

SG400<sup>†</sup>R, U, W, EX<sup>†</sup>22  
○チョップパ、インバータ用

■外形図番号 T-42 (13-45F1A)

■最大定格

記号	SG400R22	SG400U22	SG400W22	SG400EX22	単位
$V_{RRM}$	15				V
$V_{DRM}$	1300	1600	1800	2500	V
$I_{TQM}$	400 ( $V_D = \frac{1}{2} V_{DRM}$ , $V_{DM} = \frac{1}{2} V_{DRM}$ , $C_s = 1 \mu F$ , $R_s = 20 \Omega$ , $T_j = 125^\circ C$ )				
$I_{FRMS}$	150 ( $T_j = 70^\circ C$ )				
$I_{FSM}$	2600/2860 (50Hz/60Hz, 正弦半波1サイクル)				
$I^2 \cdot t$	A <sup>2</sup> S				
$di/dt$	200 ( $I_{GP} = 7 A$ , $t_r = 1 \mu s$ , $V_D = \frac{1}{2} V_{DRM}$ , $I_{TM} = 400 A$ , $f = 50 Hz$ , $T_j = 125^\circ C$ )				
$I_{GFM}$	20 (パルス幅: max. 20 $\mu s$ , duty: max. 20%)				
$P_{GFAV}$	4 W				
$I_{GRMS}$	20 A				
$P_{GRM}$	2000 (パルス幅: max. 20 $\mu s$ , duty: max. 2%)				
$V_{GRM}$	15 V				
$T_j$	125 °C				
$T_{stc}$	-40 ~ 125 °C				

■電気的特性

記号	測定条件	Min	Typ	Max	単位
$I_{RRM}$	$T_j = 125^\circ C$ , $V_D = V_{RRM}$			10	mA
$I_{DRM}$	$T_j = 125^\circ C$ , $V_D = V_{DRM}$ , $R_{GK} = 20 \Omega$			10	
$I_{GRM}$	$T_j = 125^\circ C$ , $V_D = V_{GRM}$			10	
$V_{TM}$	$T_c = 25^\circ C$ , $I_{TM} = 400 A$			2.4	V
$V_{GT}$	$T_c = 25^\circ C$ , $V_D = 12 V$	0.75		1.0	
$I_{GT}$	$R_L = 0.5 \Omega$		200	500	mA
$V_{GD}$		0.3			
$I_{GD}$	$T_c = 125^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$	5			mA
$t_d$	$T_c = 25^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$			2.0	
$t_{st}$	$I_{TM} = 400 A$ $di/dt = 200 A/\mu s$ $I_{GP} = 7 A$ , $t_r = 1 \mu s$	SG400R22		7.6	
		SG400U22		7.0	
		SG400W22		6.8	
	SG400EX22		6.0		
$dv/dt$	$T_j = 125^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$ $V_{GK} = -2 V$	600			V/ $\mu s$
$I_H$	$T_c = 25^\circ C$ , $R_L = 0.5 \Omega$		10		A
$t_r$	$T_c = 120^\circ C$ , $I_{TM} = 400 A$			13	$\mu s$
$t_{ev}$	$V_D = \frac{1}{2} V_{DRM}$ $V_{DM} = \frac{1}{2} V_{DRM}$ $C_s = 1 \mu F$ $R_s = 20 \Omega$	SG400R22		15	
		SG400U22		62	
		SG400W22		58	
	SG400EX22		56		
$t_{tot}$	$dig/dt = -12 A/\mu s$			50	A
$I_{GR}$		95		125	
$R_{th}$	接合~フィン間, DC			0.12	°C/W

SG500<sup>†</sup>FXF, GXH<sup>†</sup>21 (VRRM)  
○チョップパ、インバータ用

■外形図番号 T-43 (13-60E3A)

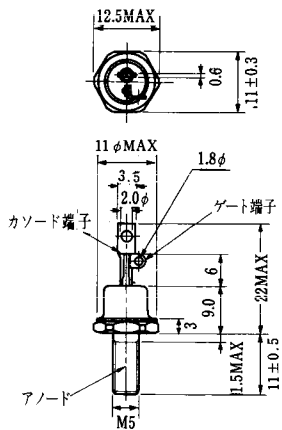
■最大定格

記号	SG500FXF21 (VRRM)	SG500GXH21 (VRRM)	単位
$V_{RRM}$	3000	4000	V
$V_{DRM}$	3300	4500	
$I_{TQM}$	500 ( $V_D = \frac{1}{2} V_{DRM}$ , $V_{DM} = \frac{1}{2} V_{DRM}$ , $C_s = 2 \mu F$ , $R_s = 20 \Omega$ , $T_j = 115^\circ C$ )		A
$I_{FRMS}$	200 ( $T_j = 70^\circ C$ )		
$I_{FSM}$	2500/3000 (50Hz/60Hz, 正弦半波1サイクル)		
$I^2 \cdot t$	A <sup>2</sup> S		
$di/dt$	200 ( $I_{GP} = 9 A$ , $t_r = 1 \mu s$ , $V_D = \frac{1}{2} V_{DRM}$ , $I_{TM} = 500 A$ , $f = 50 Hz$ , $T_j = 115^\circ C$ )		
$I_{GFM}$	30 (パルス幅: max. 20 $\mu s$ , duty: max. 20%)		
$P_{GFAV}$	6 W		
$I_{GRMS}$	35 A		
$P_{GRM}$	4000 (パルス幅: max. 20 $\mu s$ , duty: max. 2%)		
$V_{GRM}$	15 V		
$T_j$	115 °C		
$T_{stc}$	-40 ~ 115 °C		

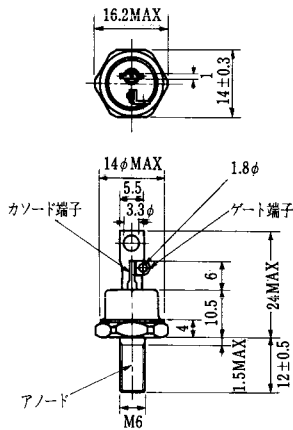
■電気的特性

記号	測定条件	Min	Typ	Max	単位
$I_{RRM}$	$T_j = 115^\circ C$ , $V_D = V_{RRM}$			40	mA
$I_{DRM}$	$T_j = 115^\circ C$ , $V_D = V_{DRM}$ , $R_{GK} = 20 \Omega$			40	
$V_{TM}$	$T_c = 25^\circ C$ , $I_{TM} = 500 A$			4.5	V
$V_{GT}$	$T_c = 25^\circ C$ , $V_D = 24 V$			1	
$I_{GT}$	$R_L = 1 \Omega$			500	mA
$V_{GD}$		0.3			
$I_{GD}$	$T_c = 115^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$	5			mA
$t_d$	$T_c = 25^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$ , $I_{GP} = 9 A$			2	
$t_{st}$	$I_{TM} = 500 A$ , $di/dt = 200 A/\mu s$			8	
$dv/dt$	$T_j = 115^\circ C$ , $V_D = \frac{1}{2} V_{DRM}$ , $V_{GK} = -4 V$	900			V/ $\mu s$
$I_H$	$T_c = 25^\circ C$ , $R_L = 1 \Omega$			30	A
$t_r$	$T_c = 110^\circ C$ , $I_{TM} = 500 A$			13	
$t_{ev}$	$V_D = \frac{1}{2} V_{DRM}$ , $V_{DM} = \frac{1}{2} V_{DRM}$			15	$\mu s$
$t_{tot}$	$C_s = 2 \mu F$ , $R_s = 20 \Omega$			180	
$I_{GR}$	$dig/dt = -20 A/\mu s$		150	180	A
$R_{th}$	接合~フィン間, DC			0.06	

