1. カソード
- 2. アノード
- 3. ゲート

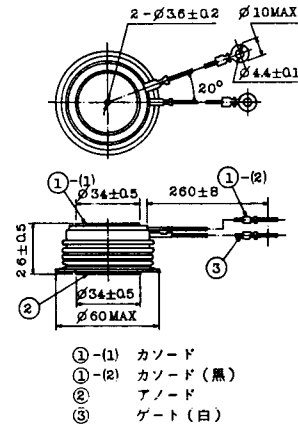
T-41 (13-28A2A)



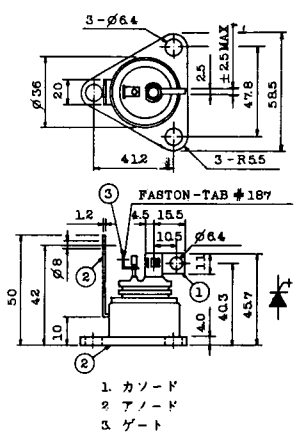
T-42 (13-45F1A)



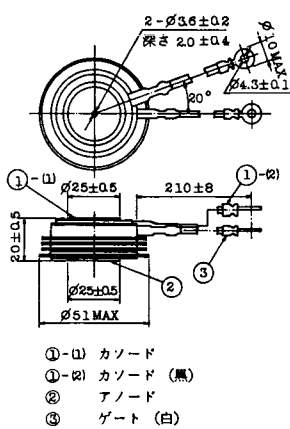
T-43 (13-60E2A)



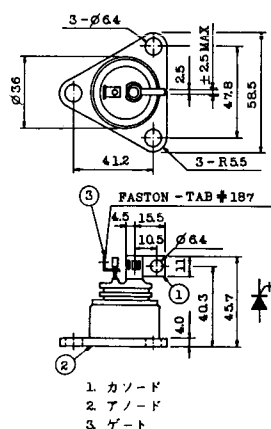
T-44 (13-36A1A)



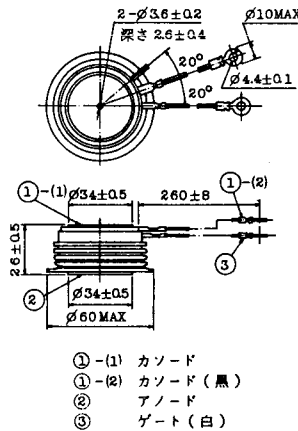
T-45 (13-51B1A)



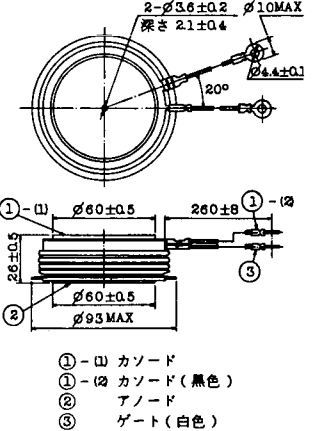
T-46 (13-36B1A)



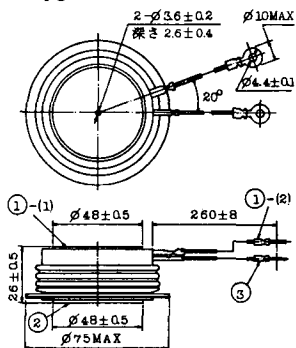
T-47 (13-60E1A)



T-48 (13-93C1A)

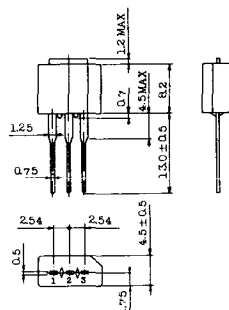


T-49 (13-75A1A)



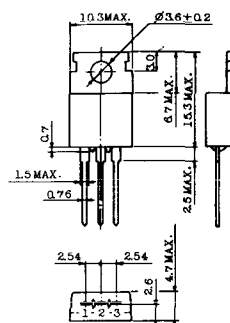
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-50 (13-10A3A)



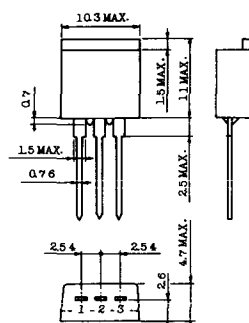
- 1 カソード
- 2 アノード
- 3 ゲート

T-51 (13-10D1A)



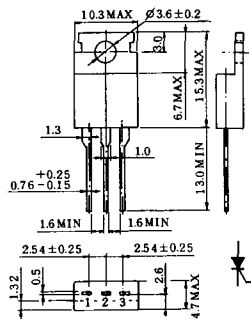
- 1 カソード
- 2 アノード
- 3 ゲート

T-52 (13-10D2A)



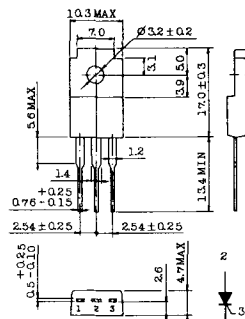
- 1 カソード
- 2 アノード
- 3 ゲート

T-53 (13-10E1B)



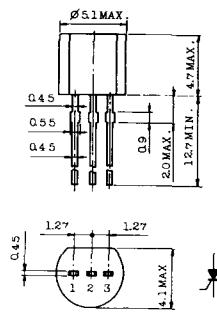
- 1 カソード
- 2 アノード
- 3 ゲート

T-54 (13-10F1B)



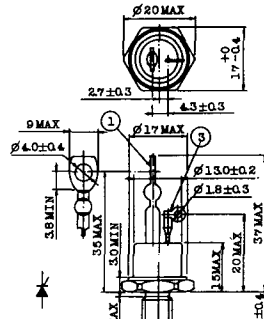
- 1 カソード
- 2 アノード
- 3 ゲート

T-55 (13-5A1D)



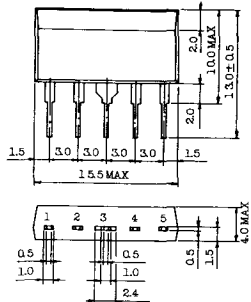
- 1 カソード
- 2 アノード
- 3 アノード

T-56 (13-13C1A)



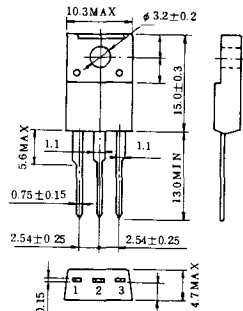
- 1 カソード
- 2 アノード
- 3 ゲート

T-57 (12-16C1A)



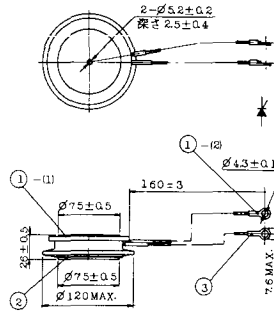
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



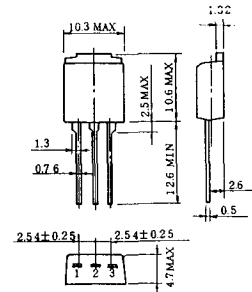
1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



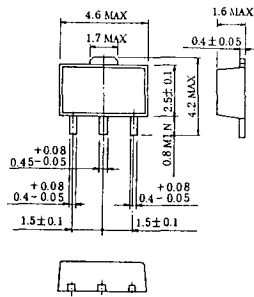
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



