

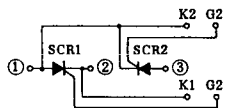
サイリスタ・モジュール

東芝

MSG60[†]G, L, Q, U, J43

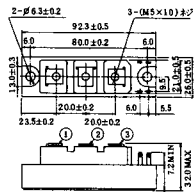
○絶縁形: AC 2000V (MSG60[†]G, L, J43)
AC 2500V (MSG60[†]Q, U, J43)

■接続図



G1, K1, G2 および K2 端子: ファストン ϕ 110

■外形図



■最大定格

記号	MSG60G43	MSG60L43	MSG60Q43	MSG60U43	単位
V_{RSM}	500	960	1440	1750	V
V_{RRM}	400	800	1200	1600	V
V_{DRM}	400	800	1200	1600	V
$I_{T(AV)}$	30 ($T_c = 84^\circ\text{C}$)				
$I_{T(RMS)}$	47				
I_{TSM}	600/660 (50Hz/60Hz正弦半波, 1サイクル波高値)				
$I^2 \cdot t$	1800 (2~10ms)				
di/dt	100 ($V_D = \frac{1}{2} V_{DRM}$, $t_{gr} \leq 250\text{ns}$, $i_G \geq 200\text{mA}$)				
P_{GM}	5				
$P_{G(AV)}$	0.5				
V_{GRM}	5				
I_{GFM}	2				
T_j	125				
T_{stg}	-40~125				

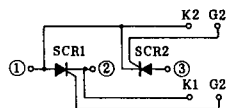
■電気的特性 ($T_c = 25^\circ\text{C}$)

記号	測定条件	最小	標準	最大	単位
I_{RRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{RRM}$			6	mA
I_{DRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{DRM}$			6	mA
V_{TM}	$I_{TM} = 100\text{A}$			1.5	V
V_{GT}	$V_D = 6\text{V}$, $R_L = 10\Omega$			1.5	V
I_{GT}				80	mA
V_{GD}	$T_c = 125^\circ\text{C}$, $V_D = \frac{1}{2} V_{DRM}$	0.25			V
I_{GD}					mA
dv/dt	$T_c = 125^\circ\text{C}$, $V_D = \frac{2}{3} V_{DRM}$	500			V/ μs
I_H	$R_L = 100\Omega$			150	mA
R_{th}	接合~ケース間			0.8	$^\circ\text{C}/\text{W}$

MSG100[†]G, L, Q, U, J43

○絶縁形: AC 2000V (MSG100[†]G, L, J43)
AC 2500V (MSG100[†]Q, U, J43)

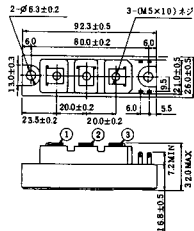
■接続図



G1, K1, G2 および K2 端子: ファストン ϕ 110

東芝

■外形図



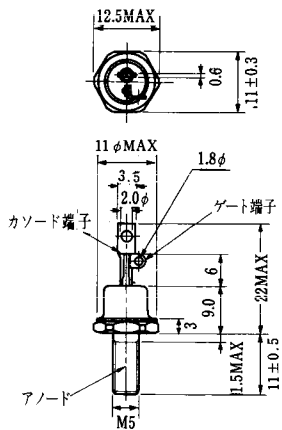
■最大定格

記号	MSG100G43	MSG100L43	MSG100Q43	MSG100U43	単位
V_{RSM}	500	960	1440	1750	V
V_{RRM}	400	800	1200	1600	V
V_{DRM}	400	800	1200	1600	V
$I_{T(AV)}$	50 ($T_c = 86^\circ\text{C}$)				
$I_{T(RMS)}$	79				
I_{TSM}	1000/1100 (50Hz/60Hz正弦半波, 1サイクル波高値)				
$I^2 \cdot t$	5000 (2~10ms)				
di/dt	100 ($V_D = \frac{1}{2} V_{DRM}$, $t_{gr} \leq 250\text{ns}$, $i_G \geq 200\text{mA}$)				
P_{GM}	5				
$P_{G(AV)}$	0.5				
V_{GRM}	5				
I_{GFM}	2				
T_j	125				
T_{stg}	-40~125				

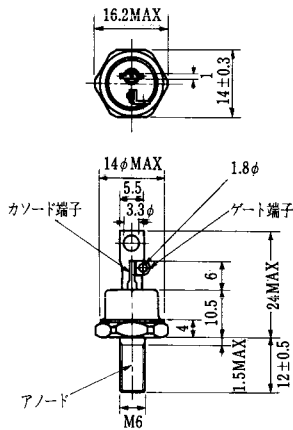
■電気的特性 ($T_c = 25^\circ\text{C}$)

記号	測定条件	最小	標準	最大	単位
I_{RRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{RRM}$			10	mA
I_{DRM}	$T_j = 125^\circ\text{C}$, $V_D = V_{DRM}$			10	mA
V_{TM}	$I_{TM} = 150\text{A}$			1.5	V
V_{GT}	$V_D = 6\text{V}$, $R_L = 10\Omega$			1.5	V
I_{GT}				80	mA
V_{GD}	$T_c = 125^\circ\text{C}$, $V_D = \frac{1}{2} V_{DRM}$	0.25			V
I_{GD}					mA
dv/dt	$T_c = 125^\circ\text{C}$, $V_D = \frac{2}{3} V_{DRM}$	500			V/ μs
I_H	$R_L = 100\Omega$			150	mA
R_{th}	接合~ケース間			0.5	$^\circ\text{C}/\text{W}$

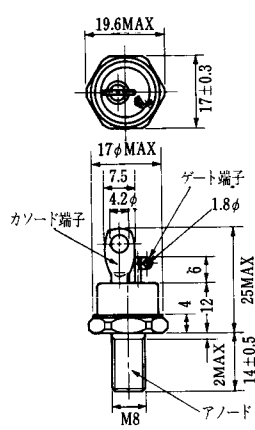
FD-1



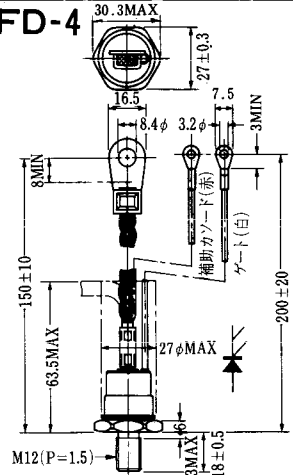
FD-2



FD-3



FD-4



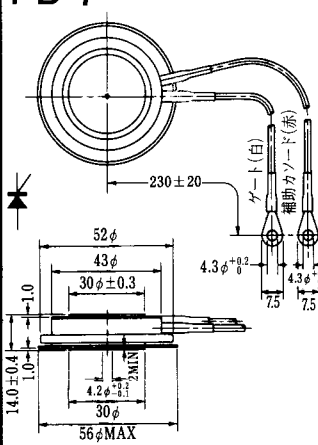
FD-5



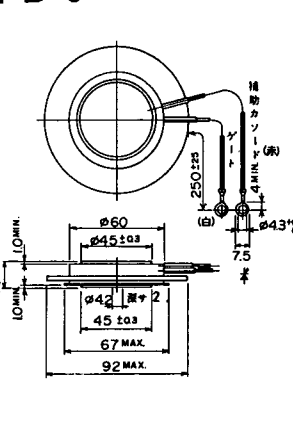
FD-6



FD-7



FD-8



FD-9



FD-10



FD-11

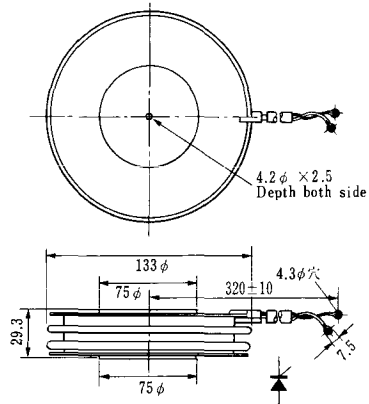
FD-12



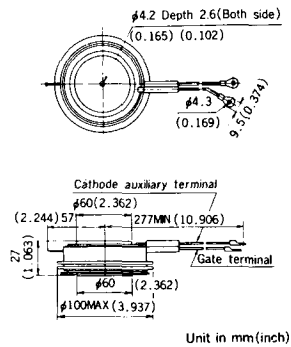


《寸法図単位：mm》

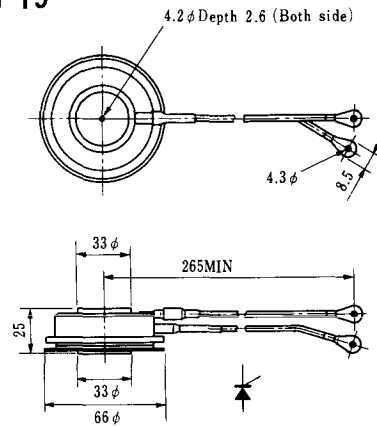
H-17



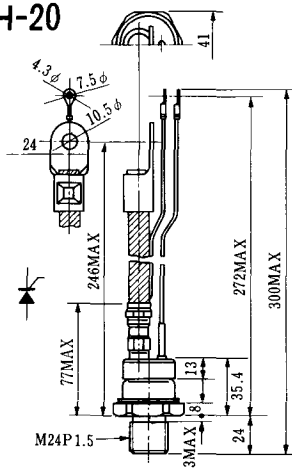
H-18



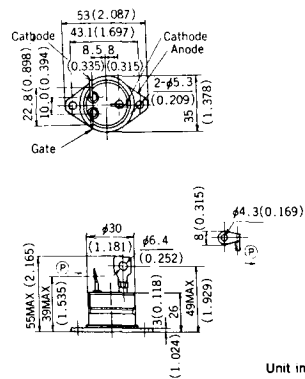
H-19



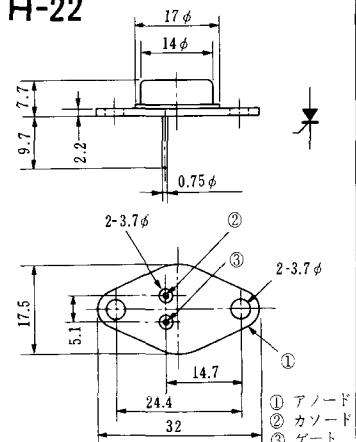
H-20



H-21



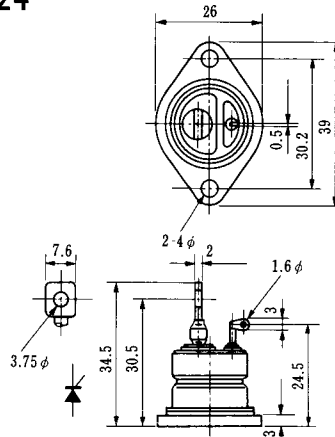
H-22



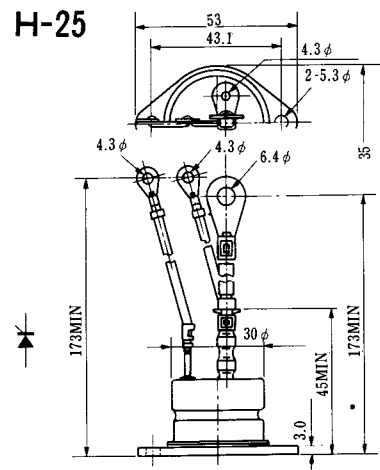
H-23



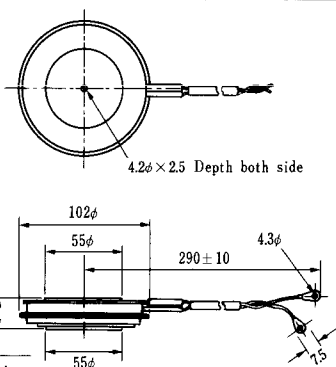
H-24



H-25

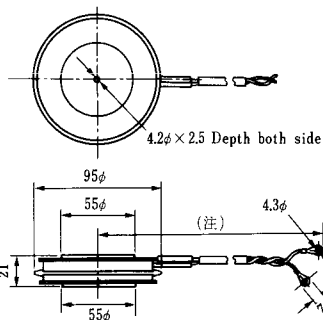


H-26



Type	Direction of polarity
CA12	

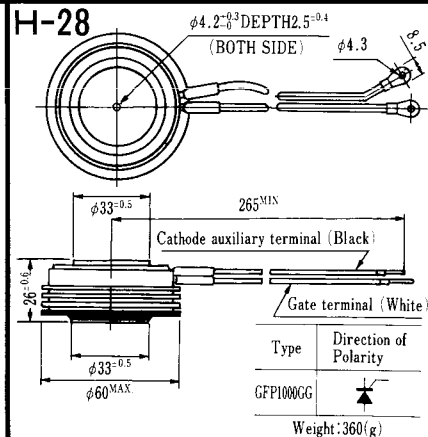
H-27



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.

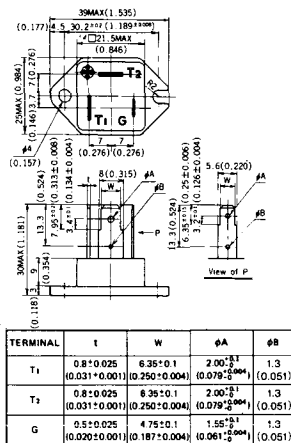


Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



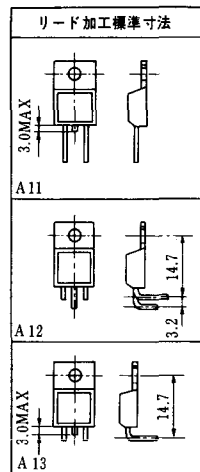
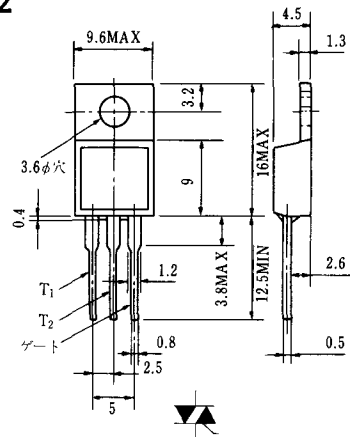
Note : The thickness is a dimension in press at the rated mounting force. Weight: 1,460(g)

HT-1

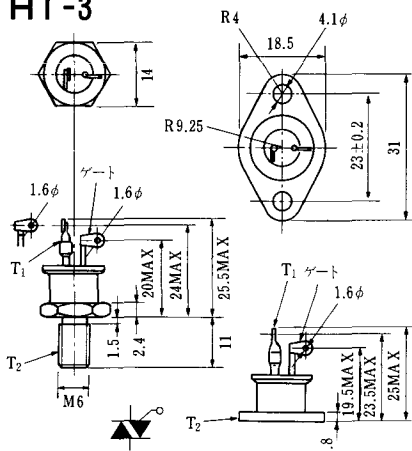


Unit in mm (inch)