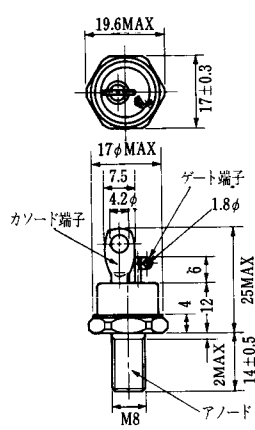
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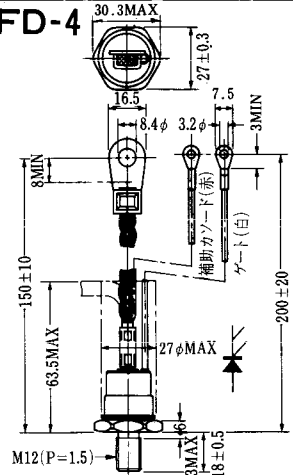
FD-2



FD-3



FD-4



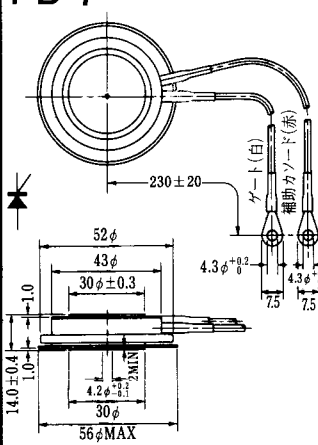
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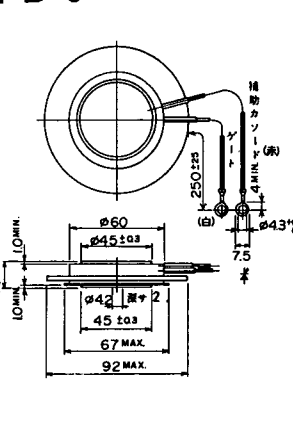
FD-6



FD-7



FD-8



FD-9

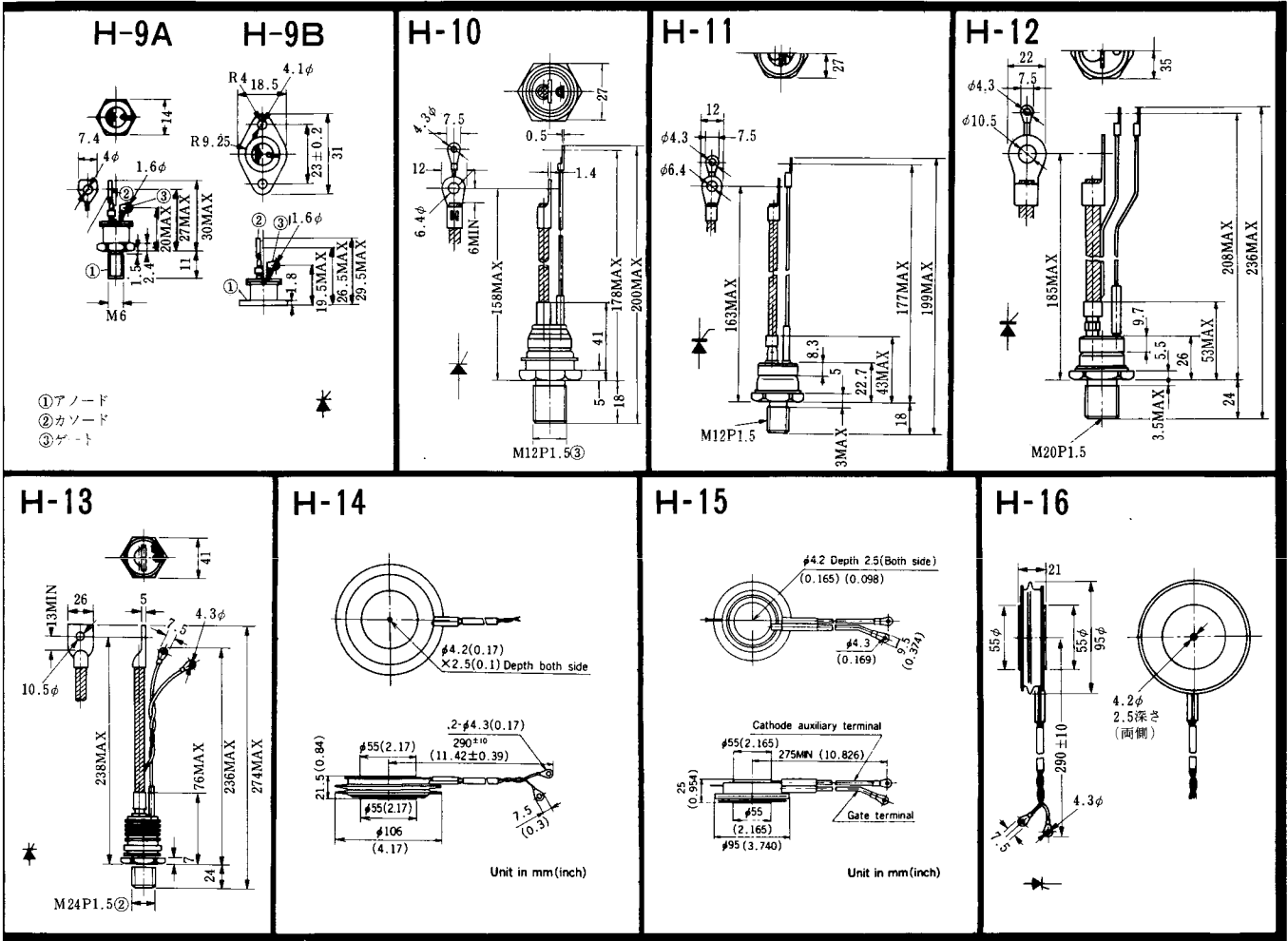


FD-10



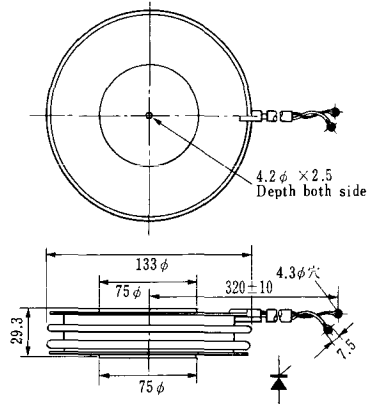
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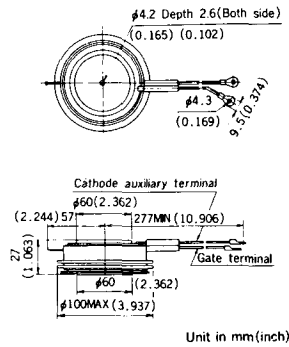


《寸法図単位：mm》

### H-17

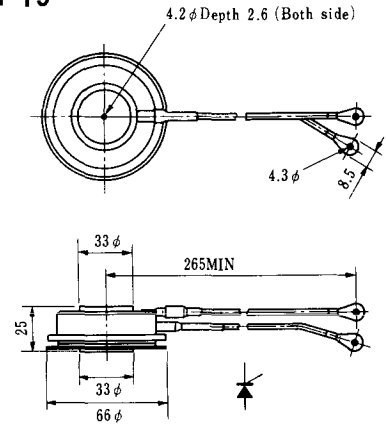


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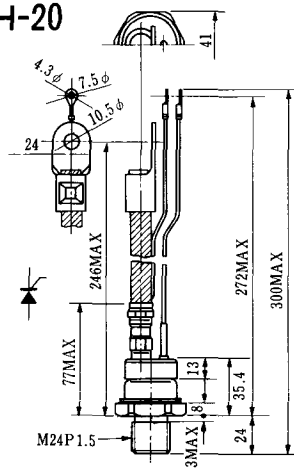