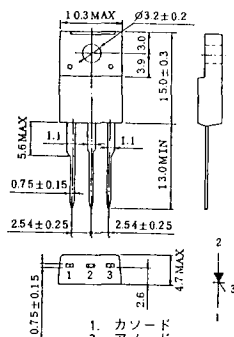
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



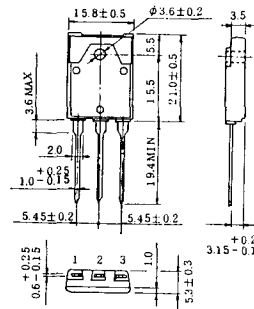
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



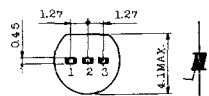
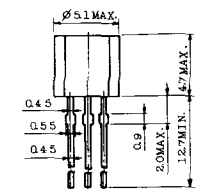
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



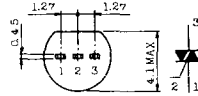
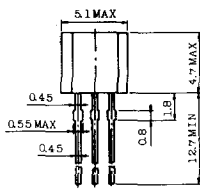
1. カソード
2. アノード
3. ゲート

TT-1



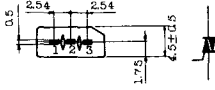
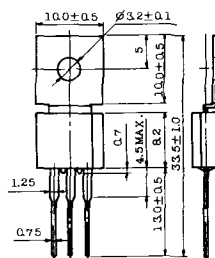
- 1. ゲート
- 2. T₂
- 3. T₁

TT-2



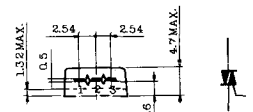
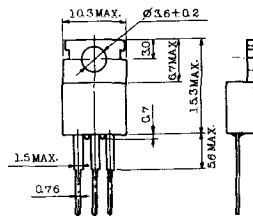
- 1. T₁
- 2. ゲート
- 3. T₂

TT-3



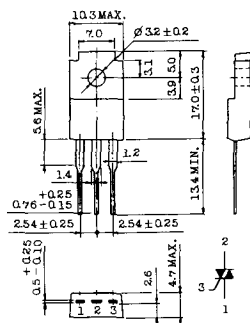
- 1. T₁
- 2. T₂
- 3. ゲート

TT-4



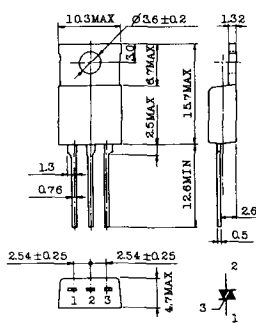
- 1. T₁
- 2. T₂
- 3. ゲート

TT-5



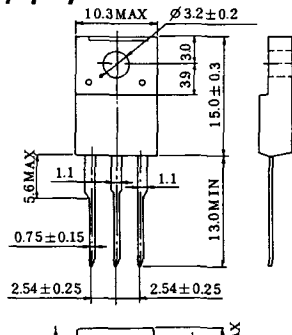
- 1. T₁
- 2. T₂
- 3. ゲート

TT-6



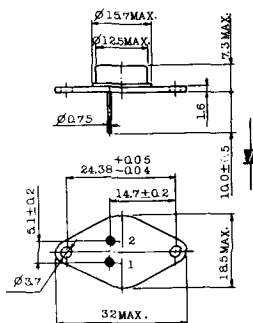
- 1. T₁
- 2. T₂ (放熱板)
- 3. ゲート

TT-7

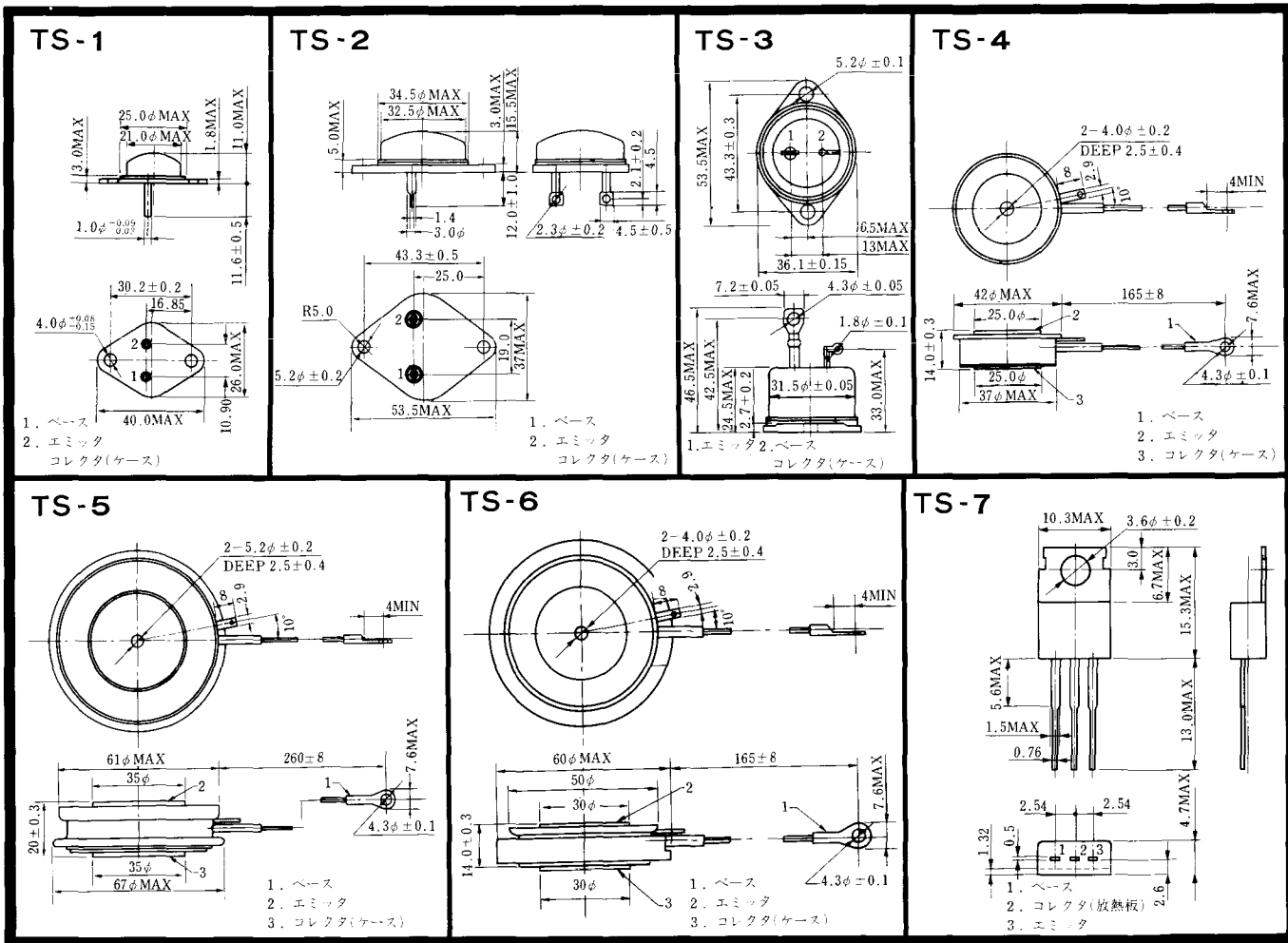


- 1. T₁
- 2. T₂
- 3. ゲート

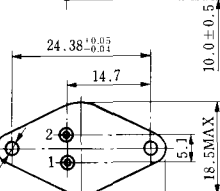
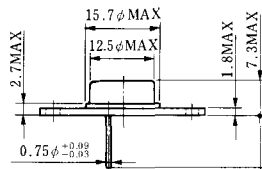
TT-8