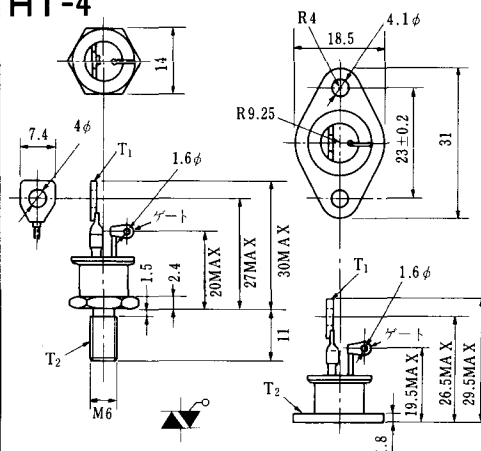
HT-2



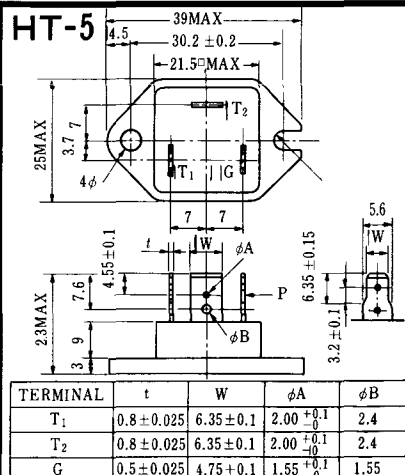
HT-3



HT-4



HT-5



M-1



M-2



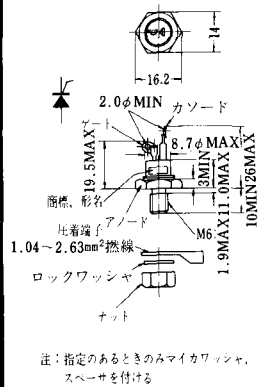
M-3



M-4



M-5



M-6



M-7



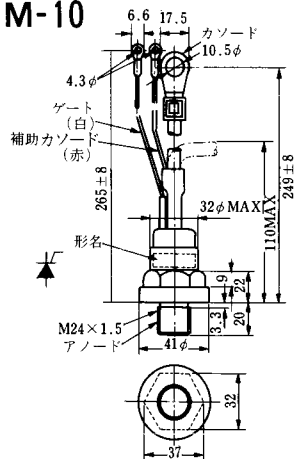
M-8



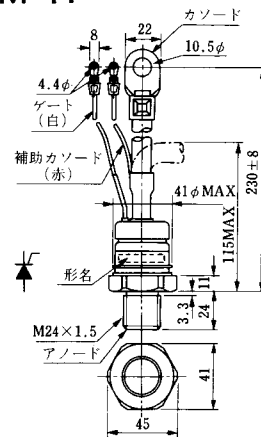
M-9



M-10



M-11



M-12



M-13



M-14



M-15



M-16





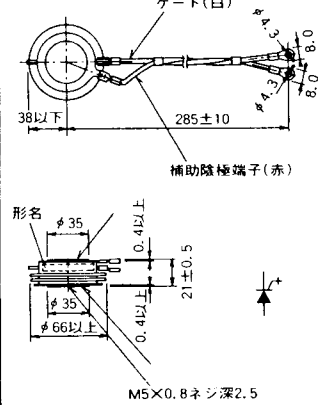
M-25



M-26



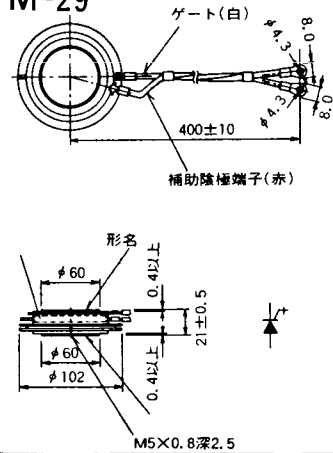
M-27



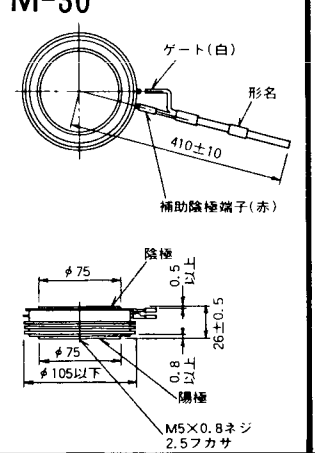
M-28



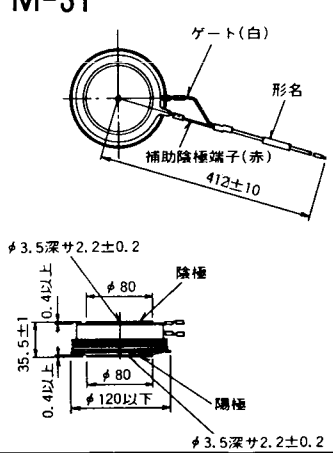
M-29



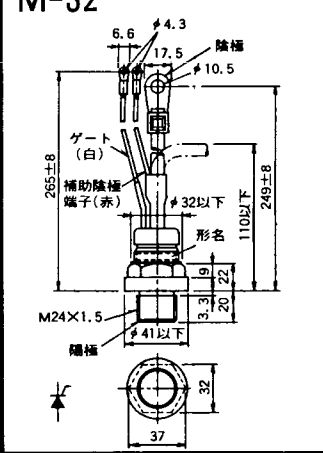
M-30



M-31



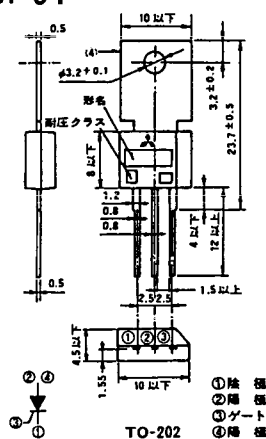
M-32



M-33



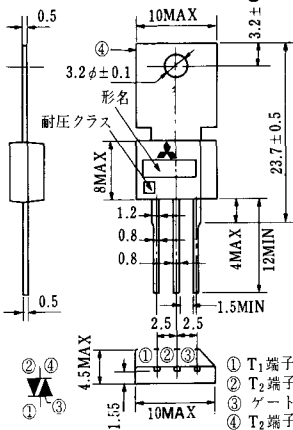
M-34



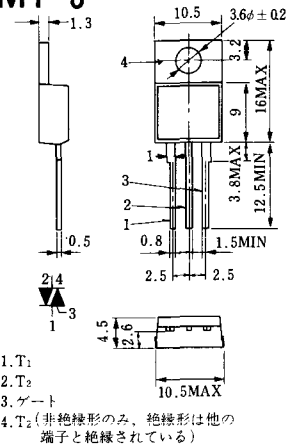
MT-1



MT-2



MT-3



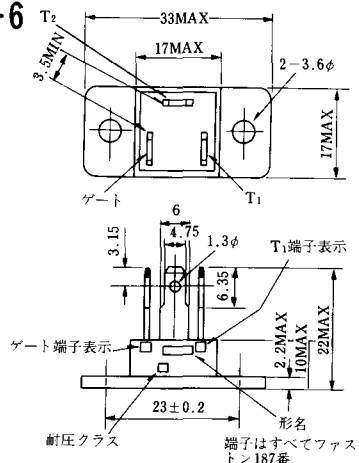
MT-4



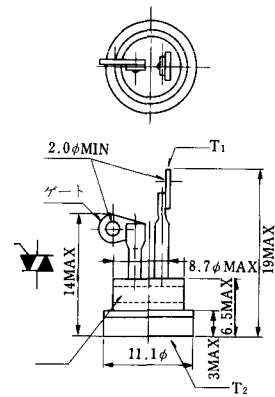
MT-5



MT-6



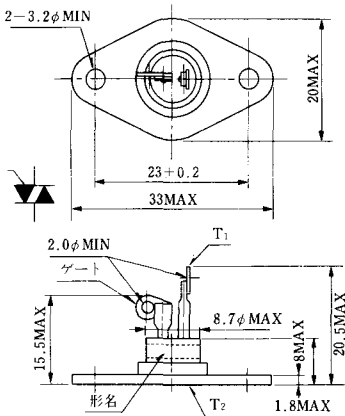
MT-7



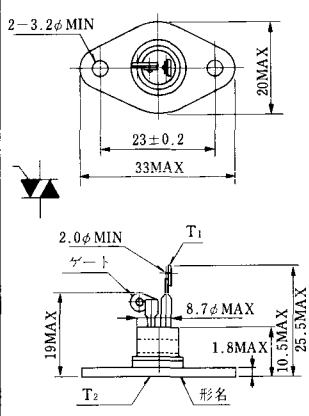
MT-8



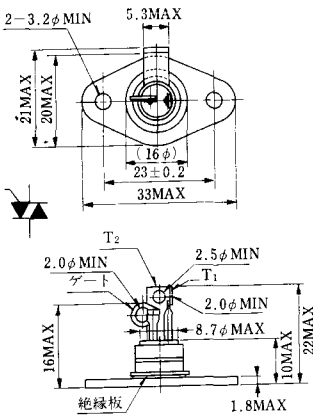
MT-9



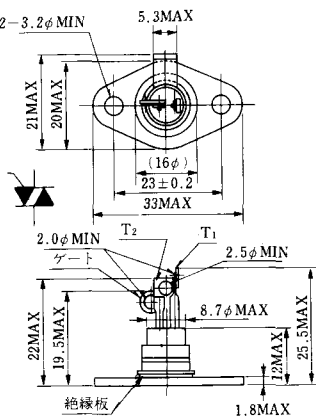
MT-10



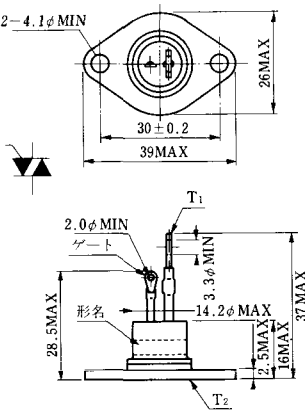
MT-11



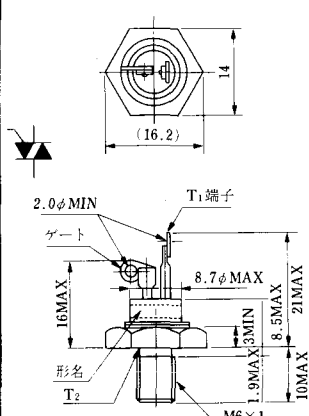
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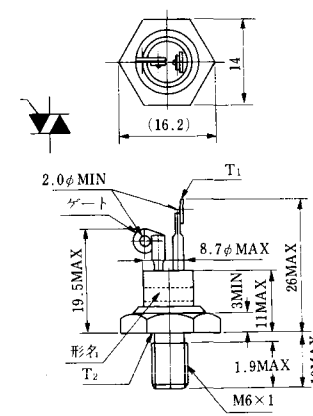
MT-13