Unit in mm (inch)

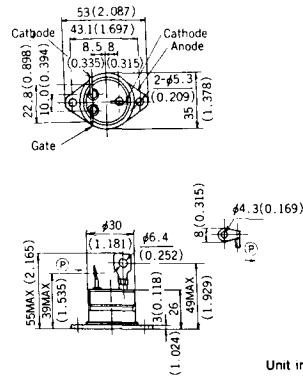
### H-19



### H-20

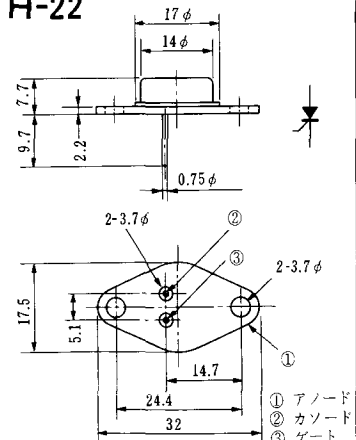


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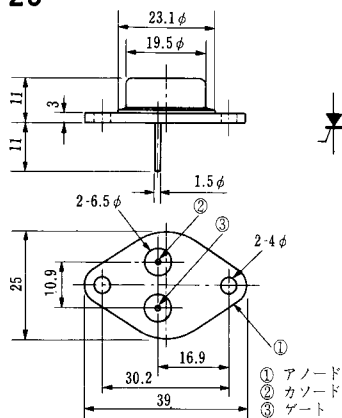
Unit in mm (inch)

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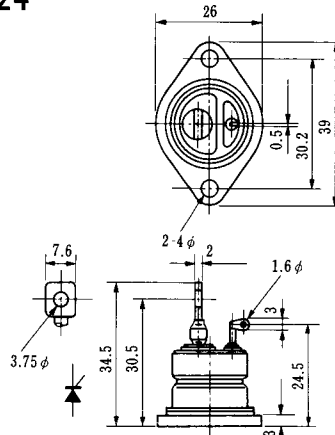


① アノード  
② カソード  
③ ゲート

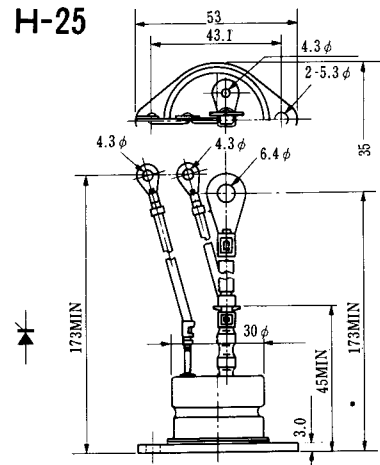
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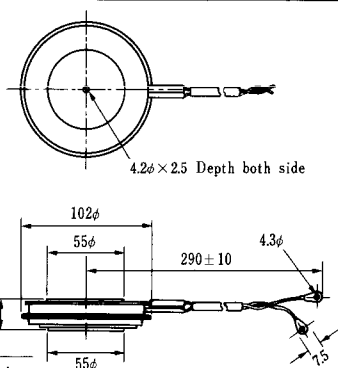
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### H-25



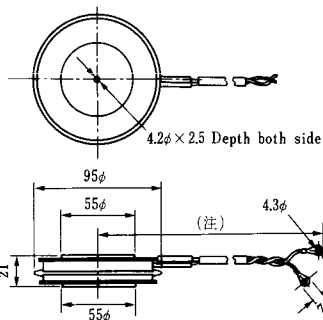
### H-26



Type	Direction of polarity
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CA12	
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### H-27

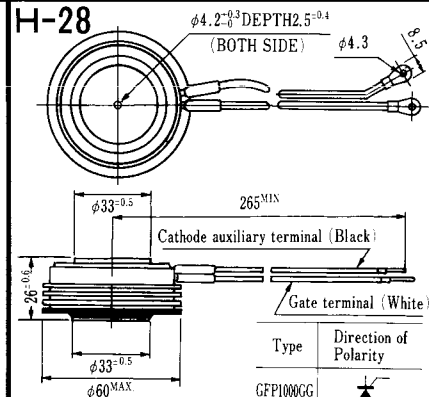


Type	Direction of polarity
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CF11V	
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(注) CC11V : 400 ± 10  
CF11V : 250 ± 10

### H-28



Type	Direction of Polarity
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GFP100GG	
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Weight: 360(g)

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



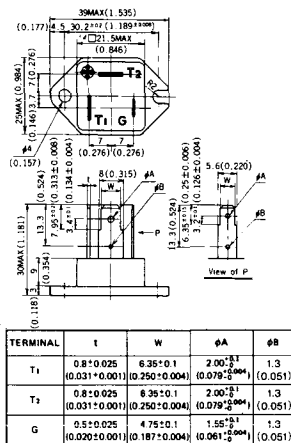
Note: The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



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

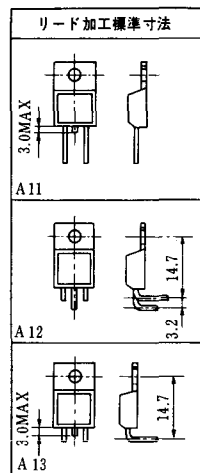
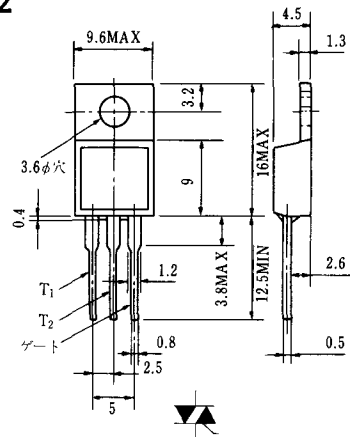


# HT-1

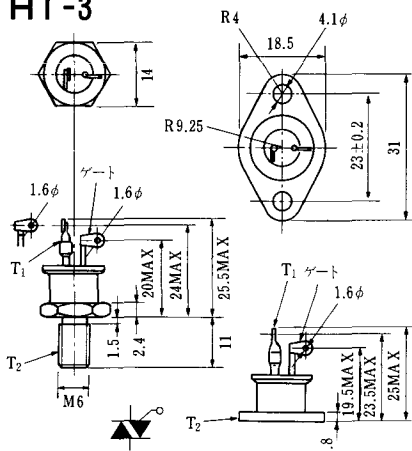


Unit in mm (inch)