- 1. ゲート
- 2. T₁
- T₂ (ケース)

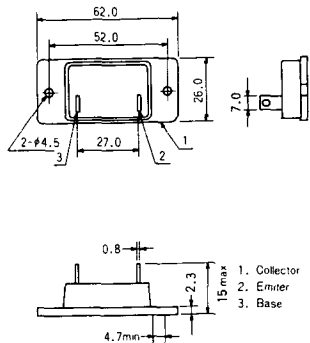


TS-8

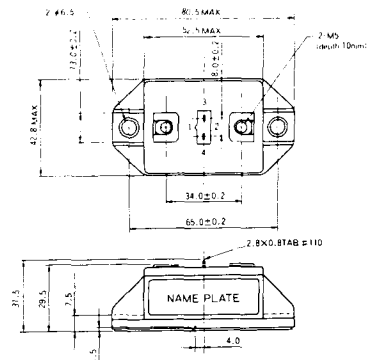


- 1. ベース
- 2. エミッタ
コレクタ
(ケース)

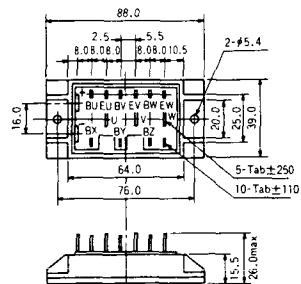
S-62A1A



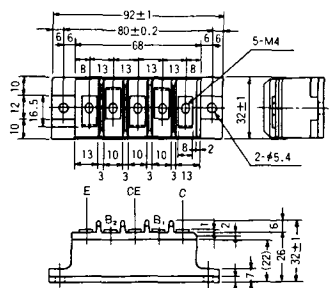
S-80A1A



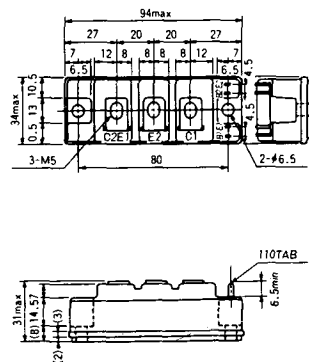
S-88D1A



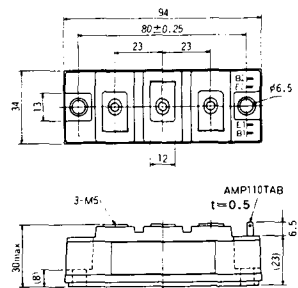
S-92B1A



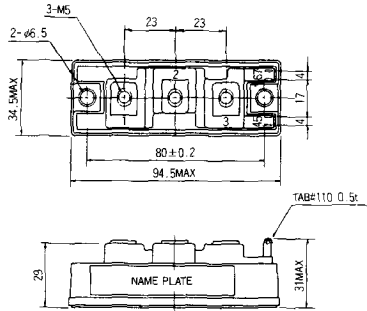
S-94B1A



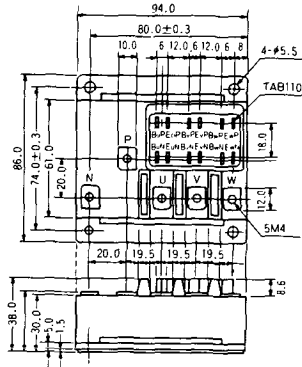
S-94B1B



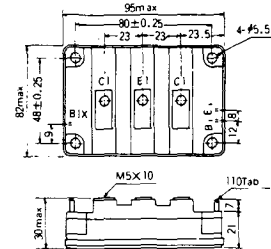
S-94B2A



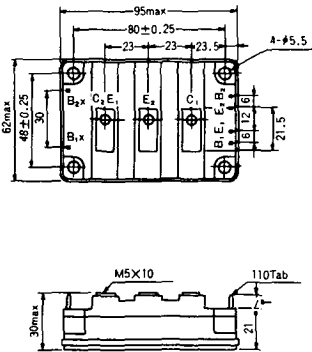
S-94D1A



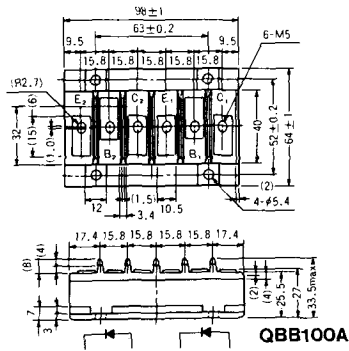
S-95A1A



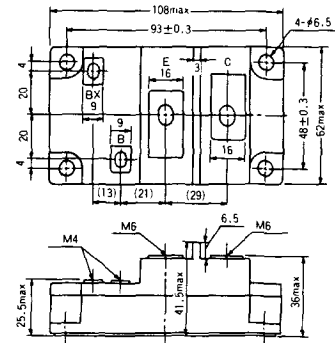
S-95B1A



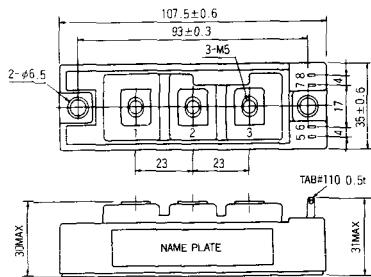
S-98B1B



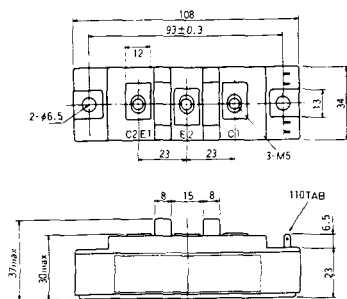
S-108A2A



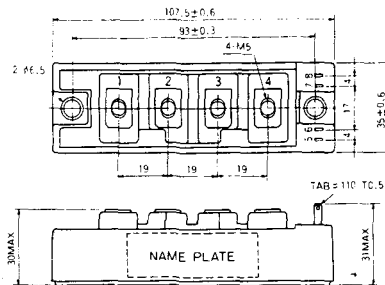
S-108B1A



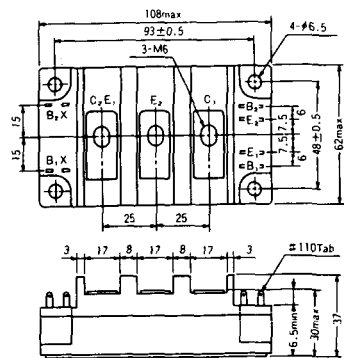
S-108B1B



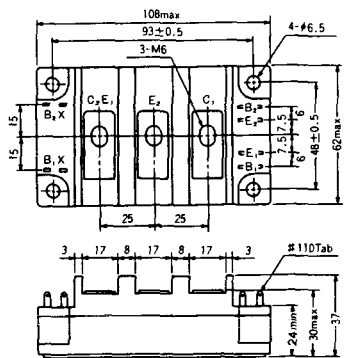
S-108B1C



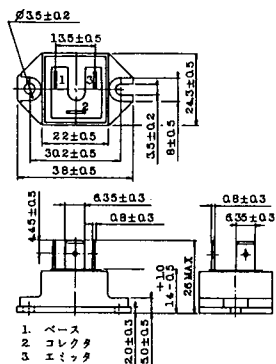