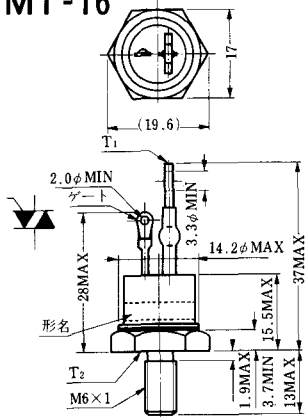
MT-14



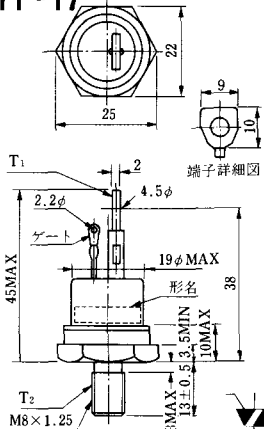
MT-15



MT-16

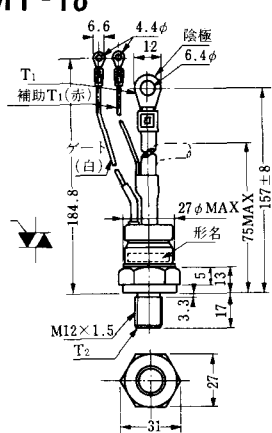


MT-17

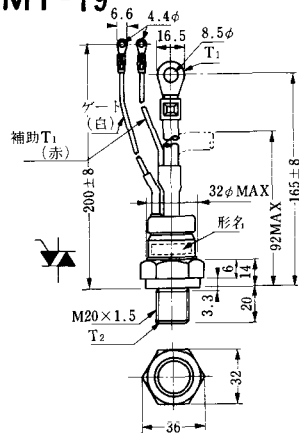


端子詳細図

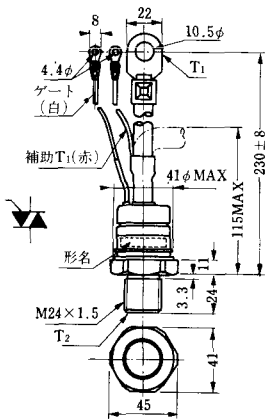
MT-18



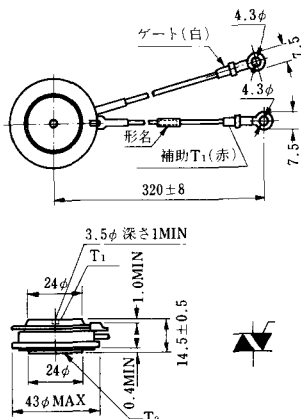
MT-19



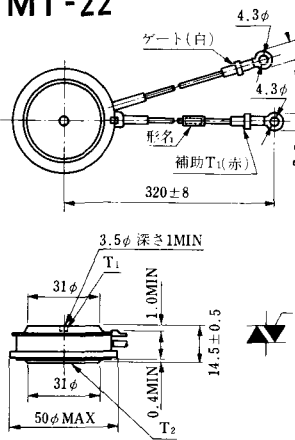
MT-20



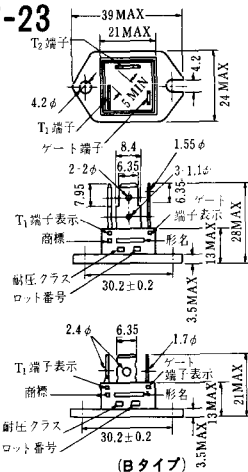
MT-21



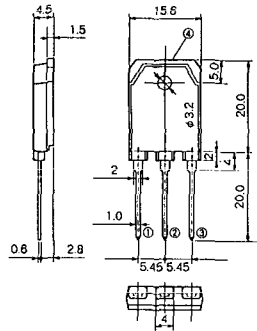
MT-22



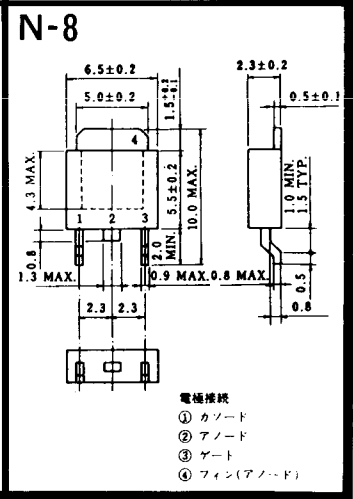
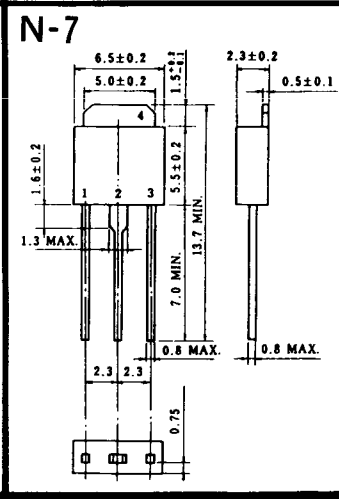
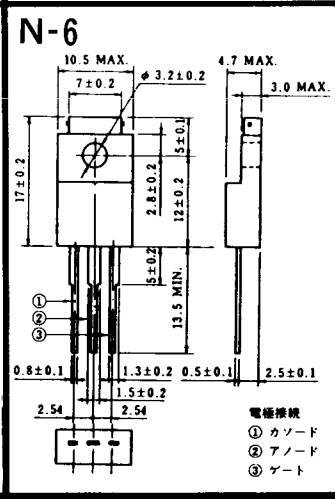
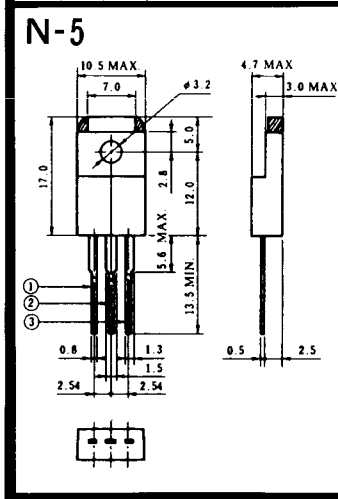
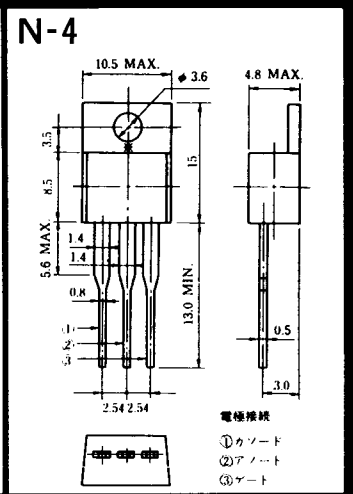
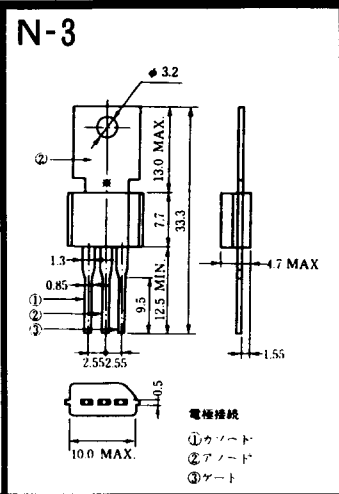
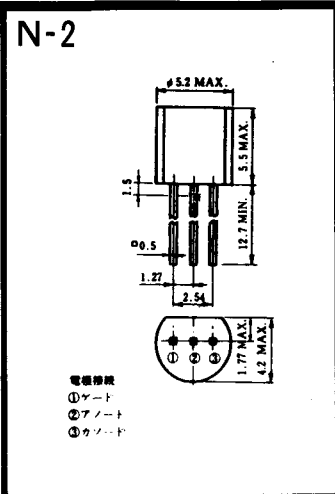
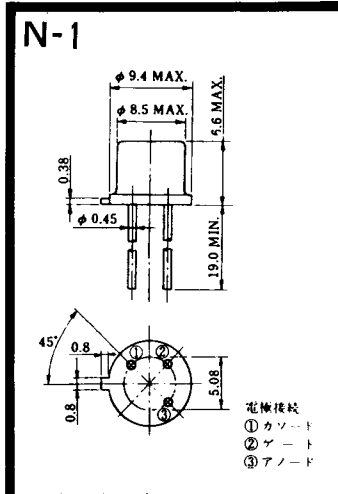
MT-23



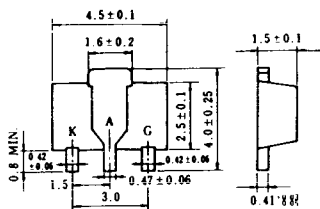
MT-24



- ① T1 端子
 - ② T2 端子
 - ③ ゲート 端子
 - ④ T2 端子
- TO - 3P



N-9



電極接続

K : カソード

A : アノード

G : ゲート

NA-1

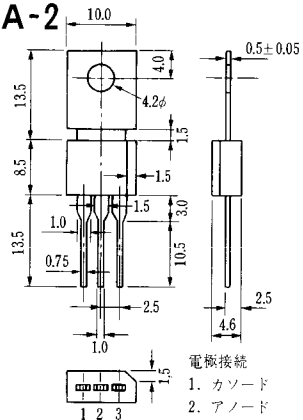


電極接続

1. ゲート
2. アノード
3. カソード

JEDEC: TO-92

NA-2

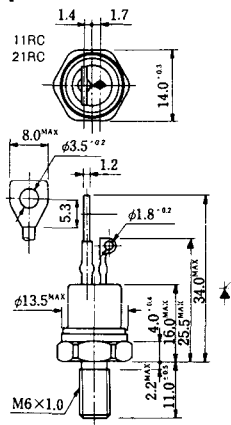


電極接続

1. カソード
2. アノード
3. ゲート

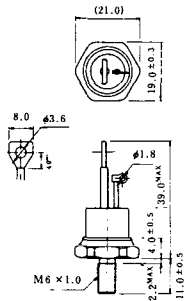
JEDEC: TO-202AA

NI-1



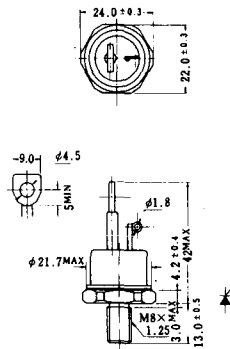
NI-2

29RD



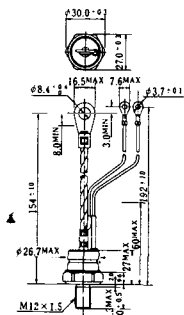
NI-3

39RC
59RC
39RF
59RF



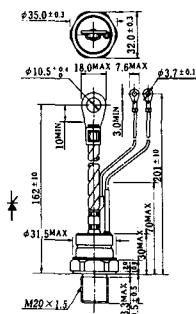
NI-4

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



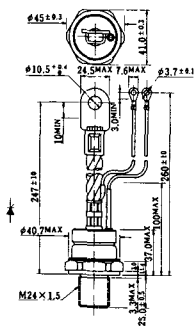
NI-5

158RP, 208RP, 128RS, 178RS,
156RT, 178RLD, 178RLE,
178RLF, 178RLG, 178RLH,
208RLE



NI-6

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



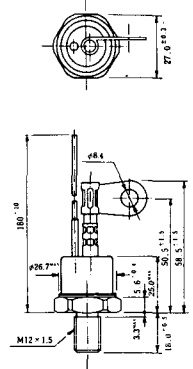
NI-7

89RW_{JL}
129RW_{JL}



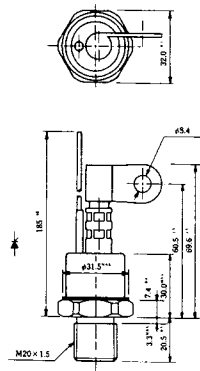
NI-8

89RW
129RW



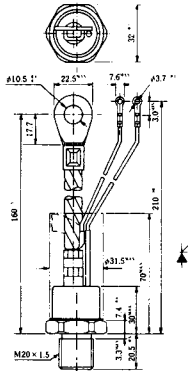
NI-9

259RW
309RW



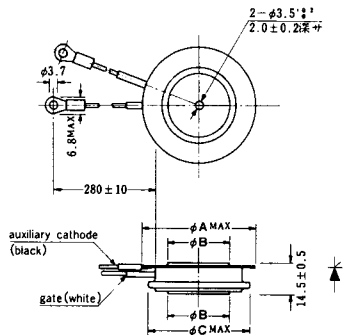
NI-10

259RW_{JL}
309RW_{JL}



NI-11

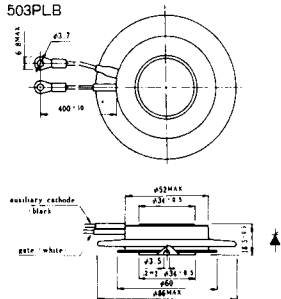
103PA
253PA
503PA
553PA
803PA
103PLE
103PLG
103PLH
203PLG
253PLE
253PLH
353PLG
403PLE
403PLH



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

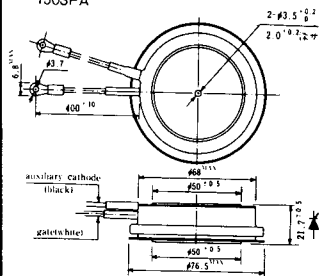
NI-12

403PAB
503PAB
503PLB



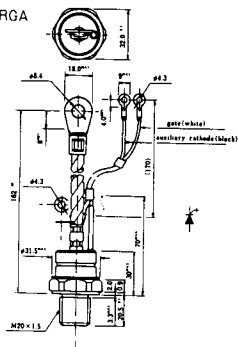
NI-13

1003PA
1003PAB
1003PLF
1003PLH
1503PA



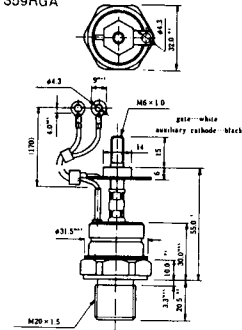
NI-14

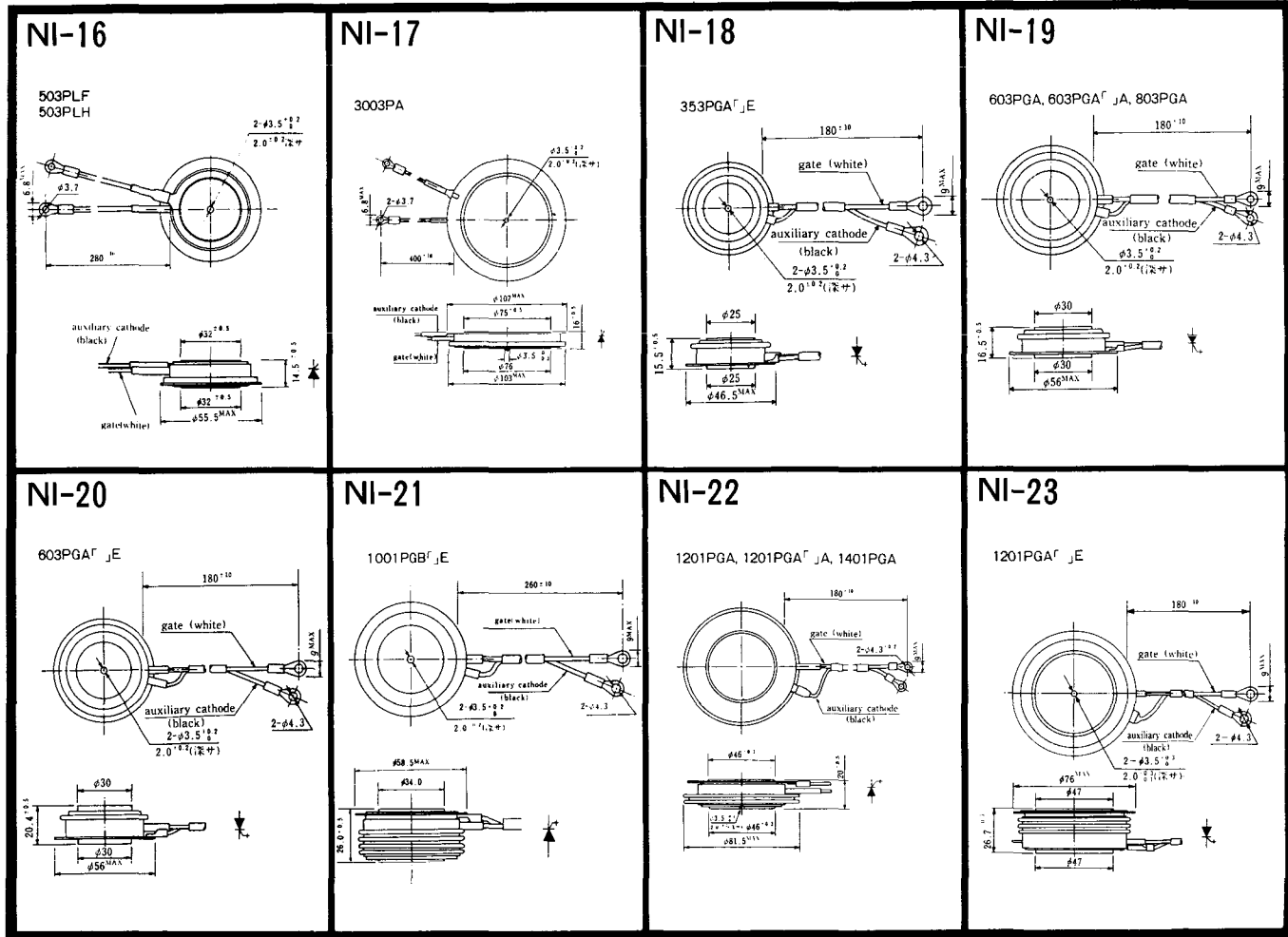
358RGA



NI-15

359RGA





NI-24

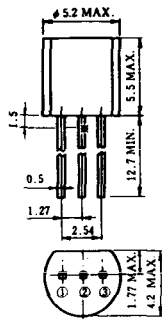
2001PGB^r JE



NI-25

NI-26

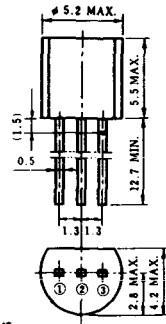
NT-1



電極接続

- ① T₁
- ② ゲート
- ③ T₂

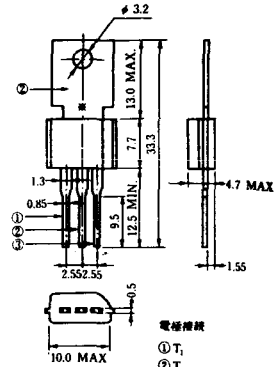
NT-2



電極接続

- ① T₁
- ② ゲート
- ③ T₂

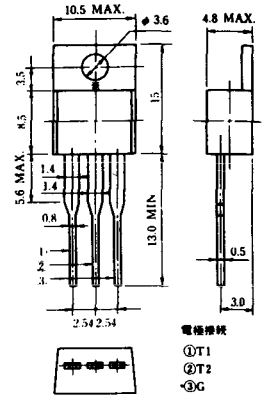
NT-3



電極接続

- ① T₁
- ② T₂
- ③ ゲート

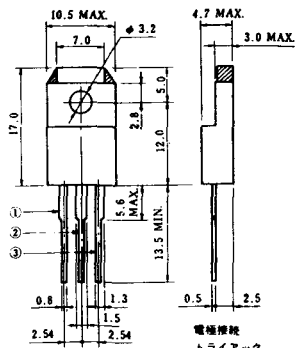
NT-4



電極接続

- ① T₁
- ② T₂
- ③ G

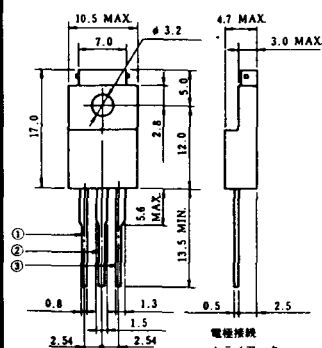
NT-5



電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

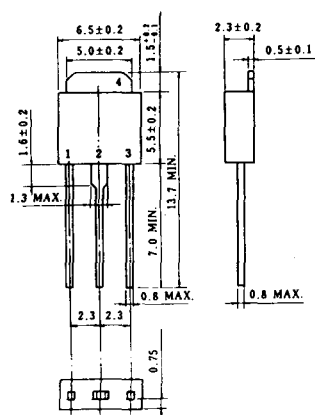
NT-6



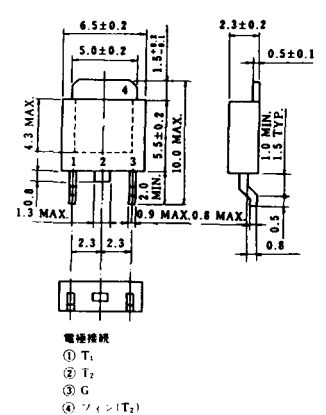
電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