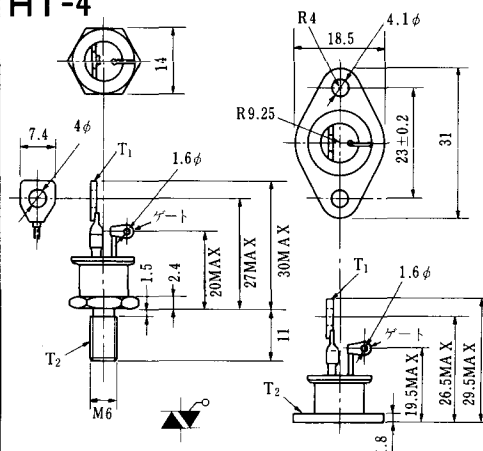
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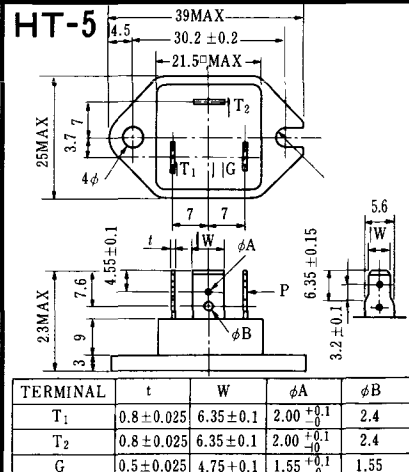
# HT-3



# HT-4



# HT-5



### M-1



### M-2



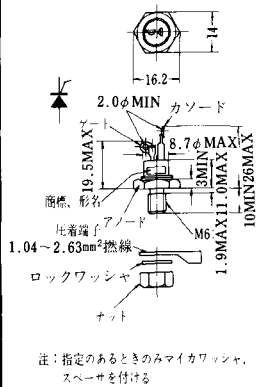
### M-3



### M-4



### M-5



### M-6



### M-7



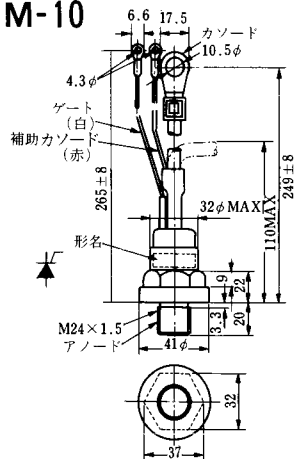
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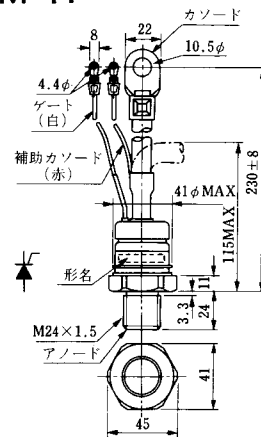
M-9



M-10



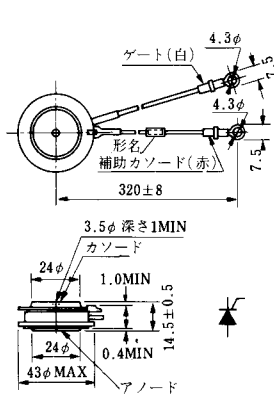
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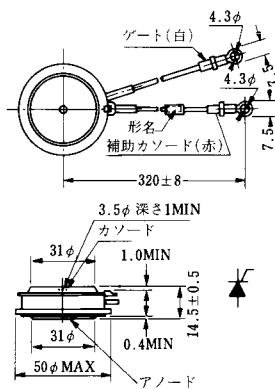
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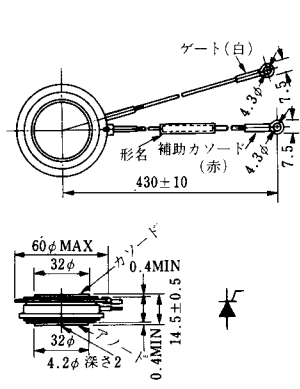
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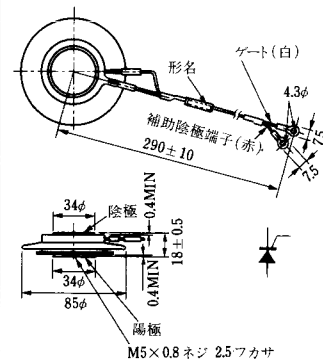
M-14



M-15

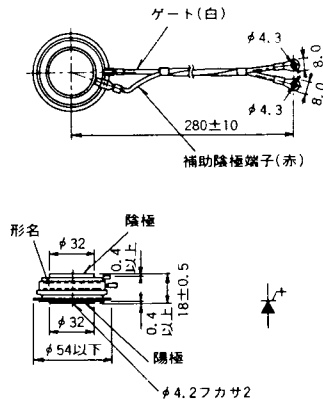


M-16

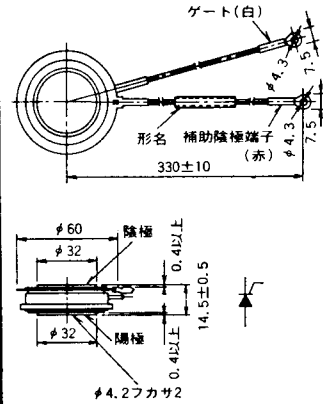




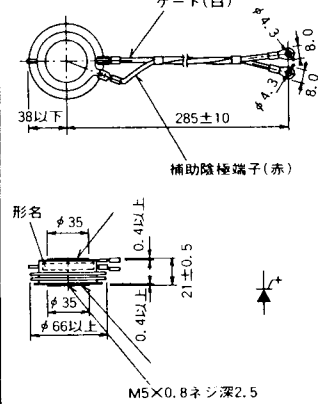
M-25



M-26



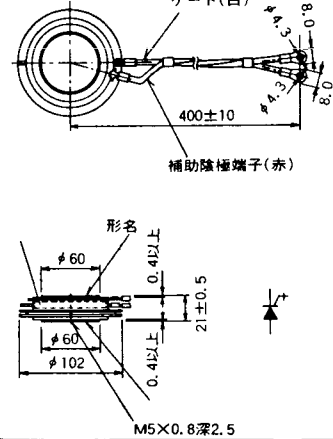
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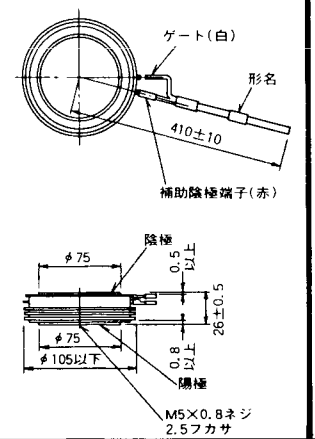
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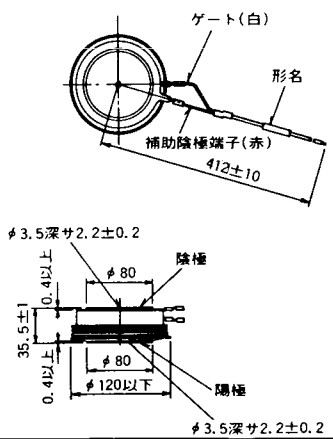
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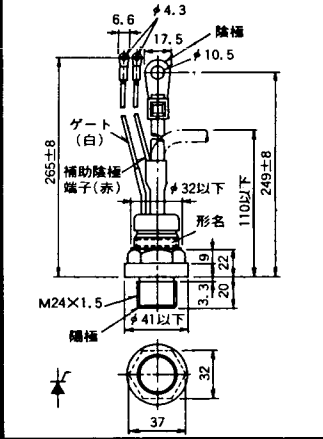
M-30



M-31



M-32



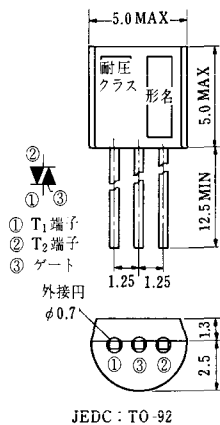
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### M-34