S-108B2A



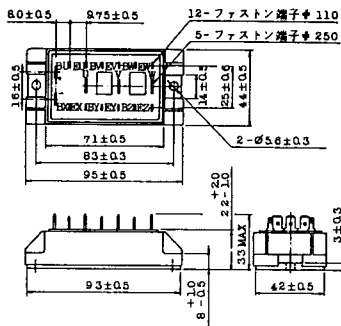
S-108B2B



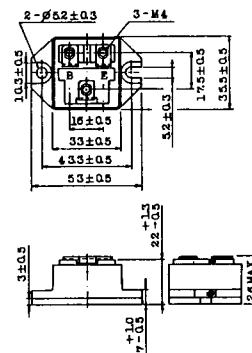
2-22B1A



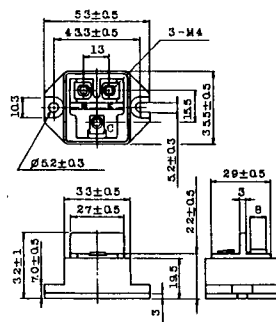
2-27A4A



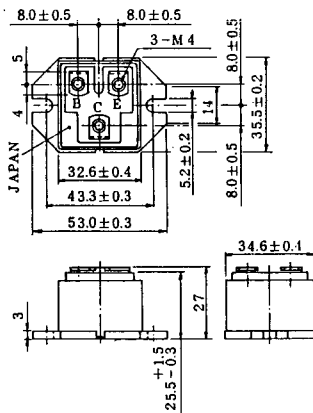
2-33C1A



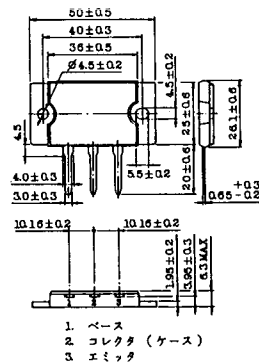
2-33D1A



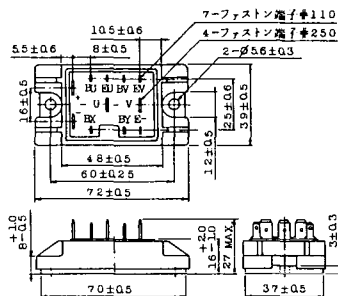
2-33F1A



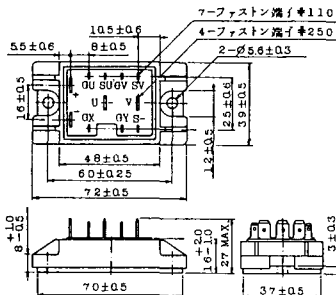
2-37A1A



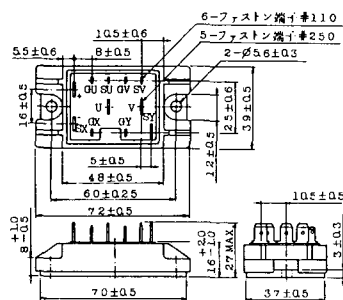
2-48A3A



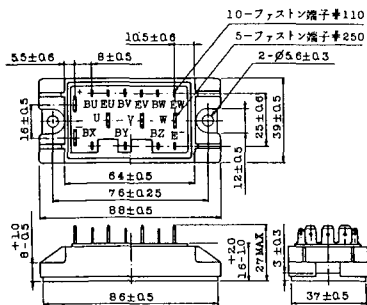
2-48A3B



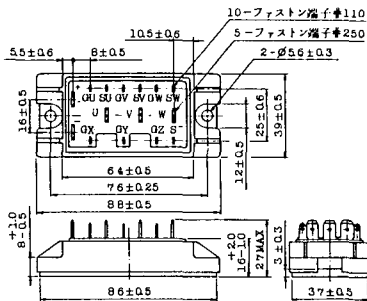
2-48A4A



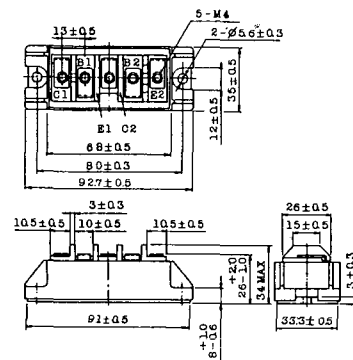
2-64A2A



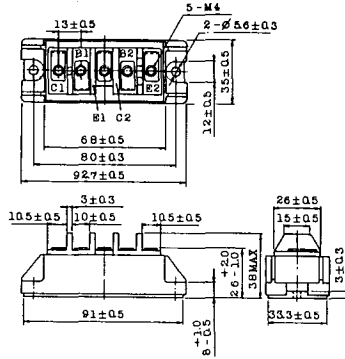
2-64A2B



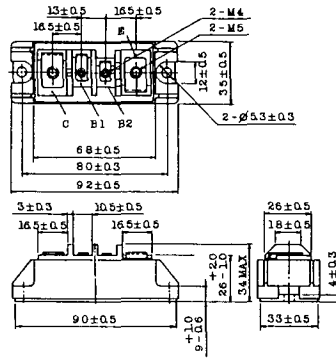
2-68A2A



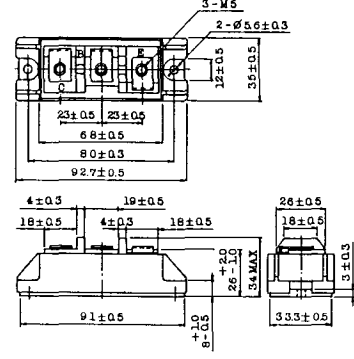
2-68B2A



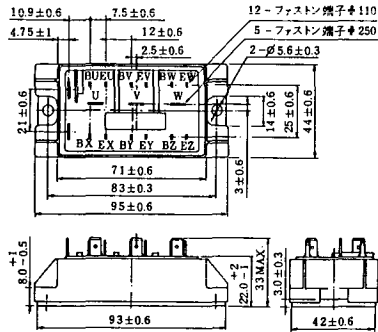
2-68C1A



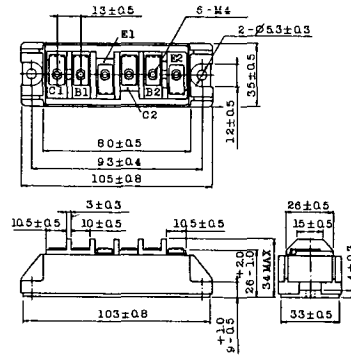
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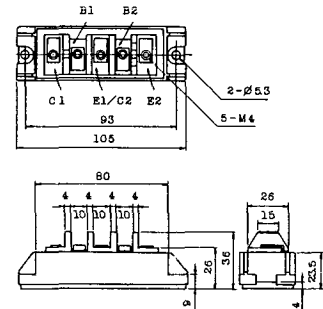
2-72A3A