NT-7



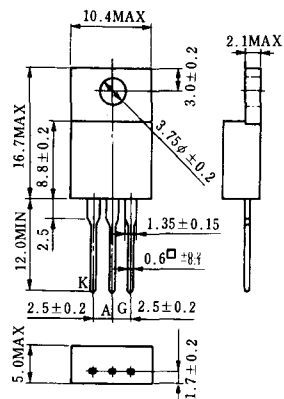
NT-8



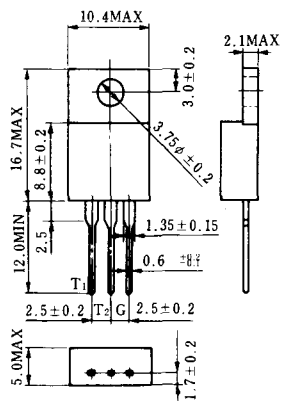
電極接続

- ① T₁
- ② T₂
- ③ G
- ④ シェン(T₂)

S-1



ST-1



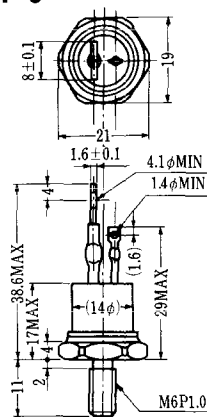
SA-1



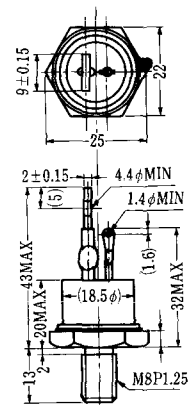
SA-2



SA-3



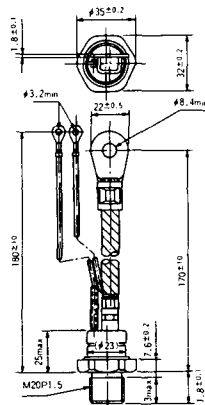
SA-4



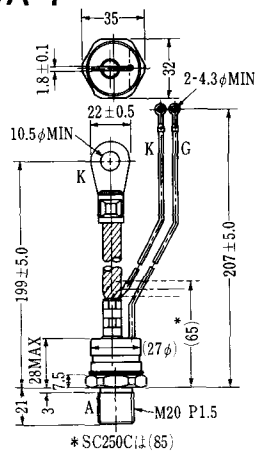
SA-5



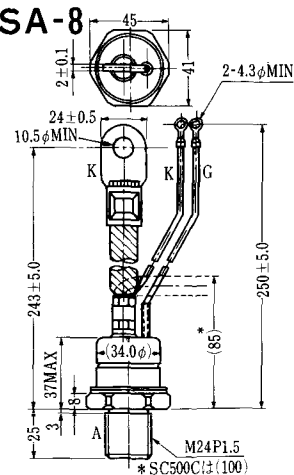
SA-6



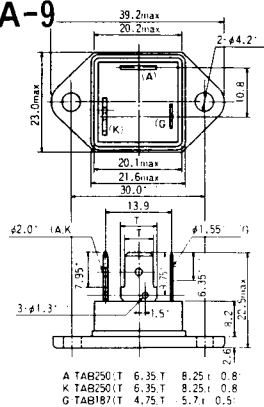
SA-7



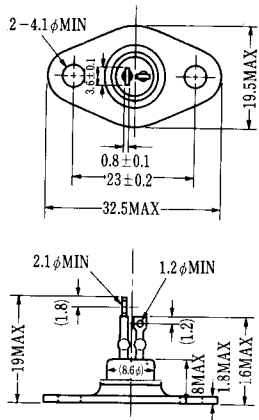
SA-8



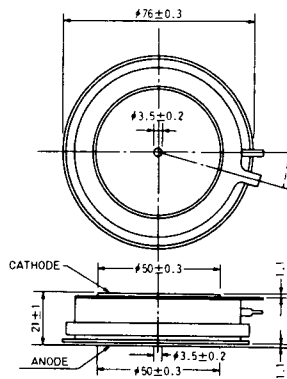
SA-9



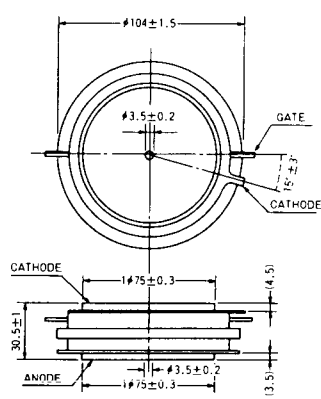
SA-10



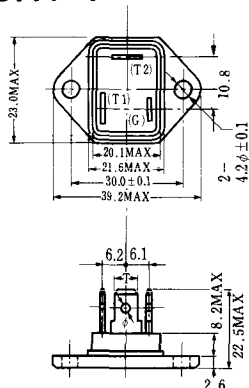
SA-11



SA-12



SAT-1



T1 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)
 T2 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)
 C 端子: フラスト > 187 (T=4.75, t=0.5, φ=1.3)

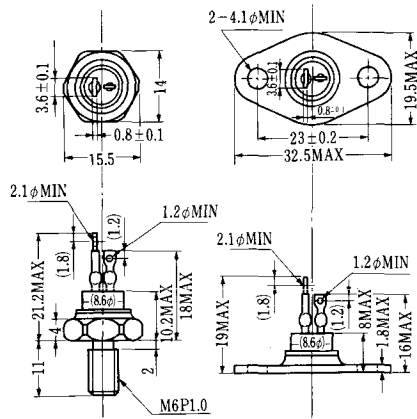
SAT-2



SAT-3



SAT-4



SAT-5



SAT-6



SAT-7



SAT-8



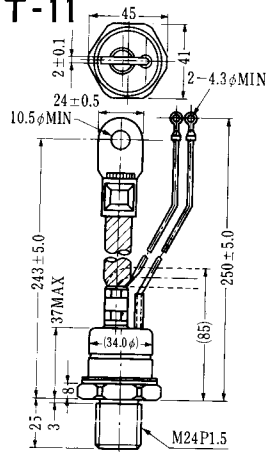
SAT-9



SAT-10



SAT-11

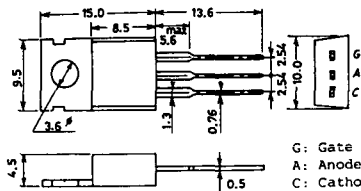


SY-1 (1096A)



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)



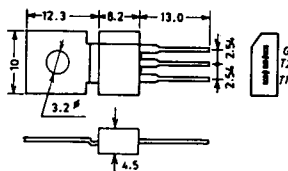
G: Gate
A: Anode
C: Cathode

1097A



G: Gate

1102



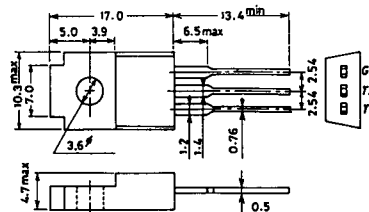
1141



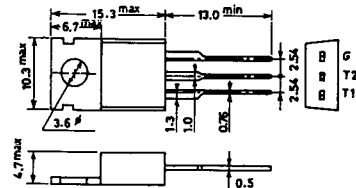
1142



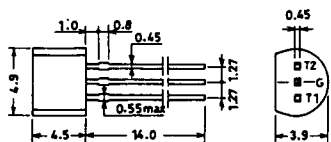
1144



1155

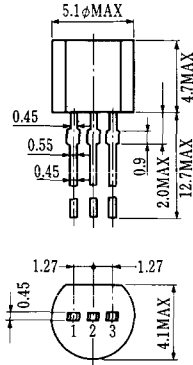


1192A



G: Gate

T-1 (13-5A1A)



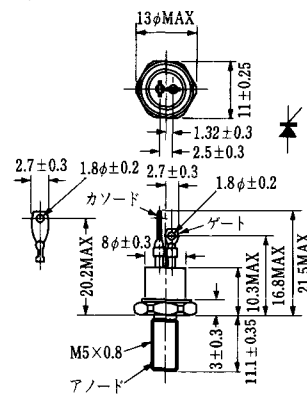
- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



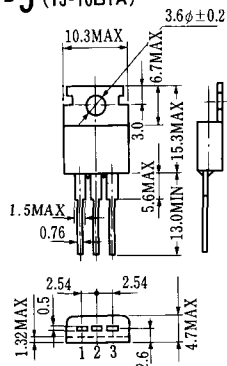
1. カソード
2. ゲート
3. アノード(ケース)

T-3 (13-8C1A)



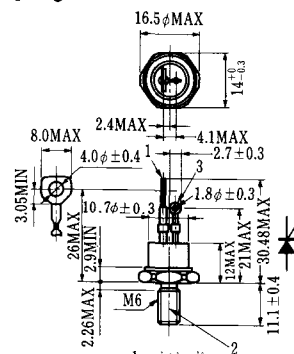
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



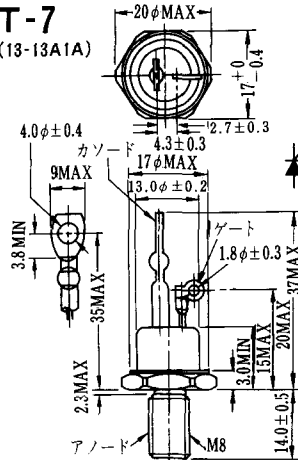
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)

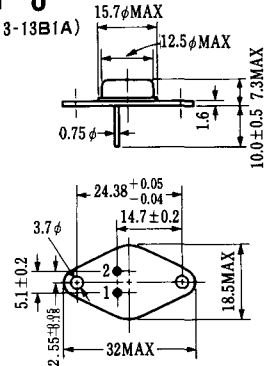


- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)

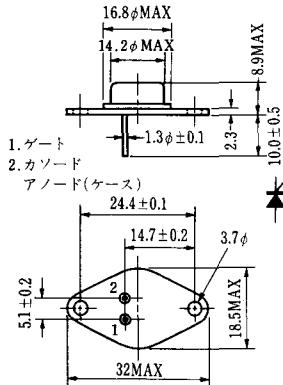


T-8 (13-13B1A)



1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



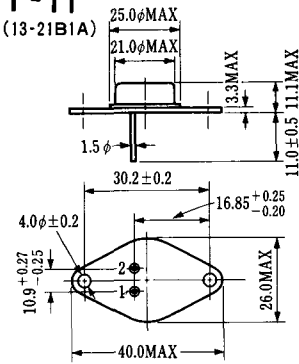
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



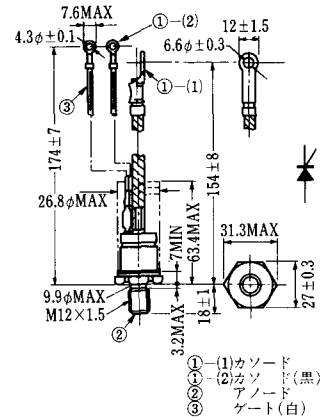
1. カソード
2. アノード
3. ゲート

T-11 (13-21B1A)



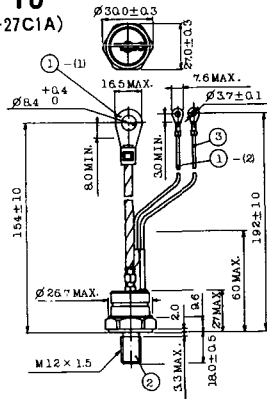
1. ゲート
2. カソード
- アノード(ケース)

T-12 (13-27B1B)



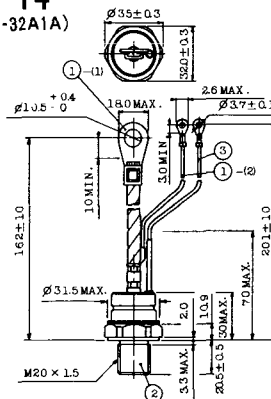
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-13 (13-27C1A)



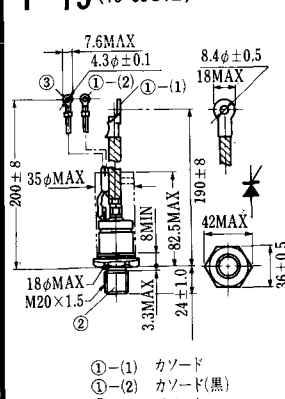
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-14 (13-32A1A)



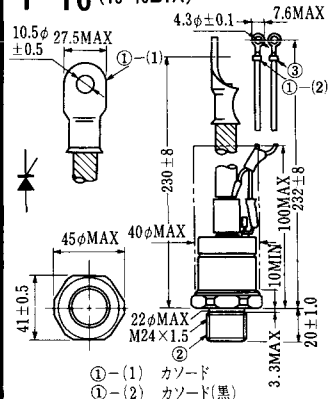
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-15 (13-35C1B)



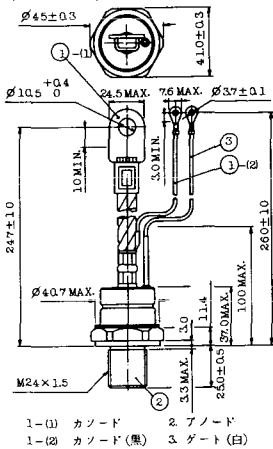
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-16 (13-40B1A)

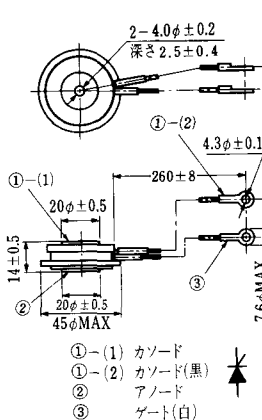


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-17 (13-42A1A)



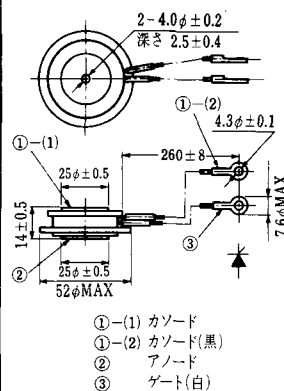
T-18 (13-45D1A)



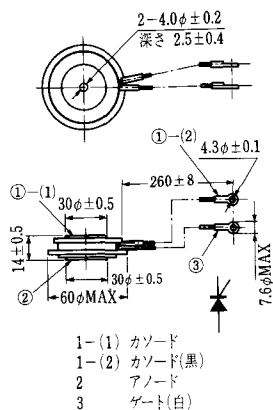
T-19 (13-52B1A)



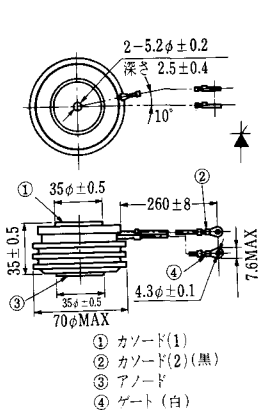
T-20 (13-52C1A)



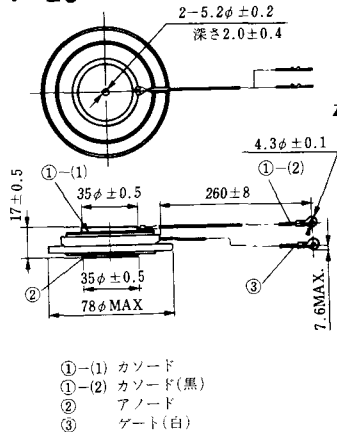
T-21 (13-60A1A)