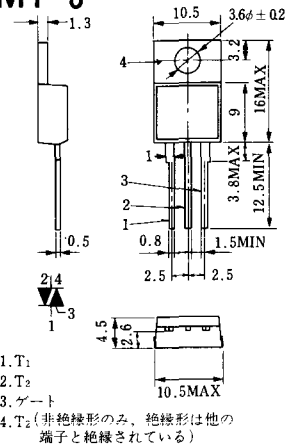
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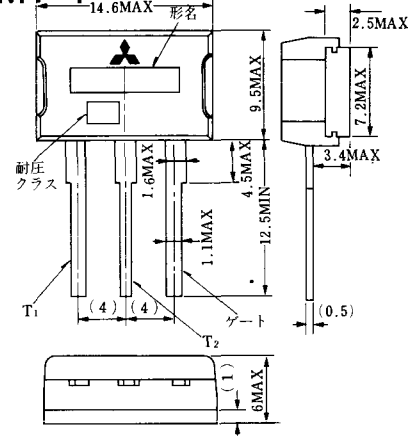
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### MT-3



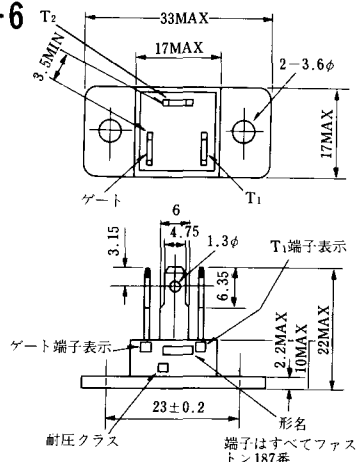
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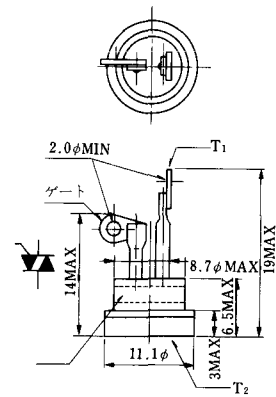
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### MT-6



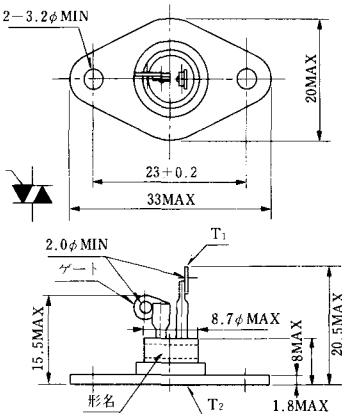
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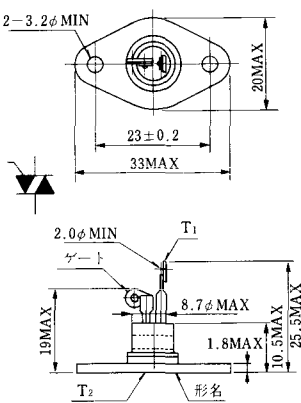
MT-8



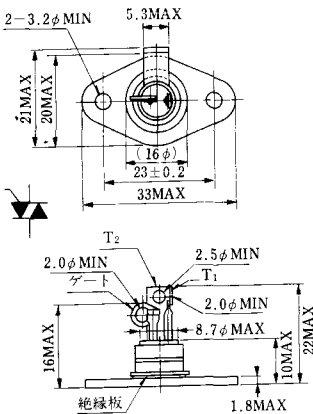
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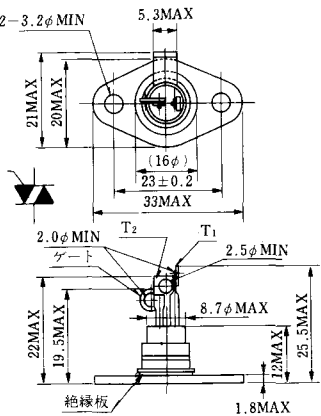
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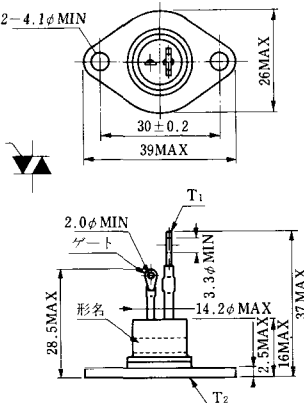
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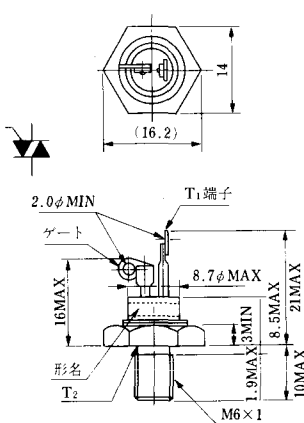
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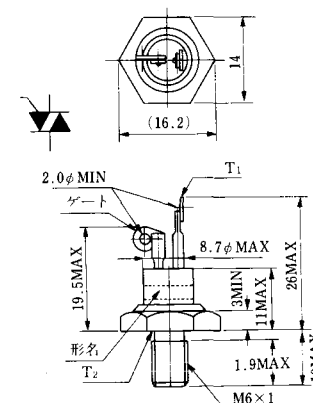
MT-13



MT-14



MT-15

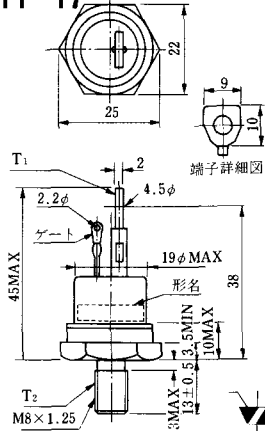




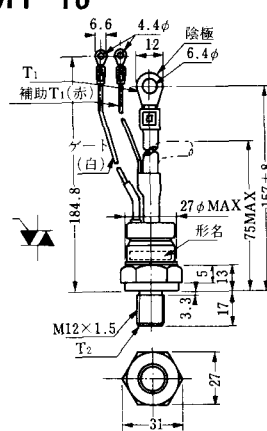
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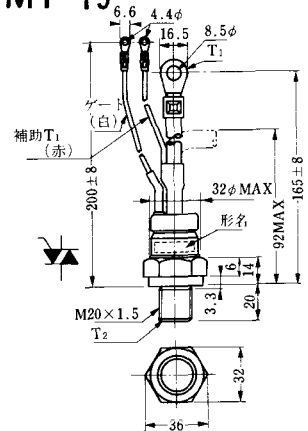
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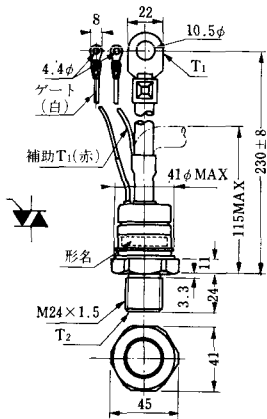
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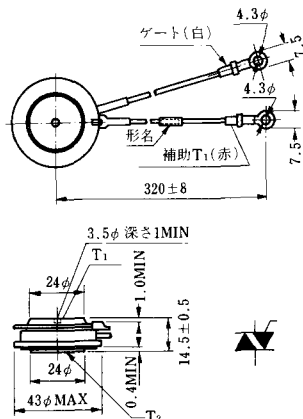
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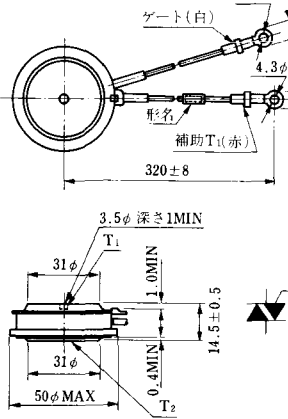
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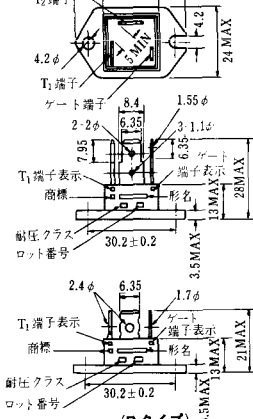
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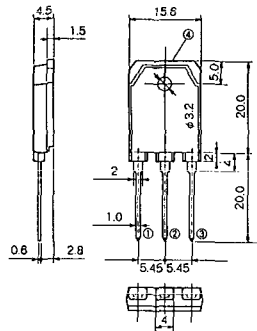
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MT-23