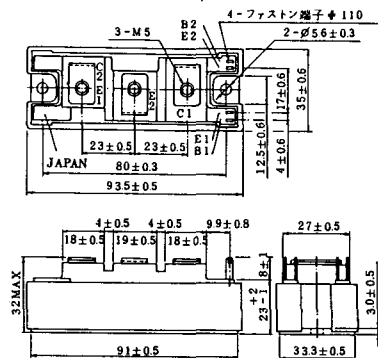
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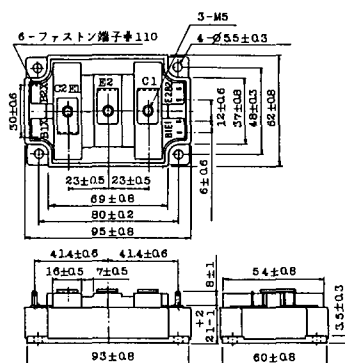
2-80B1A



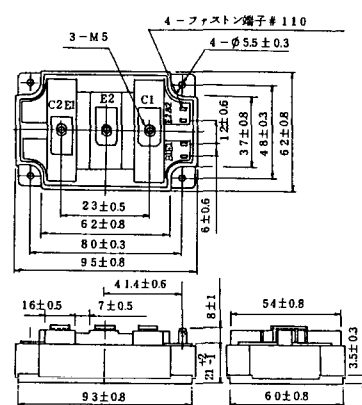
2-94D1A



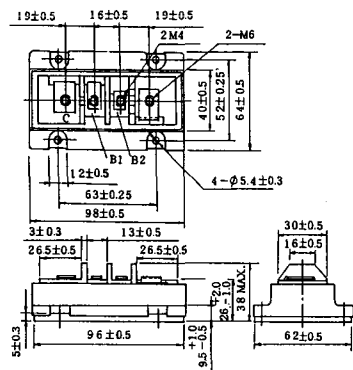
2-96A3A



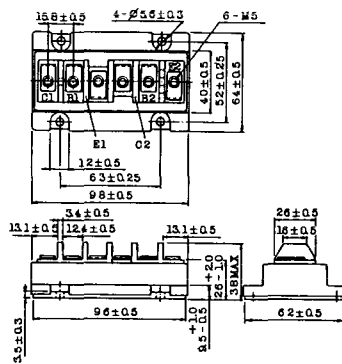
2-96A4A



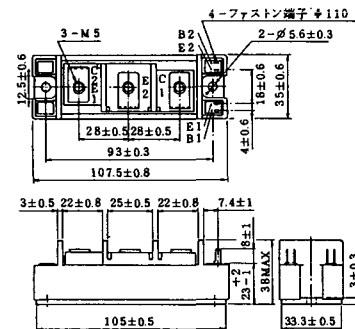
2-98B1A



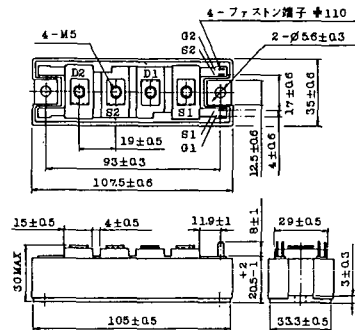
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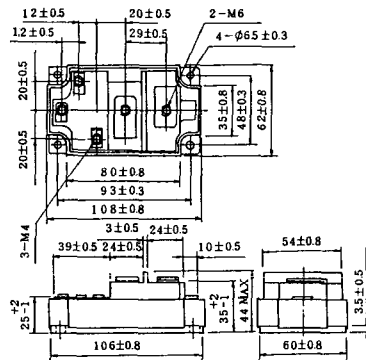
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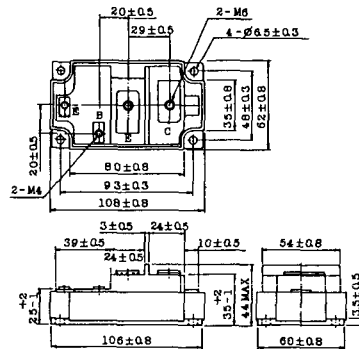
2-108B1A



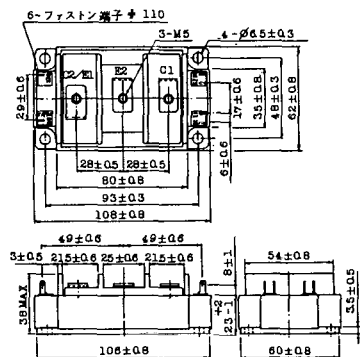
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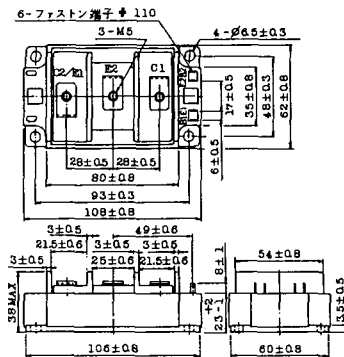
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2-109B3A

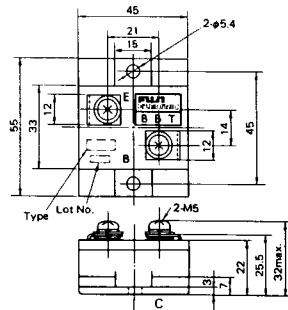


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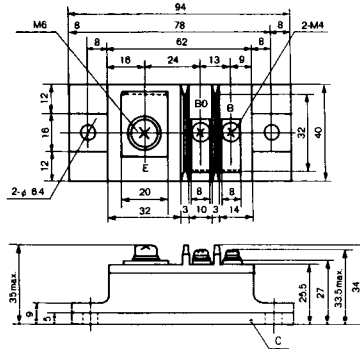
BBT-II

BBTII
1D200A-020



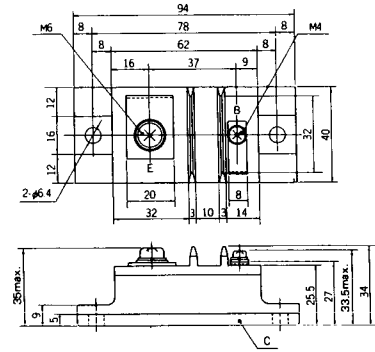
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BBTIII
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ETM36-030
ETN36-030
ETN35-030



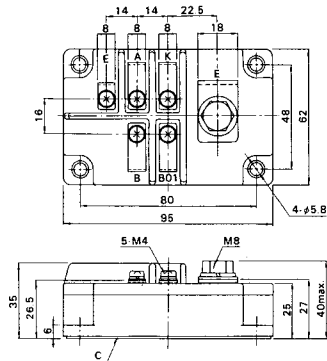
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BBTIII
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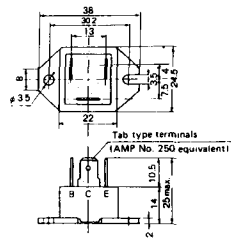


BBT-IV

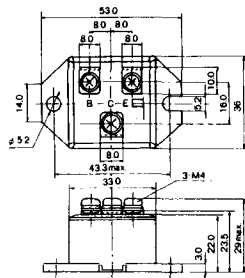
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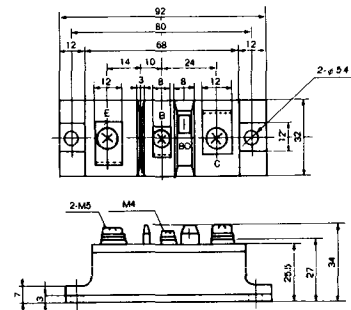
M-101