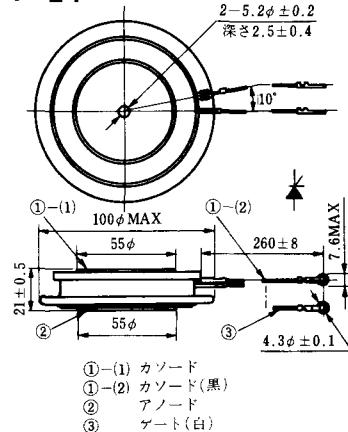
T-22 (13-70C1A)



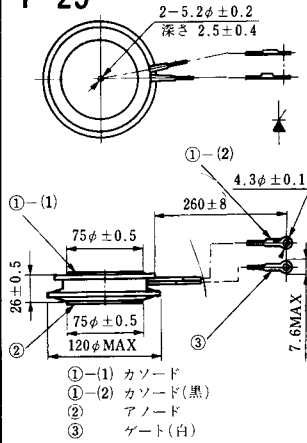
T-23 (13-78A1A)



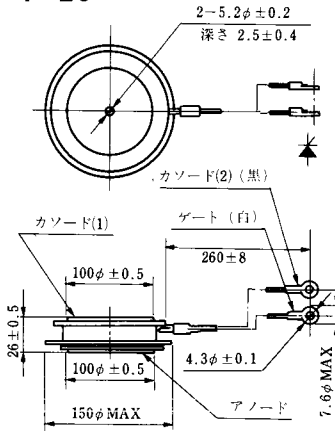
T-24 (13-100C1A)



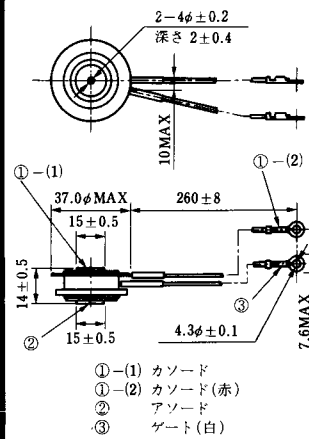
T-25 (13-120A2A)



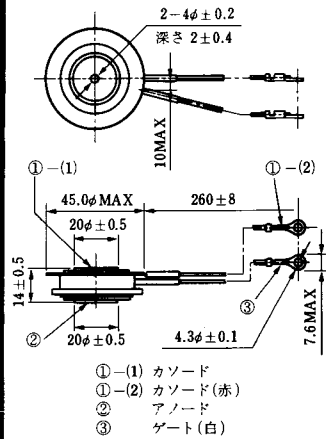
T-26 (13-150A1A)



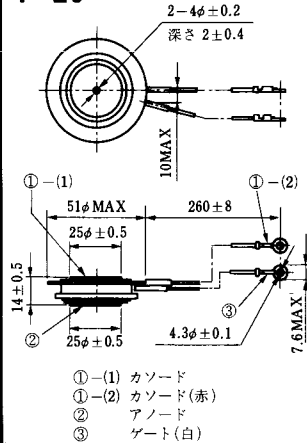
T-27 (13-37A1A)



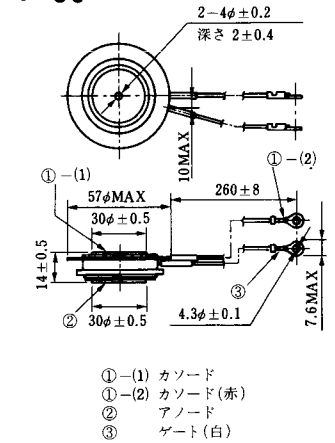
T-28 (13-45E1A)



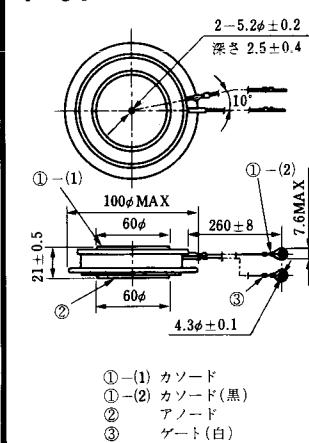
T-29 (13-51A1A)



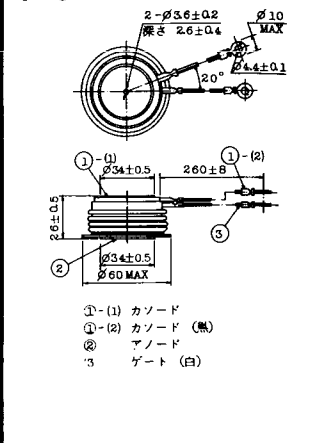
T-30 (13-57A1A)



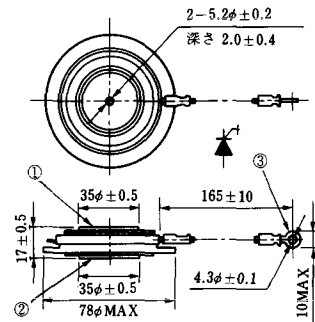
T-31 (13-100E1A)



T-32 (13-60E3A)

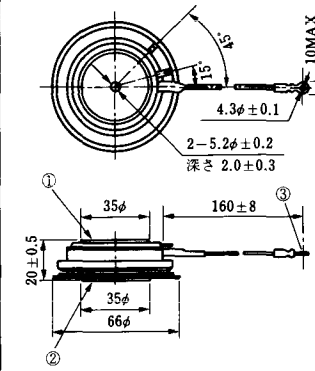


T-33 (13-78B1A)



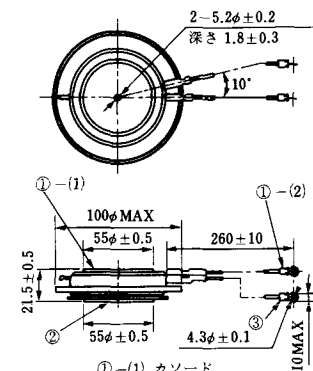
- ① カソード
- ② アノード
- ③ ゲート

T-34 (13-66A1A)



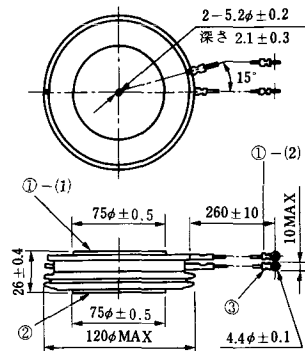
- ① カソード
- ② アノード
- ③ ゲート

T-35 (13-100D1A)



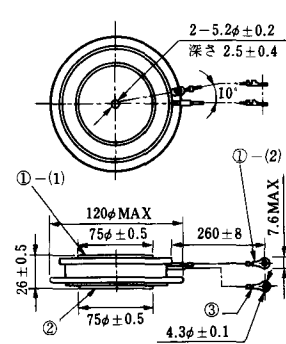
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-36 (13-120E1A)



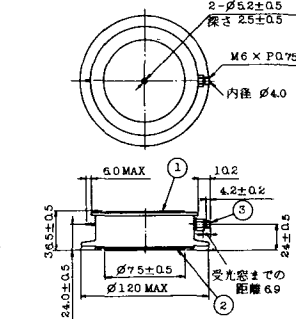
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-37 (13-120A1A)



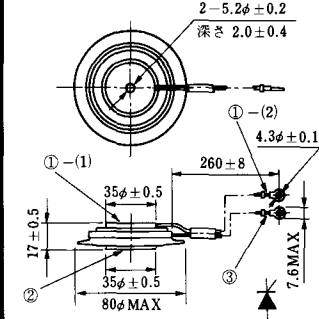
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-38 (13-120C1A)



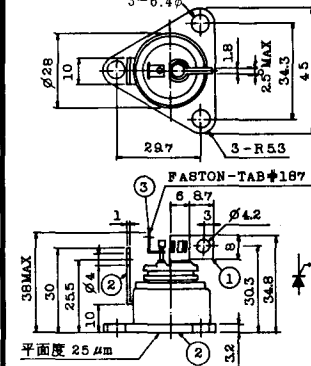
- ① カソード
- ② アノード
- ③ ゲート

T-39 (13-80B1A)



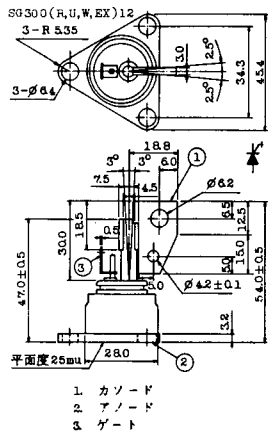
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-40 (13-28A1A)

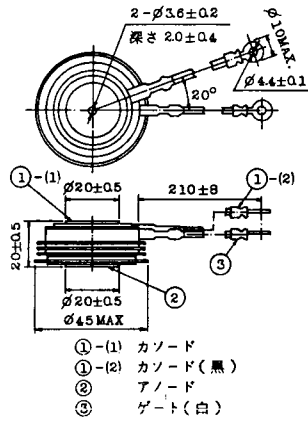


- 1. カソード
- 2. アノード
- 3. ゲート

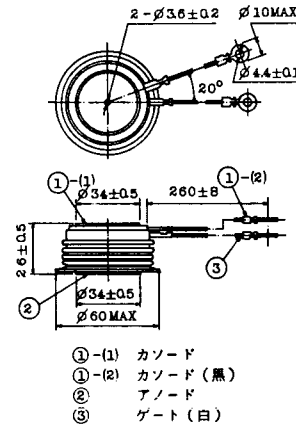
T-41 (13-28A2A)



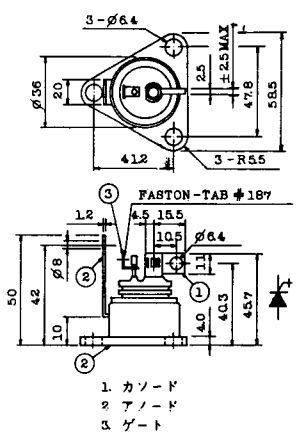
T-42 (13-45F1A)



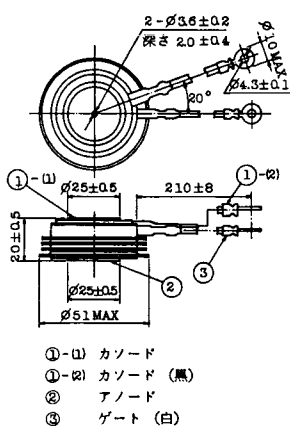
T-43 (13-60E2A)



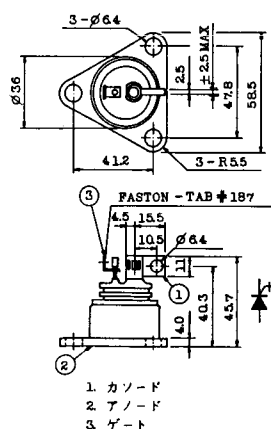
T-44 (13-36A1A)



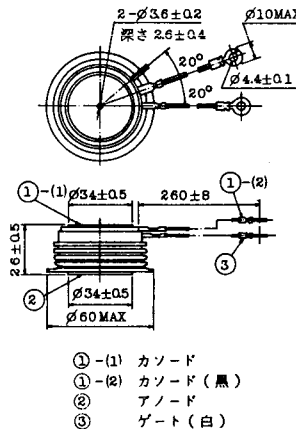
T-45 (13-51B1A)



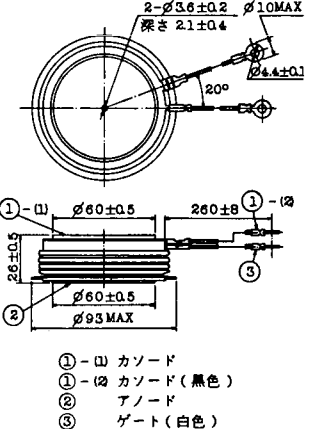
T-46 (13-36B1A)



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)



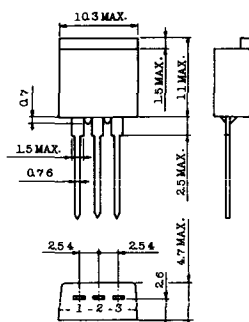
- 1 カソード
- 2 アノード
- 3 ゲート

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)



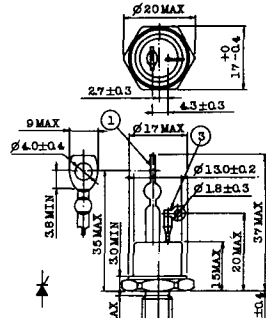
- 1 カソード
- 2 アノード
- 3 ゲート

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
- 1-12) 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)



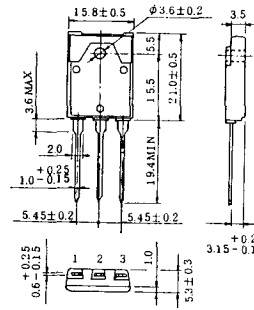
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



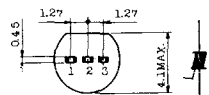
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



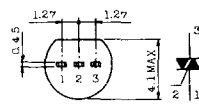
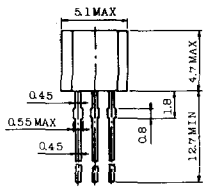
1. カソード
2. アノード
3. ゲート

TT-1



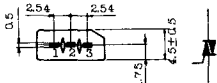
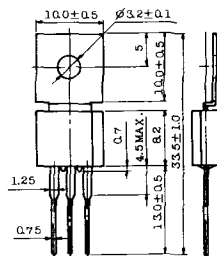
- 1 ゲート
- 2 T₂
- 3 T₁

TT-2



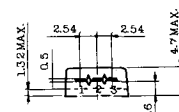
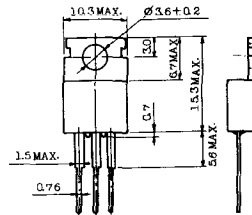
- 1 T₁
- 2 ゲート
- 3 T₂

TT-3



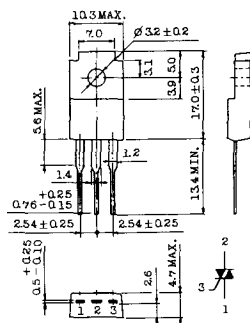
- 1 T₁
- 2 T₂
- 3 ゲート

TT-4



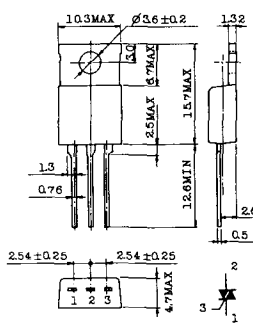
- 1 T₁
- 2 T₂
- 3 ゲート

TT-5



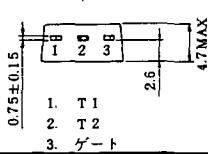
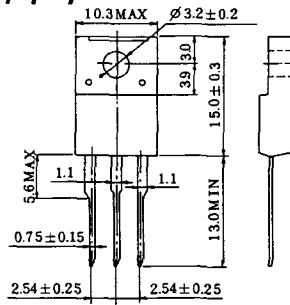
- 1 T₁
- 2 T₂
- 3 ゲート