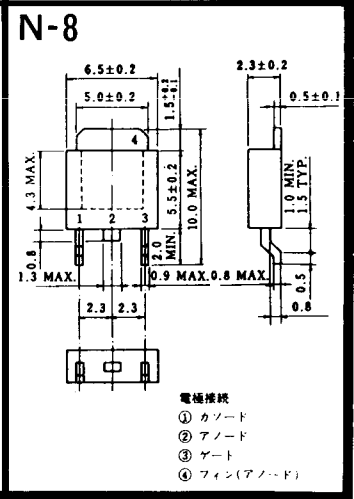
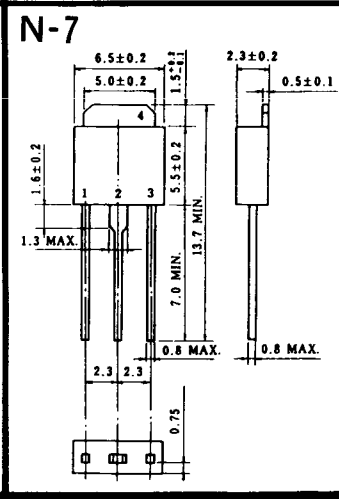
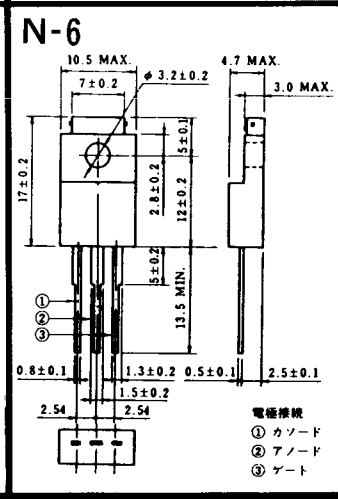
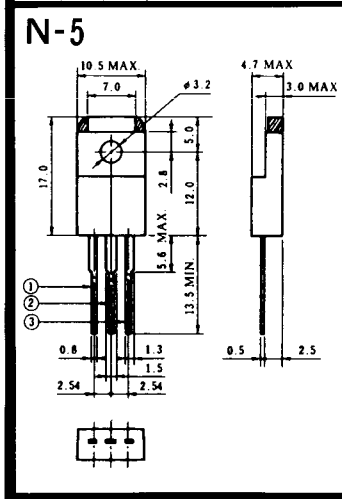
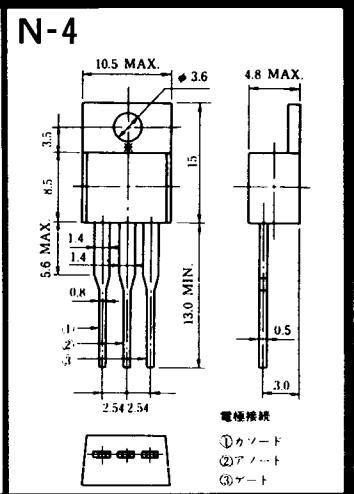
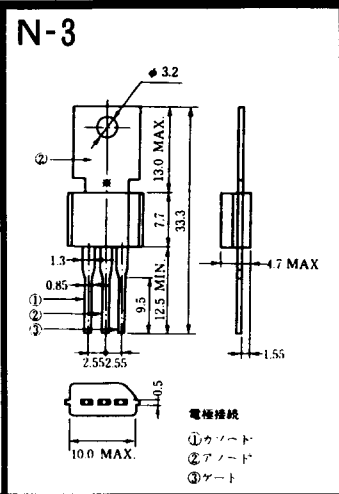
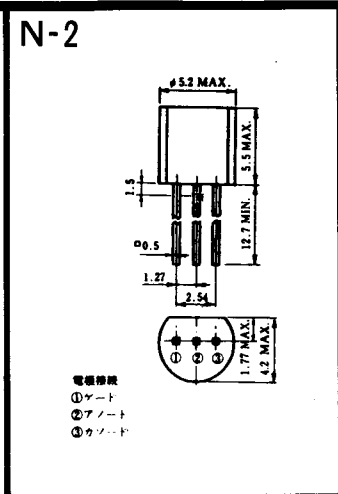
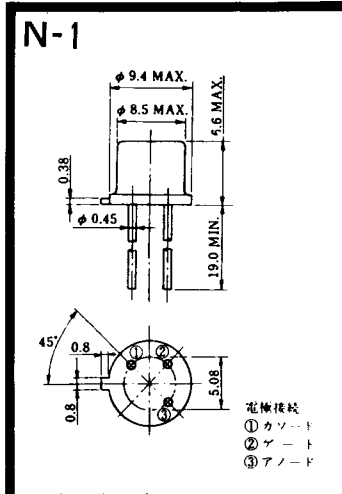