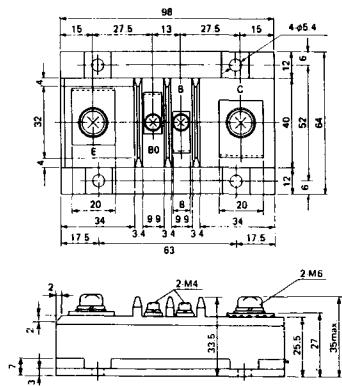
M-102



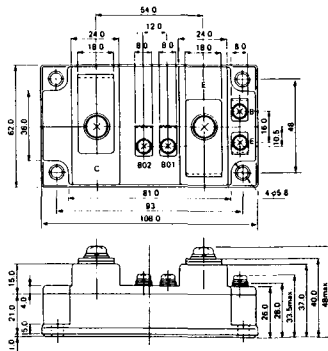
M-103



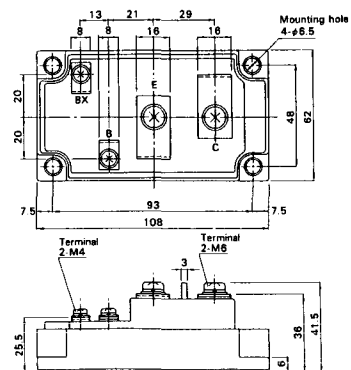
M-104



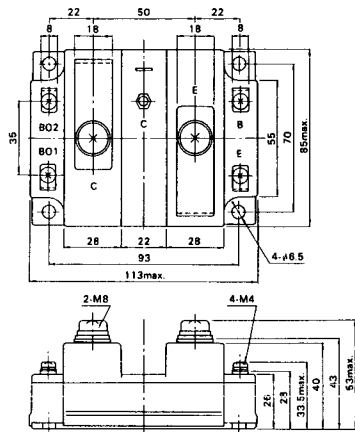
M-105



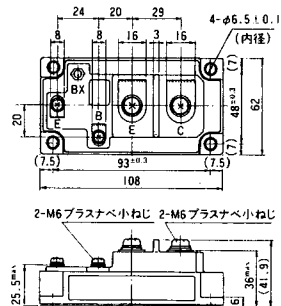
M-106



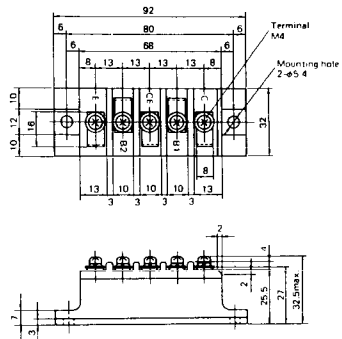
M-107



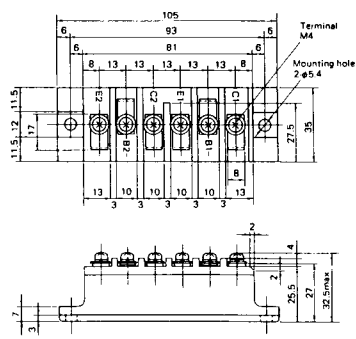
M-116



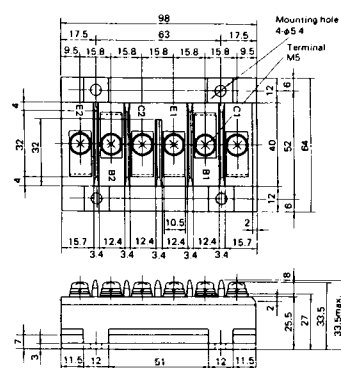
M-201



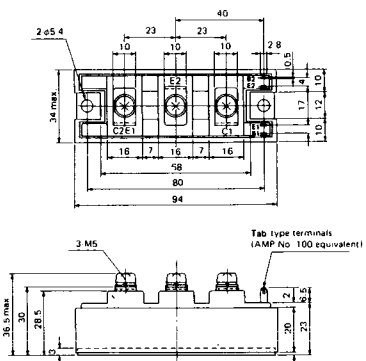
M-202



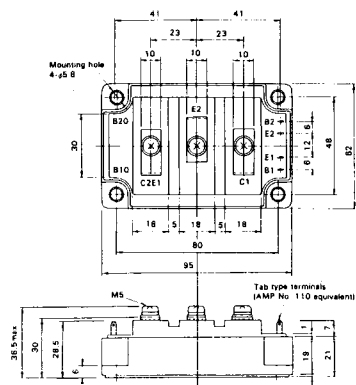
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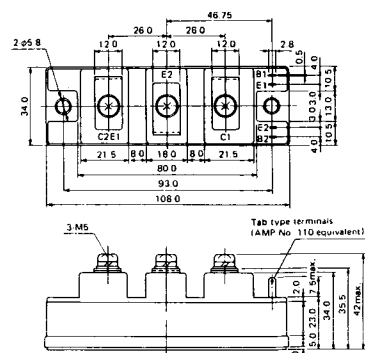
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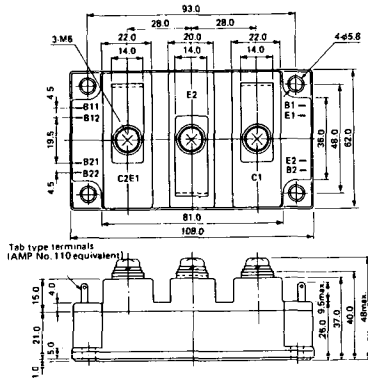
M-205