TT-6



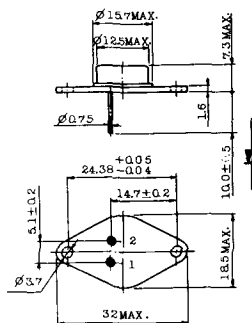
- 1 T₁
- 2 T₂ (放熱板)
- 3 ゲート

TT-7



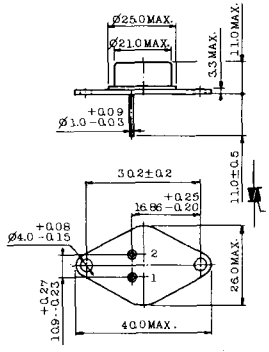
- 1. T₁
- 2. T₂
- 3. ゲート

TT-8



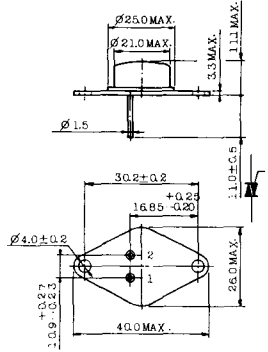
- 1. ゲート
- 2. T₁
- T₂ (ケース)

TT-9



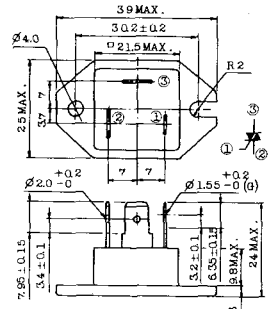
- 1. ゲート
- 2. T₁
- 3. T₂ (ケース)

TT-10



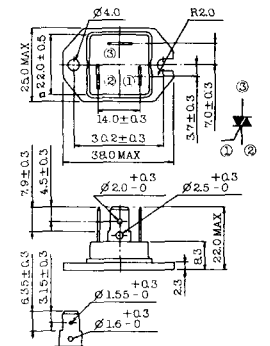
- 1. ゲート
- 2. T₁
- 3. T₂ (ケース)

TT-11



- 1. ゲート (フーストン端子 #187)
- 2. T₁ (" #250)
- 3. T₂ (" #250)

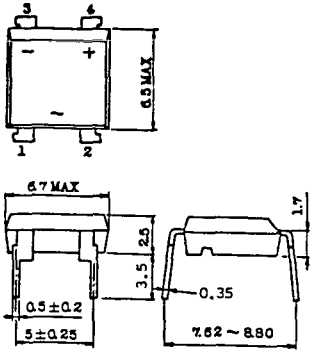
TT-12



ゲート端子詳細

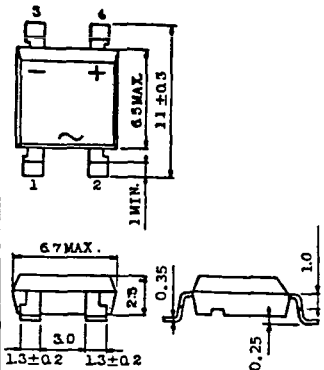
- ① ゲート (フーストン端子 #187)
- ② T₁ (" #250)
- ③ T₂ (" #250)

TT-13



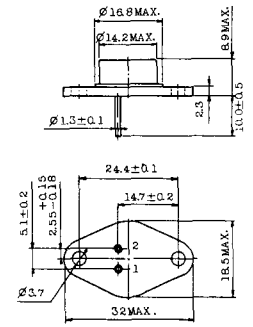
- 1, 2: T₂
- 3: GATE
- 4: T₁

TT-14



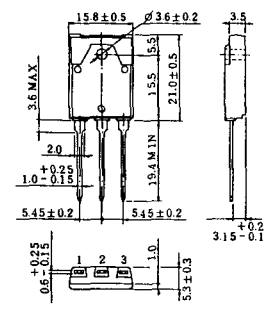
- 1, 2: T₂
- 3: GATE
- 4: T₁

TT-15 (13-14A1B)



- 1. ゲート
- 2. T₁
- T₂ (ケース)

TT-16 (13-16A1A)



- 1. T₁
- 2. T₂
- 3. ゲート

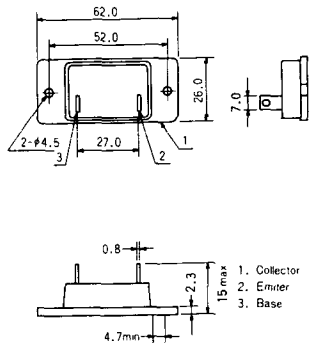


TS-8

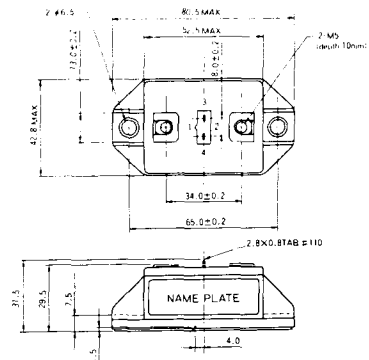


- 1. ベース
- 2. エミッタ
コレクタ
(ケース)