# MT-24

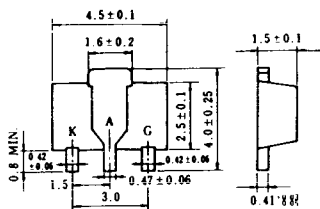


TO - 3P

- ① T1 端子
- ② T2 端子
- ③ ゲート端子
- ④ T2 端子



N-9



電極接続

K : カソード

A : アノード

G : ゲート

### NA-1

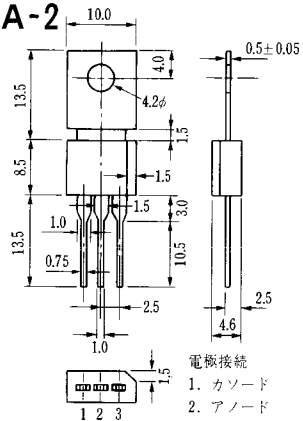


電極接続

1. ゲート
2. アノード
3. カソード

JEDEC: TO-92

### NA-2

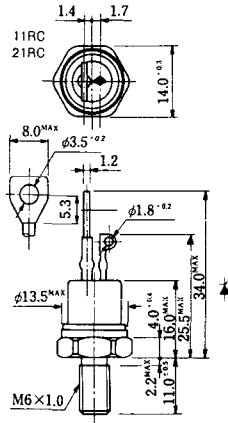


電極接続

1. カソード
2. アノード
3. ゲート

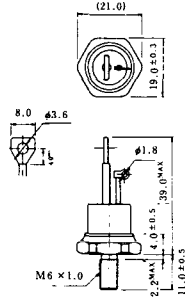
JEDEC: TO-202AA

### NI-1



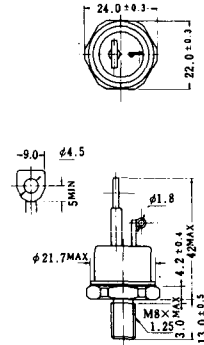
### NI-2

29RD



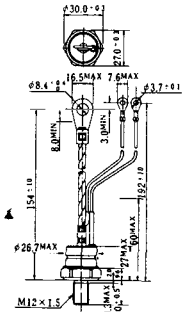
### NI-3

39RC  
59RC  
39RF  
59RF



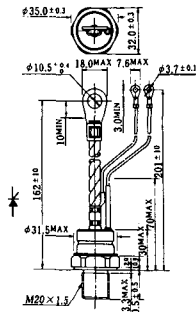
### NI-4

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



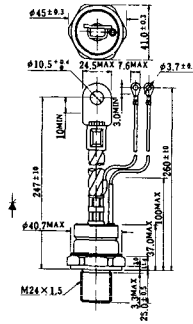
### NI-5

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



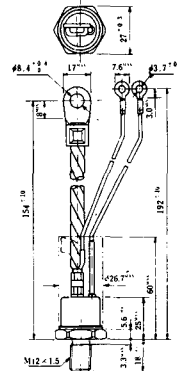
### NI-6

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



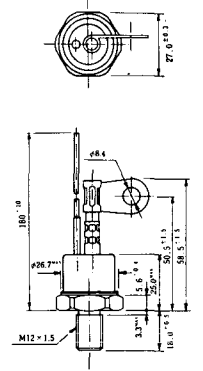
### NI-7

89RW<sub>L</sub>  
129RW<sub>L</sub>



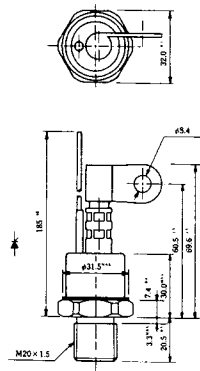
### NI-8

89RW  
129RW



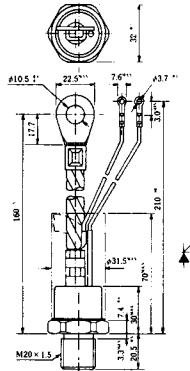
### NI-9

259RW  
309RW



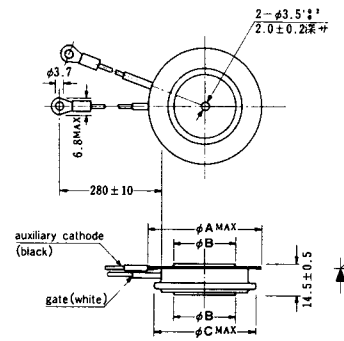
### NI-10

259RW<sub>JL</sub>  
309RW<sub>JL</sub>



### NI-11

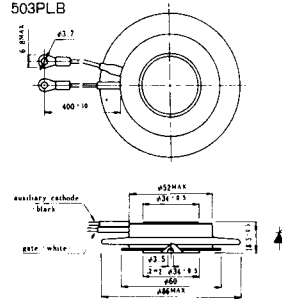
103PA  
253PA  
503PA  
553PA  
803PA  
103PLE  
103PLG  
103PLH  
203PLG  
253PLE  
253PLH  
353PLG  
403PLE  
403PLH



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

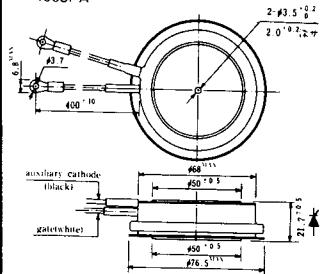
### NI-12

403PAB  
503PAB  
503PLB



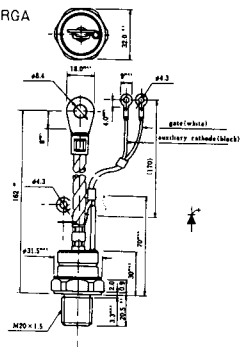
### NI-13

1003PA  
1003PAB  
1003PLF  
1003PLH  
1503PA



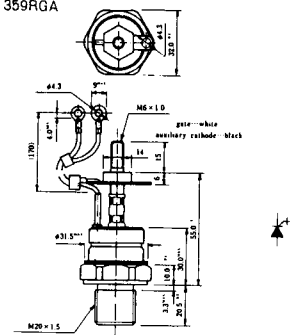
### NI-14

358RGA



### NI-15

359RGA







NI-24

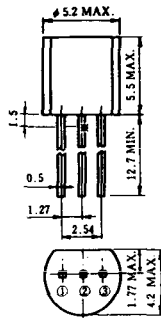
2001PGB<sup>r</sup> JE



NI-25

NI-26

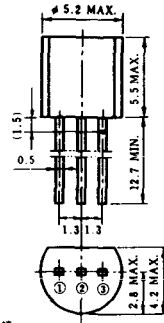
### NT-1



電極接続

- ① T<sub>1</sub>
- ② ゲート
- ③ T<sub>2</sub>

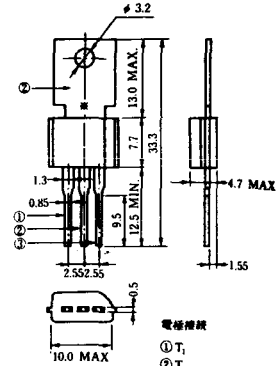
### NT-2



電極接続

- ① T<sub>1</sub>
- ② ゲート
- ③ T<sub>2</sub>

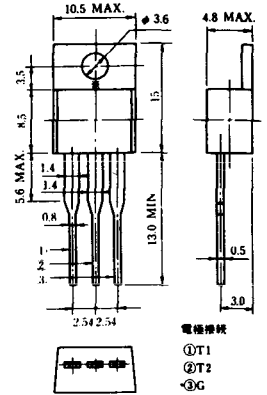
### NT-3



電極接続

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ ゲート

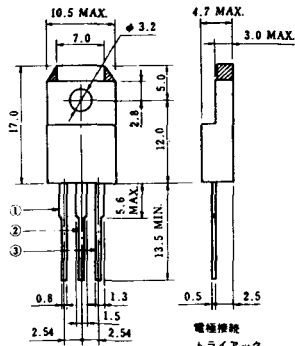
### NT-4



電極接続

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ G

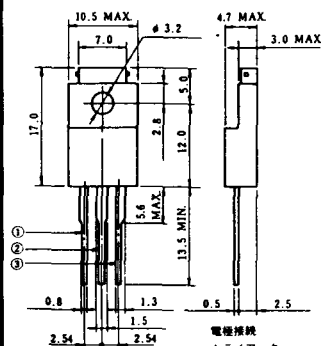
### NT-5



電極接続  
トライアック

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ ゲート

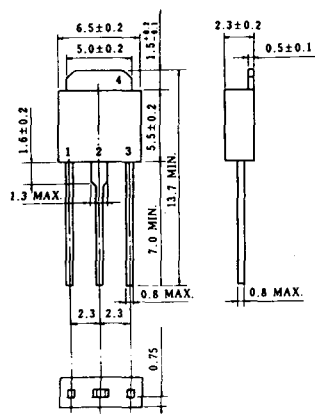
### NT-6



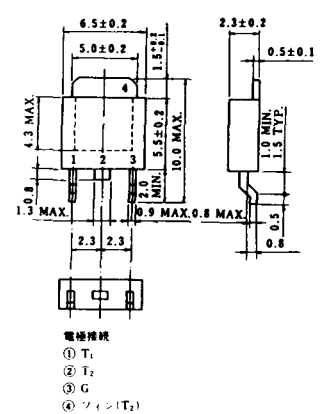
電極接続  
トライアック

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ ゲート

### NT-7



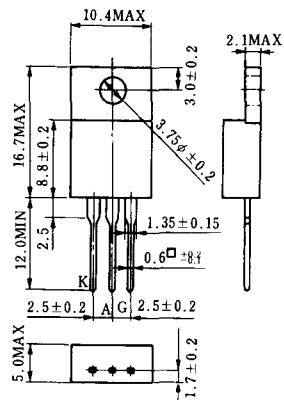
### NT-8



電極接続

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ G
- ④ シェン(T<sub>2</sub>)