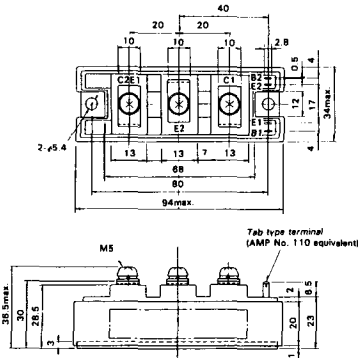
M-206



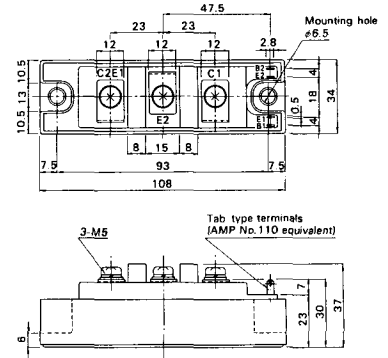
M-207



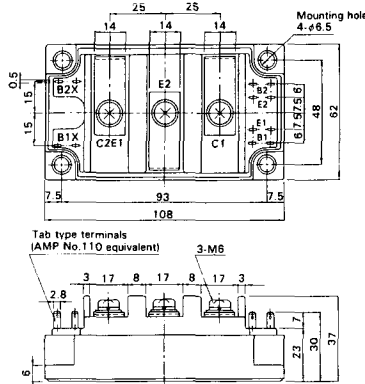
M-208



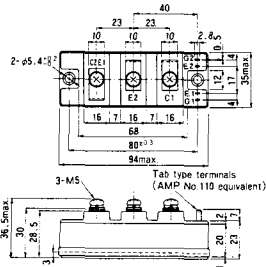
M-209



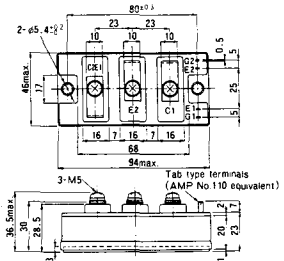
M-210



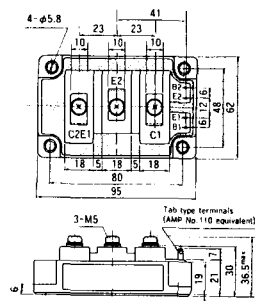
M-211



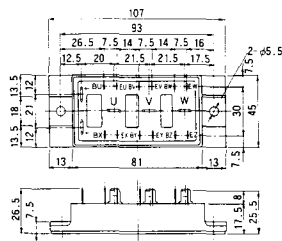
M-212



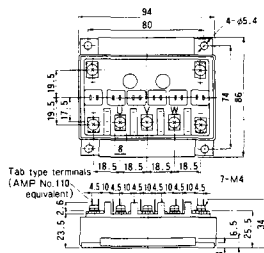
M-219



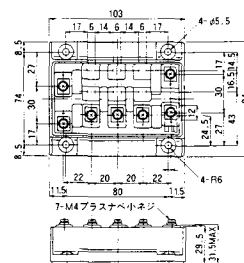
M-607



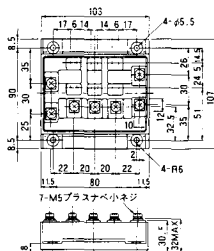
M-608



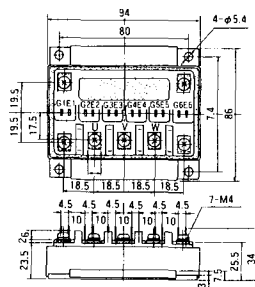
M-609



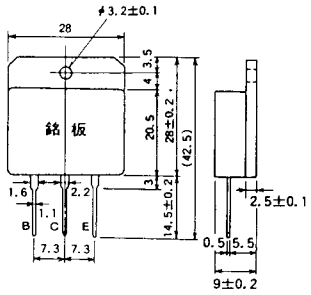
M-610



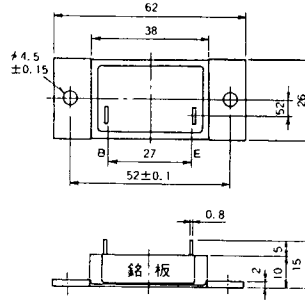
M-616



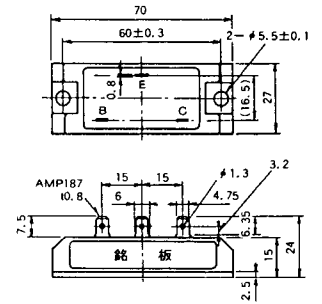
M-1A1A



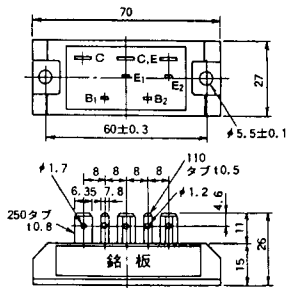
M-2A1A



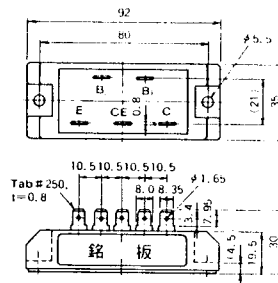
M-2B1A



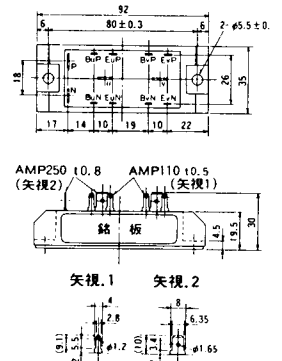
M-2B2A



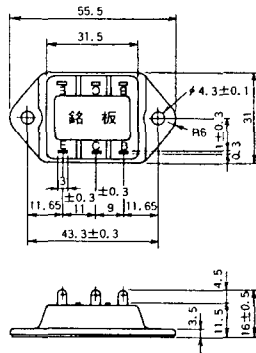
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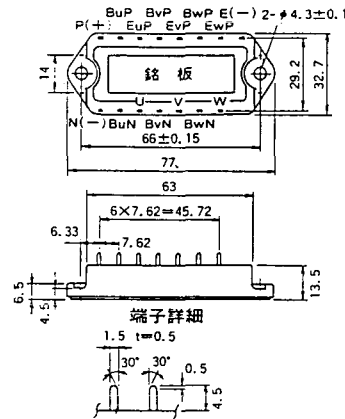
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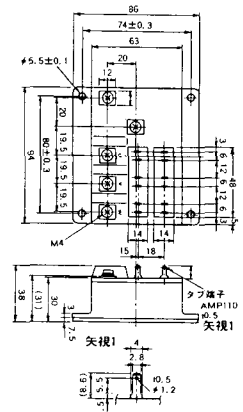
M-3C1A



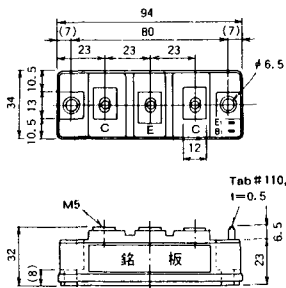
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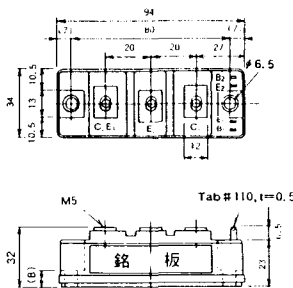
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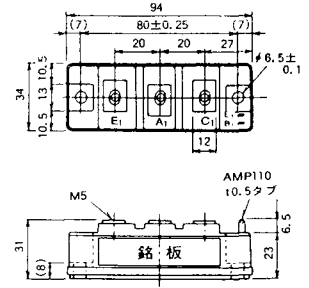
M-4A1A