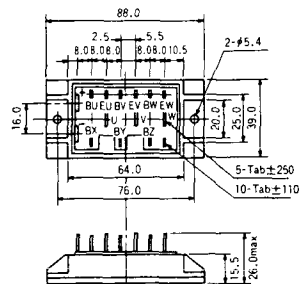
S-62A1A



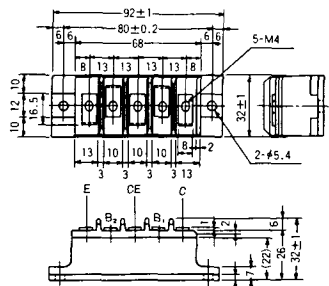
S-80A1A



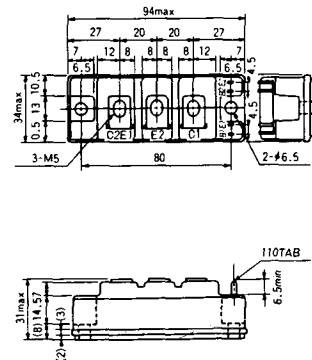
S-88D1A



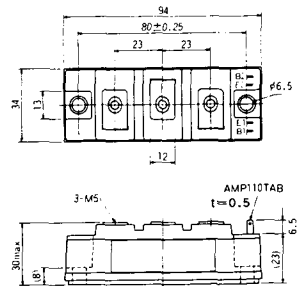
S-92B1A



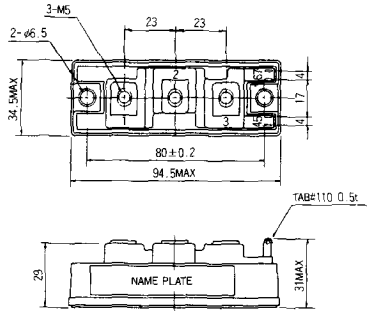
S-94B1A



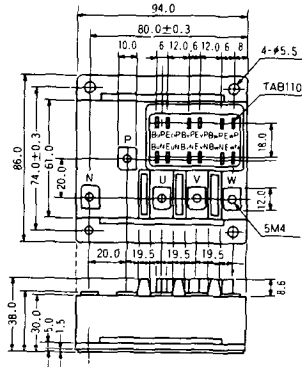
S-94B1B



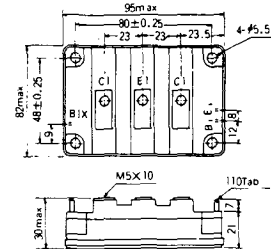
S-94B2A



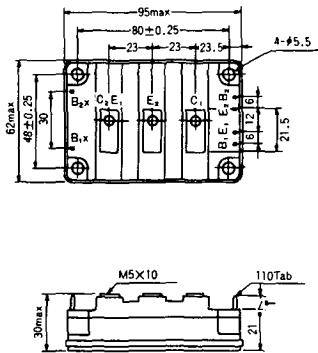
S-94D1A



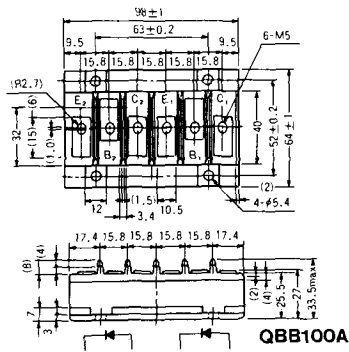
S-95A1A



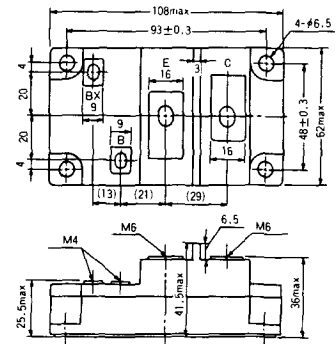
S-95B1A



S-98B1B



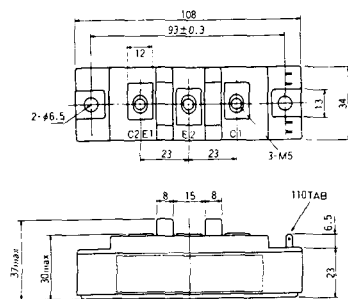
S-108A2A



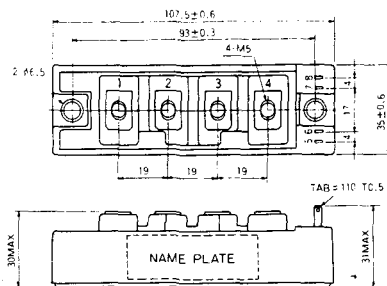
S-108B1A



S-108B1B



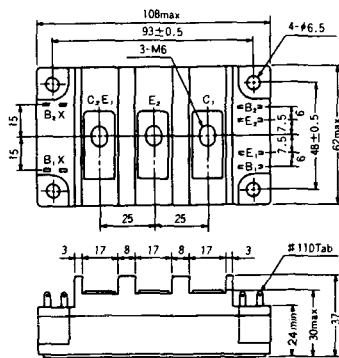
S-108B1C



S-108B2A



S-108B2B



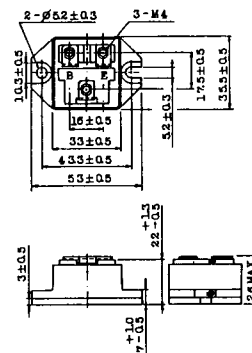
2-22B1A



2-27A4A



2-33C1A



2-33D1A



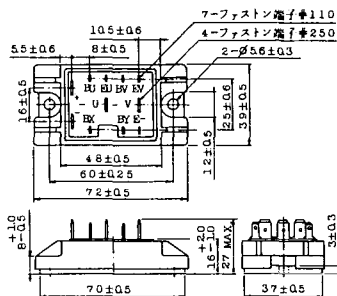
2-33F1A



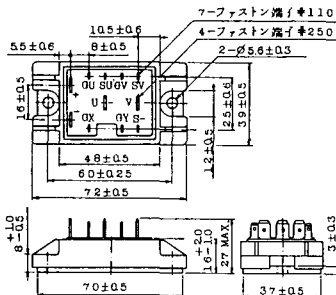
2-37A1A



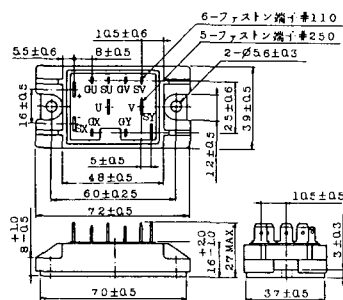
2-48A3A



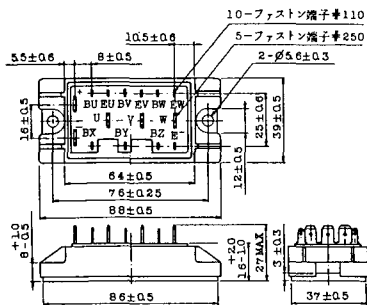
2-48A3B



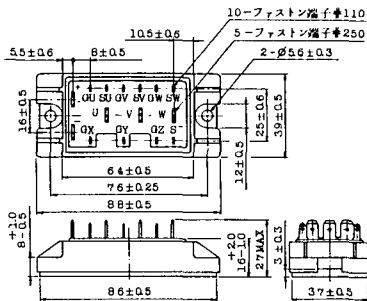
2-48A4A



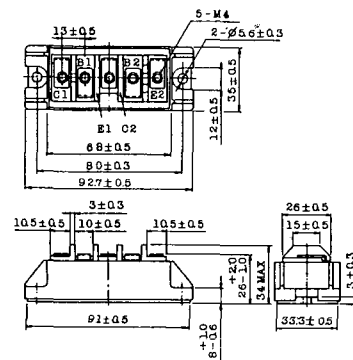
2-64A2A



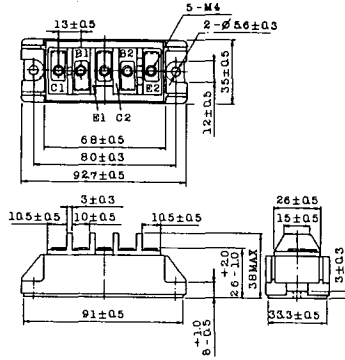
2-64A2B



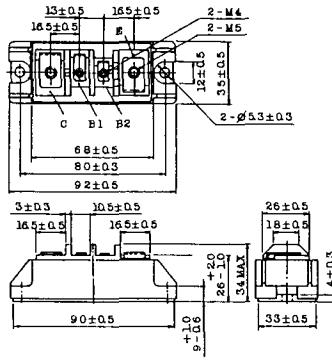
2-68A2A



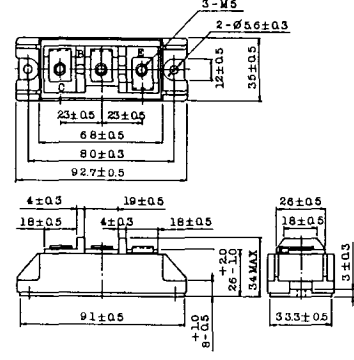
2-68B2A



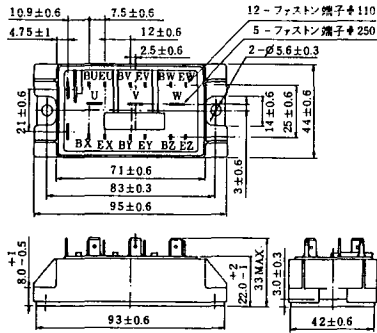
2-68C1A



2-68D2A



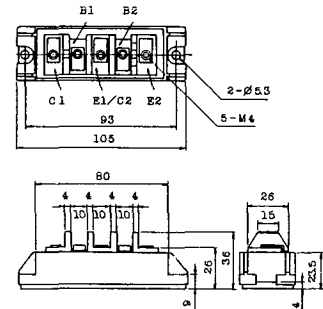
2-72A3A



2-80A1A



2-80B1A



2-94D1A



2-96A3A



2-96A4A



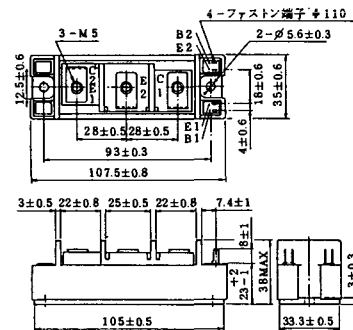
2-98B1A



2-98C2A



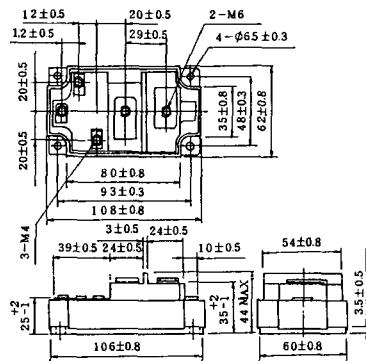
2-108A2A



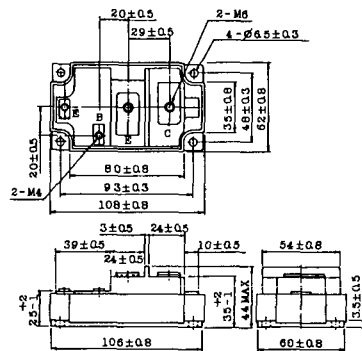
2-108B1A



2-109A3A



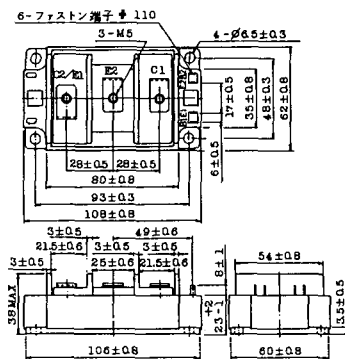
2-109A4A



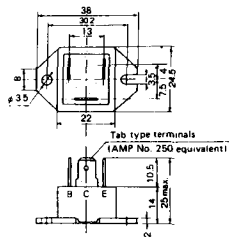
2-109B3A



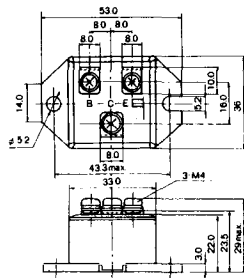
2-109B4A



M-101



M-102



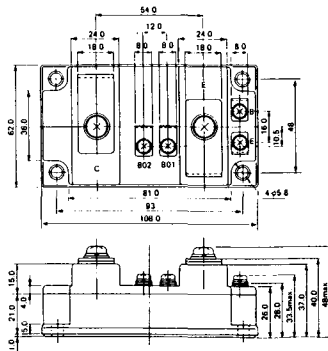
M-103



M-104



M-105



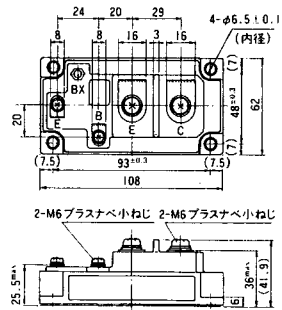
M-106



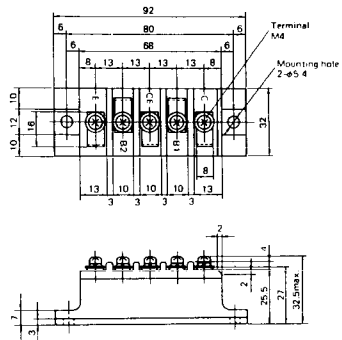
M-107



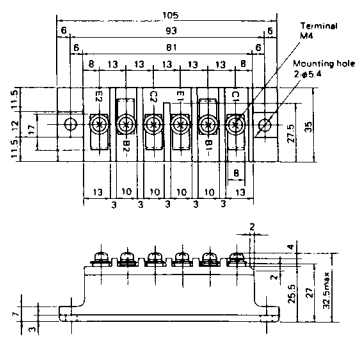
M-116



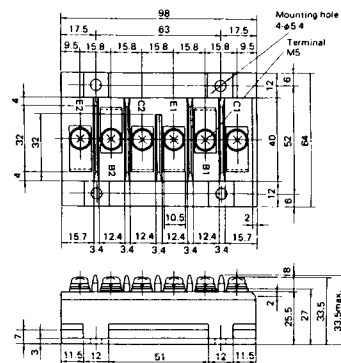
M-201



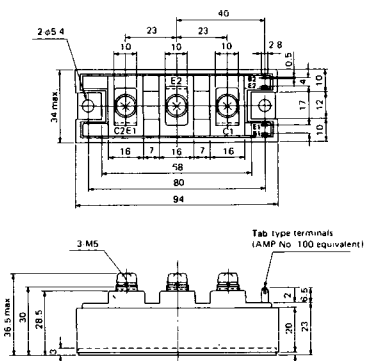
M-202



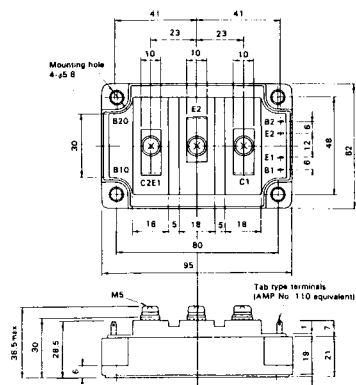
M-203



M-204



M-205



M-206



M-207



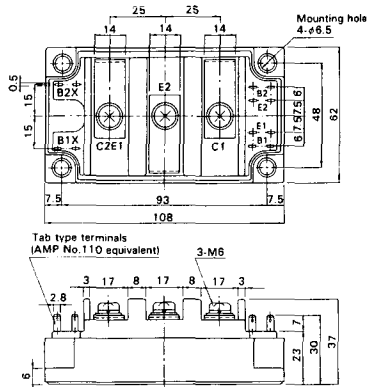
M-208



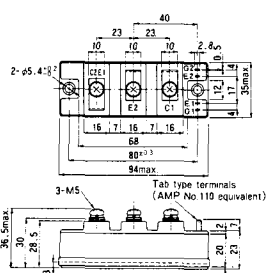
M-209



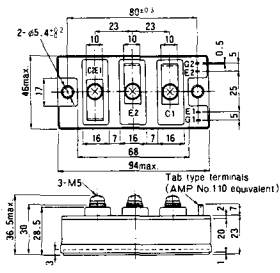
M-210



M-211



M-212



M-213

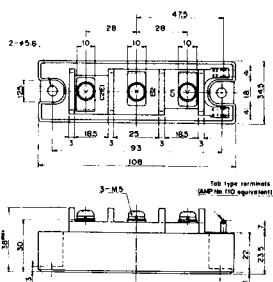


M-214

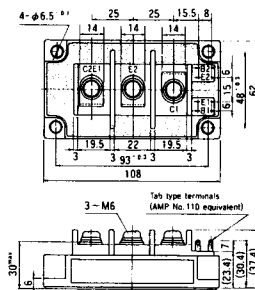
M-215



M-216



M-217



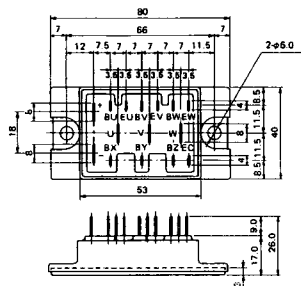
M-218



M-219



M-601



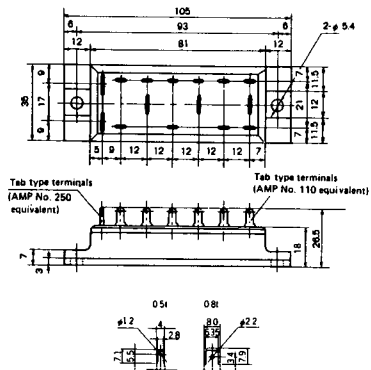
Tab type terminals
(AMP No. 110 equivalent)



Tab type terminals
(AMP No. 250 equivalent)



M-602



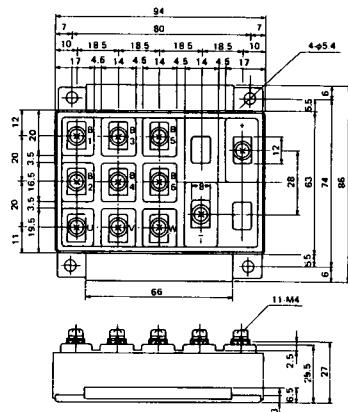
Tab type terminals
(AMP No. 250 equivalent)



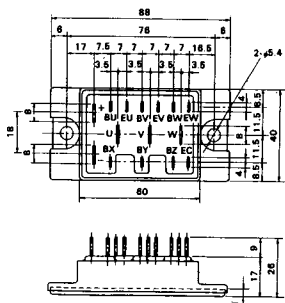
Tab type terminals
(AMP No. 110 equivalent)



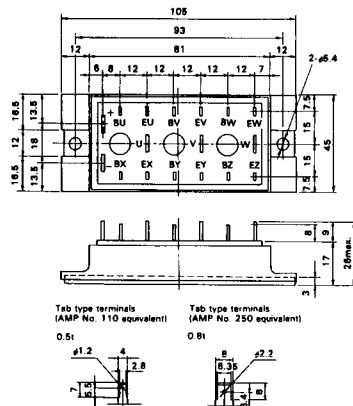
M-603



M-604



M-605



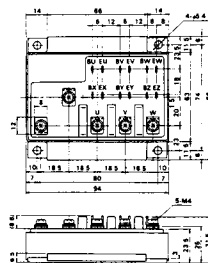
Tab type terminals
(AMP No. 110 equivalent)



Tab type terminals
(AMP No. 250 equivalent)