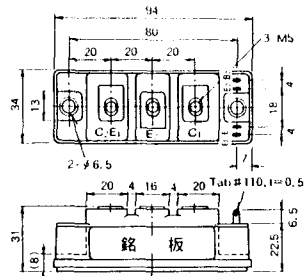
M-4A2A



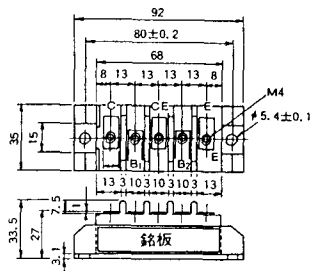
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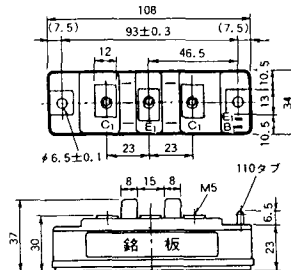
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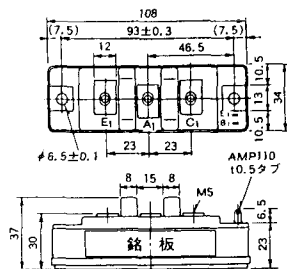
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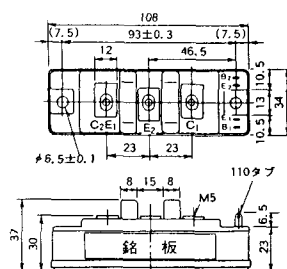
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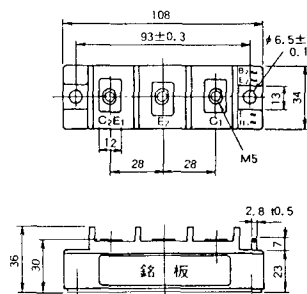
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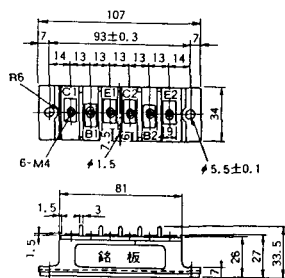
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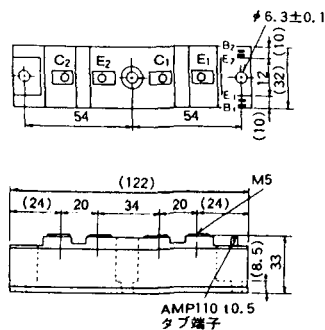
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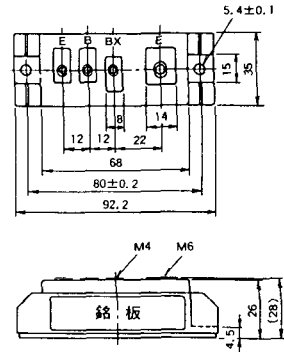
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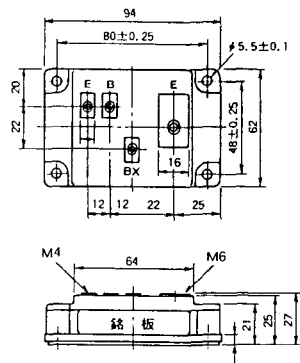
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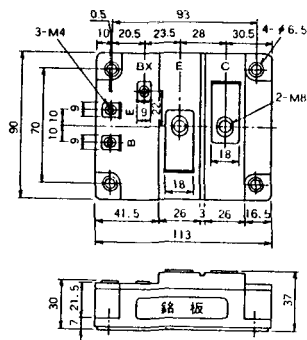
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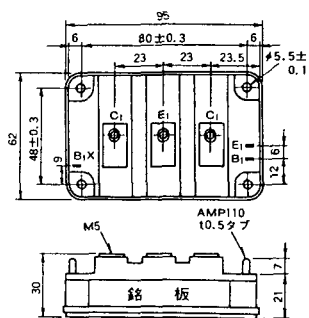
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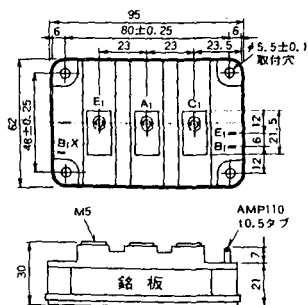
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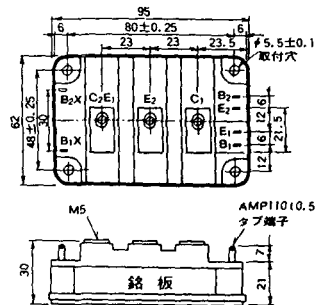
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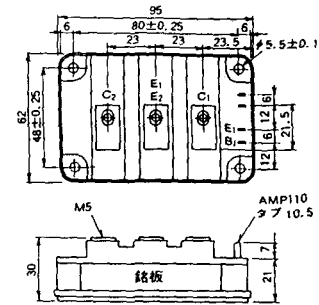
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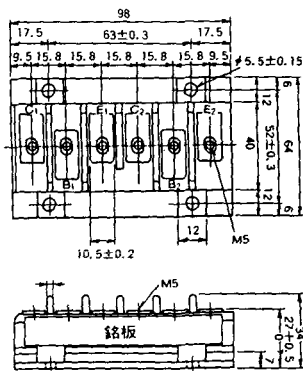
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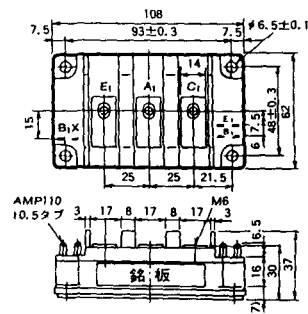
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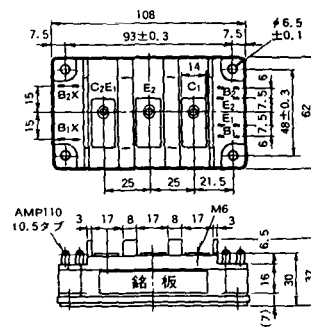
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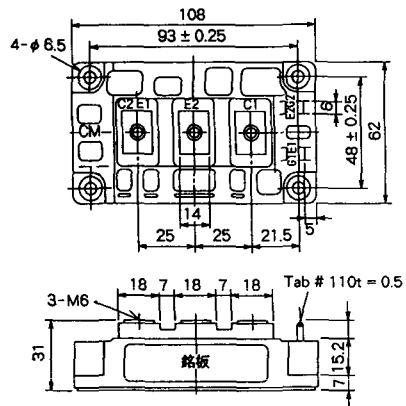
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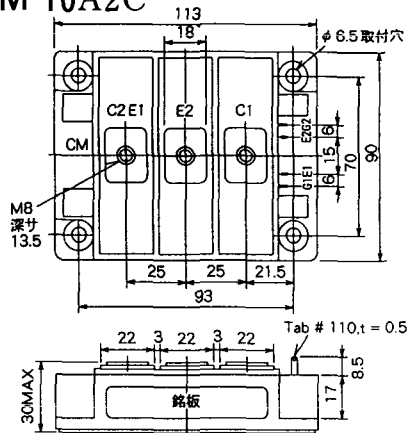
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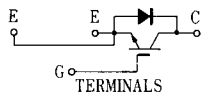
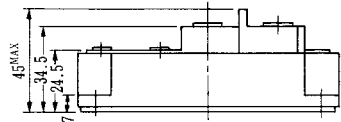
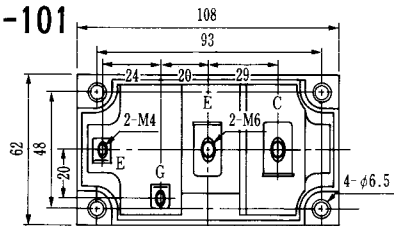
M-9D2B



M-10A2C

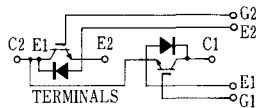
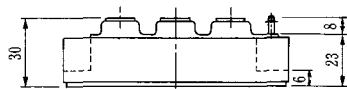
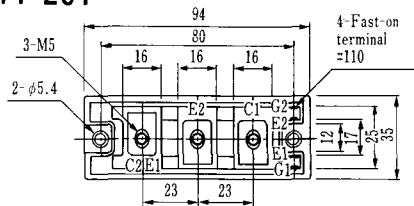


H-101



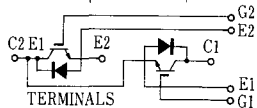
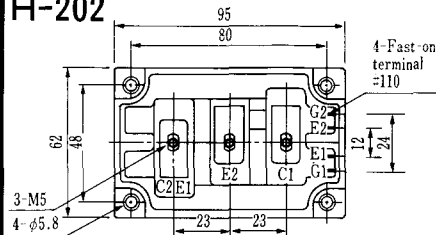
Weight :480g

H-201



Weight: 200g

H-202



Weight: 360g