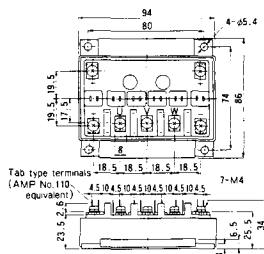
M-606



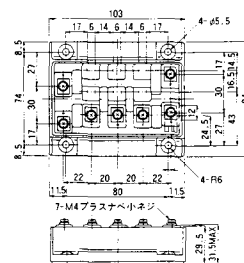
M-607



M-608



M-609



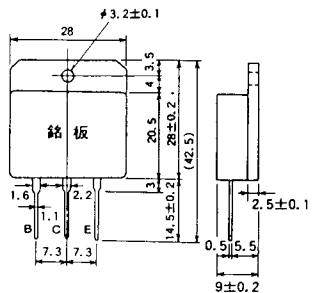
M-610



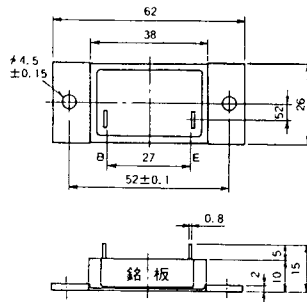
M-616



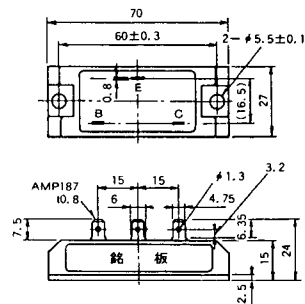
M-1A1A



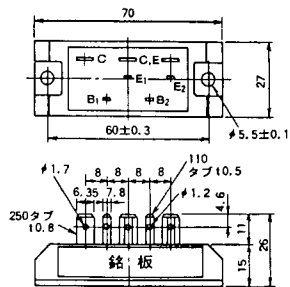
M-2A1A



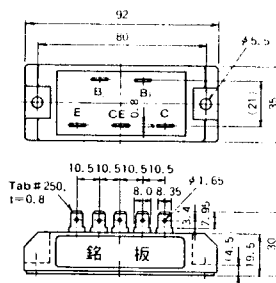
M-2B1A



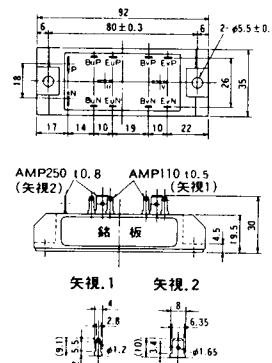
M-2B2A



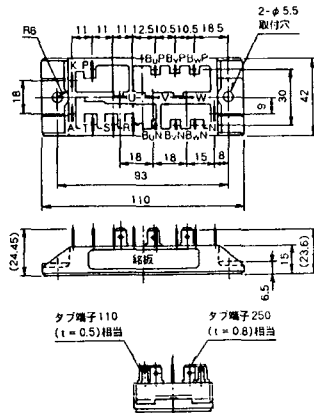
M-2C2A



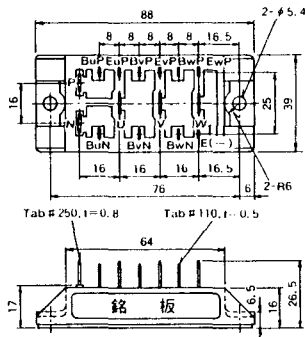
M-2D4A



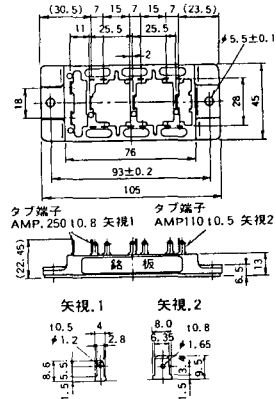
M-2E6A



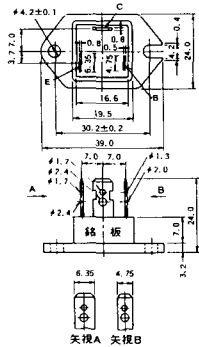
M-2F6A



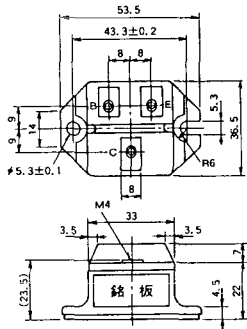
M-2G6A



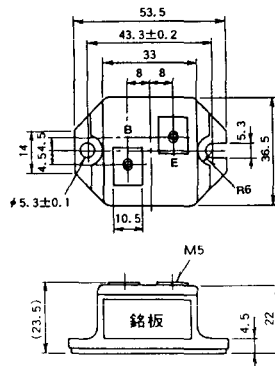
M-3A1A



M-3B1A



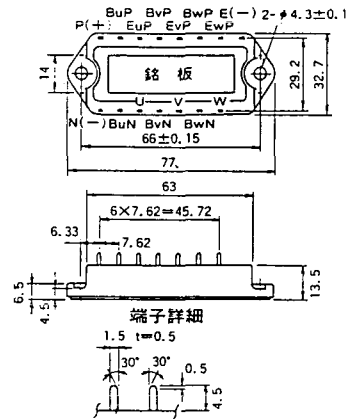
M-3B1B



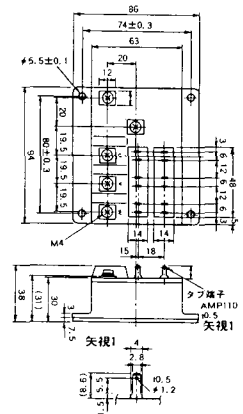
M-3C1A



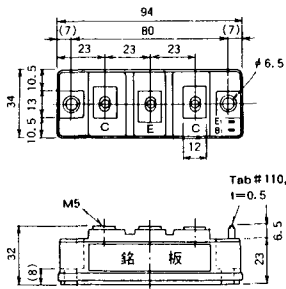
M-3D6A



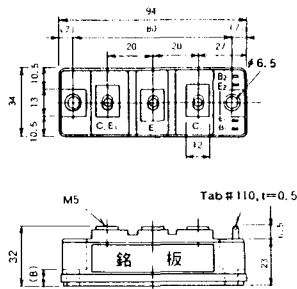
M-3E6A



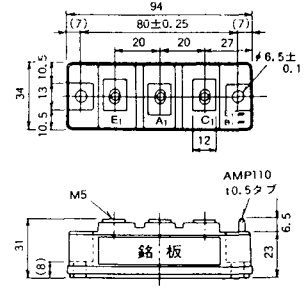
M-4A1A



M-4A2A



M-4A1B



M-4A2B



M-4B2A



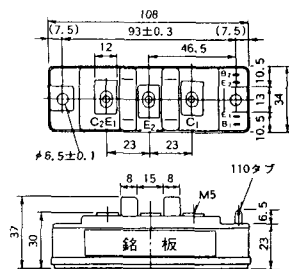
M-5A1A



M-5A1B



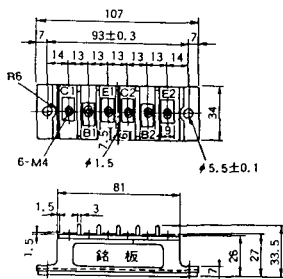
M-5A2A



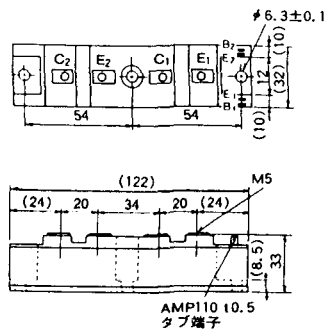
M-5B2A



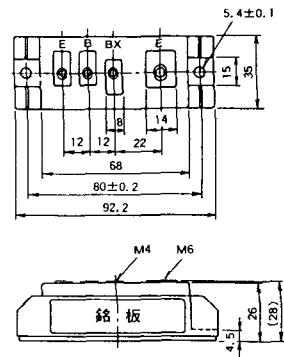
M-5C2A



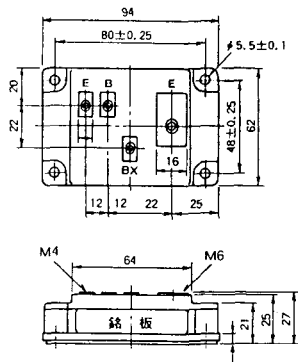
M-5D2A



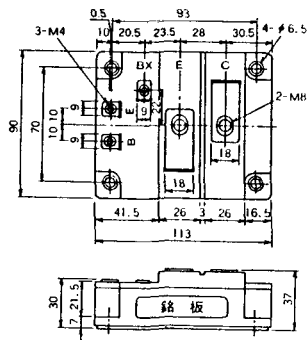
M-6A1A



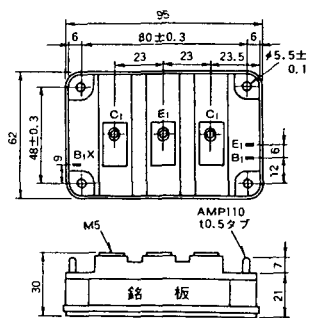
M-7A1A



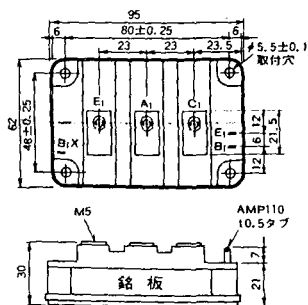
M-7B1A



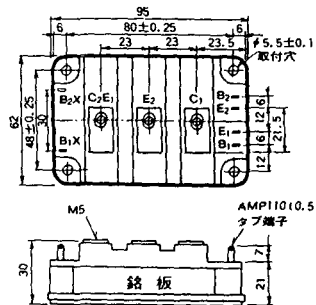
M-8A1A



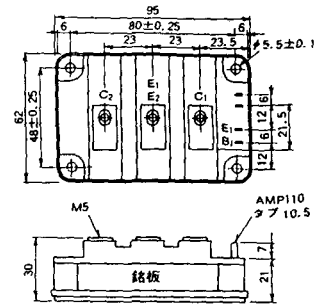
M-8A1B



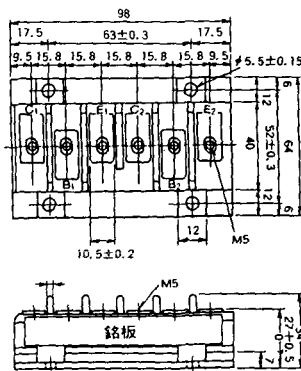
M-8A2A



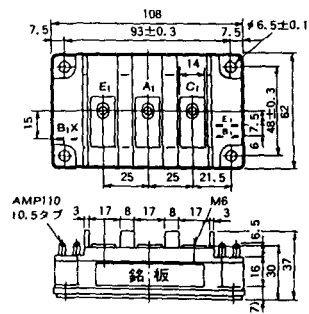
M-8A2B



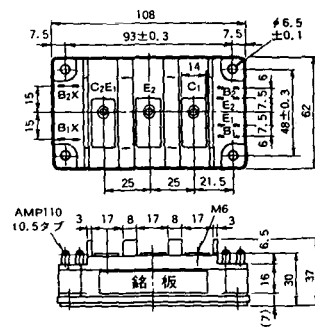
M-8B2A



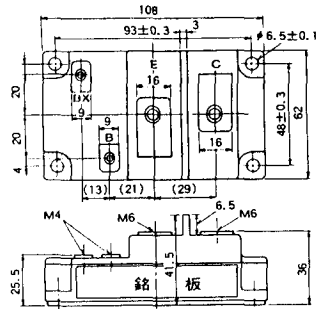
M-9A1A



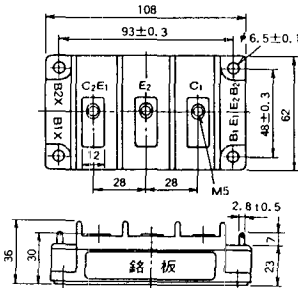
M-9A2A



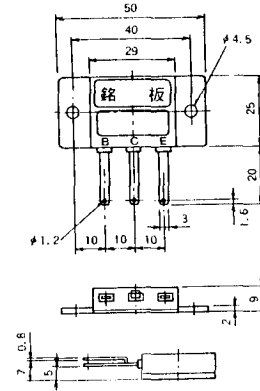
M-9B1A



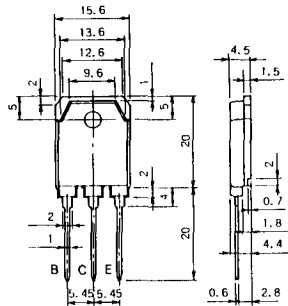
M-9C2A



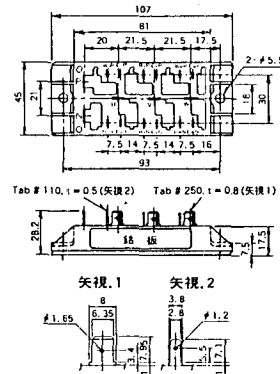
M-1A1B



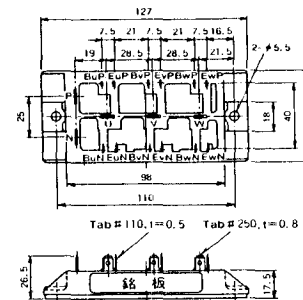
M-1A1C



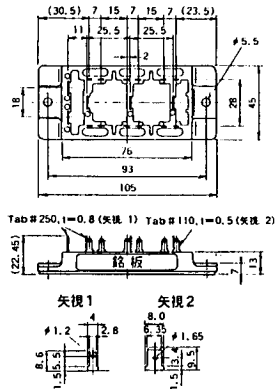
M-2E6B



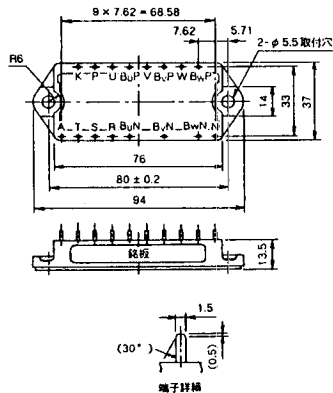
M-2E6C



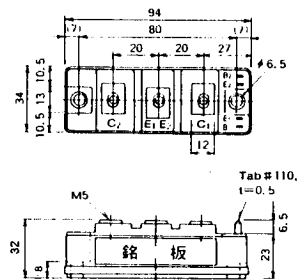
M-2G6B



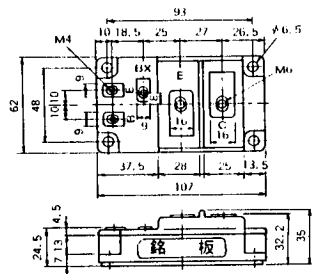
M-3D6B



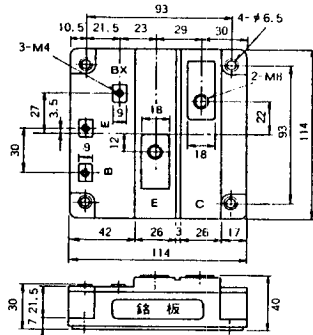
M-4A2C



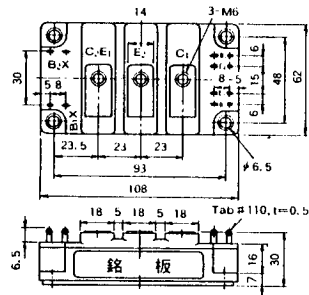
M-7A1B



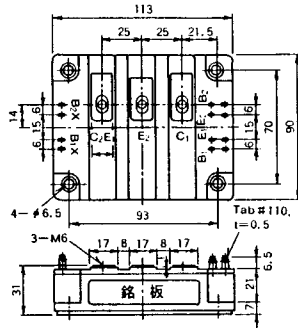
M-7C1A



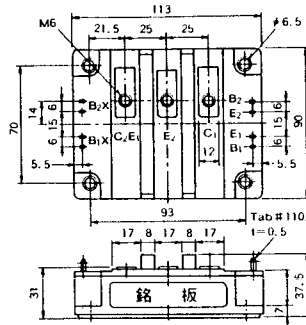
M-8A2C



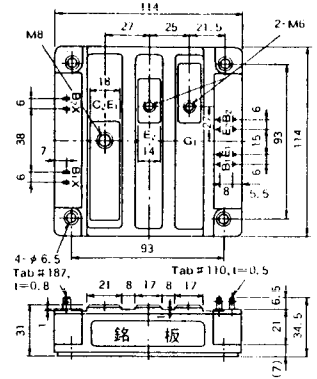
M-10A2A



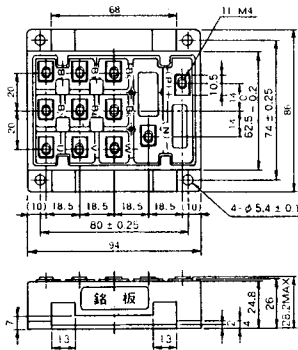
M-10A2B



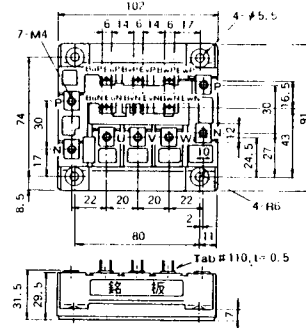
M-11A2A



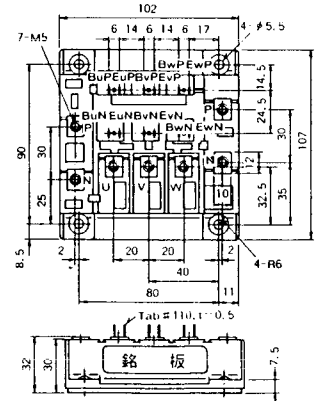
M-12A6A



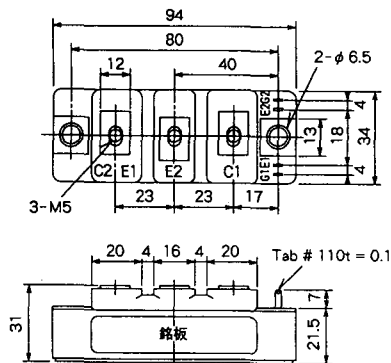
M-12B6A



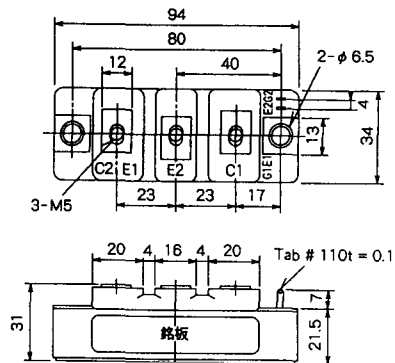
M-12B6B



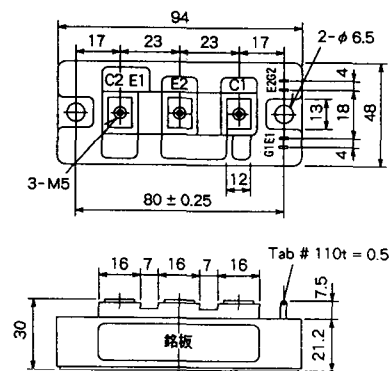
M-4A2D



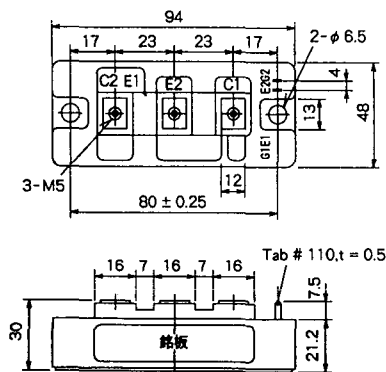
M-4A2E



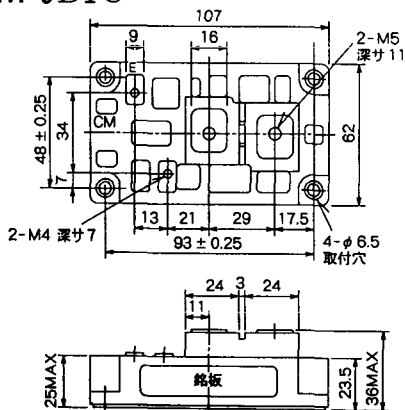
M-4C2A



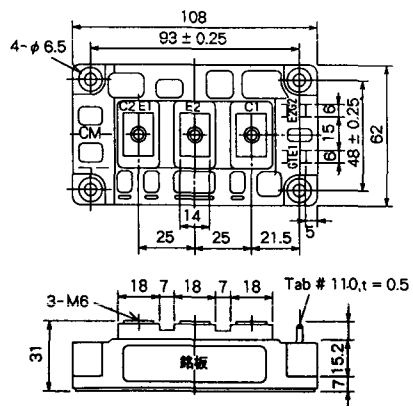
M-4C2B



M-9B1C



M-9D2A



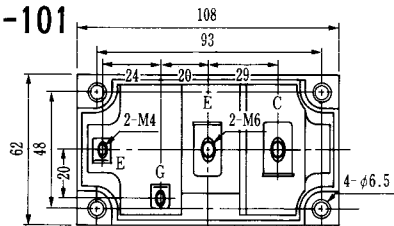
M-9D2B



M-10A2C

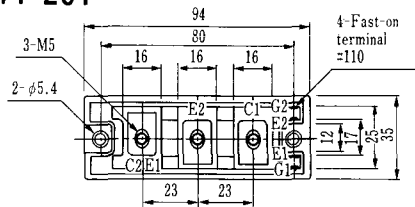


H-101



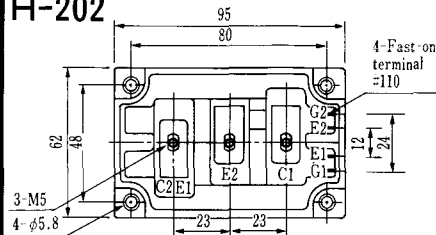
Weight :480g

H-201



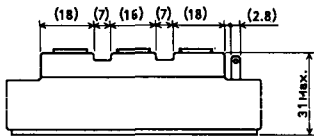
Weight: 200g

H-202



Weight: 360g

LF-J



LF-K