### S-1



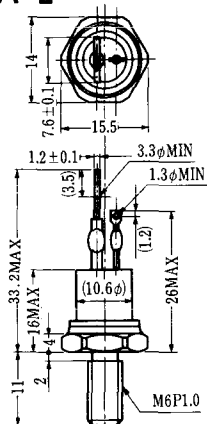
### ST-1



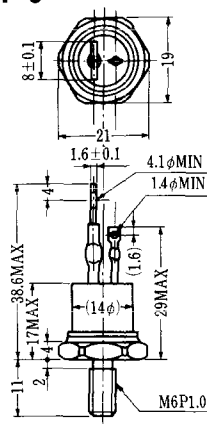
SA-1



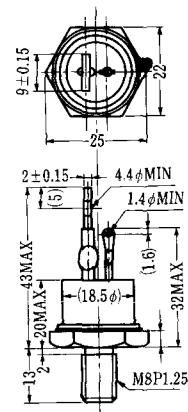
SA-2



SA-3



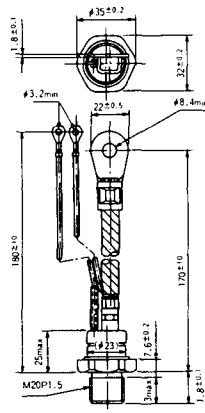
SA-4



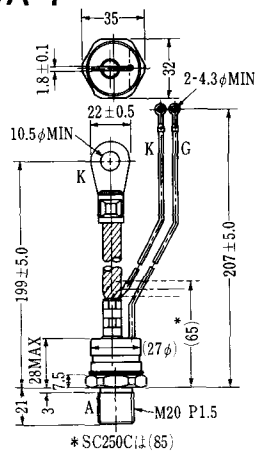
SA-5



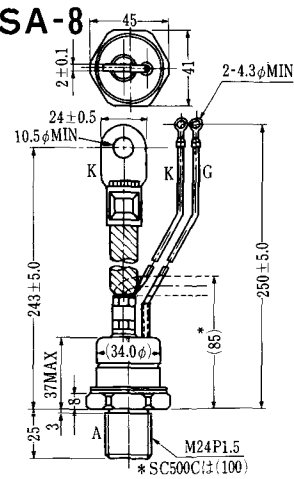
SA-6



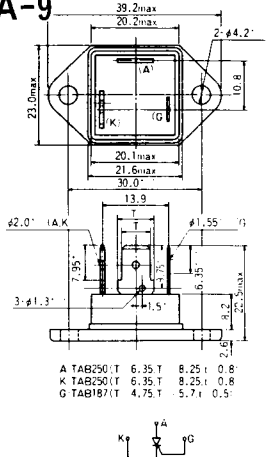
SA-7



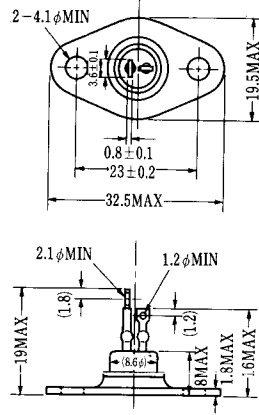
SA-8



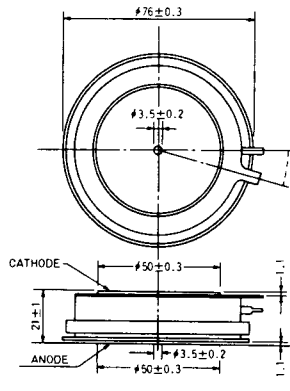
SA-9



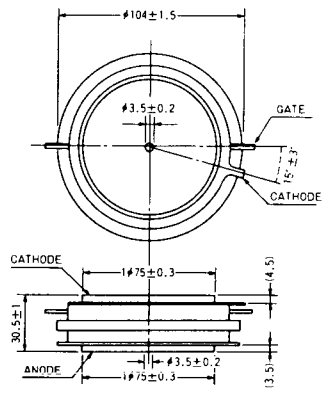
SA-10



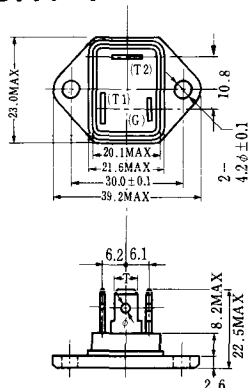
SA-11



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)

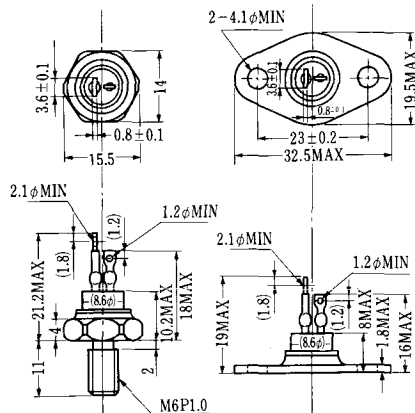
SAT-2



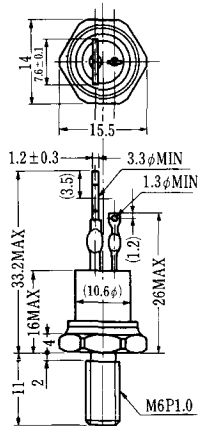
SAT-3



SAT-4



SAT-5



SAT-6



SAT-7



SAT-8



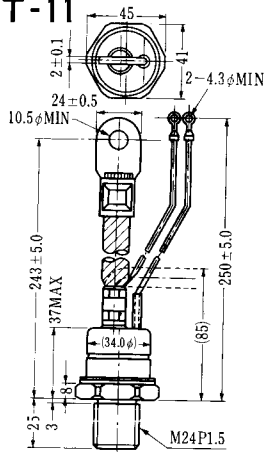
SAT-9



SAT-10



SAT-11

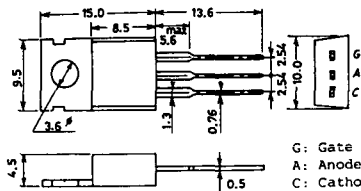


### SY-1 (1096A)



C: Cathode  
A: Anode  
G: Gate

### SY-2 (1151)



G: Gate  
A: Anode  
C: Cathode

### SY-3 (1104)



G: Gate  
A: Anode  
C: Cathode

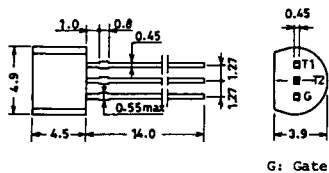
### SY-4 (1150)



G: Gate  
A: Anode  
C: Cathode



1097A



G: Gate

1102



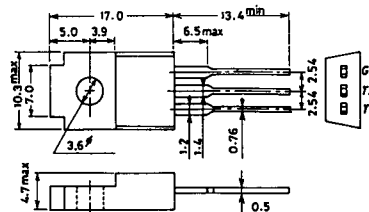
1141



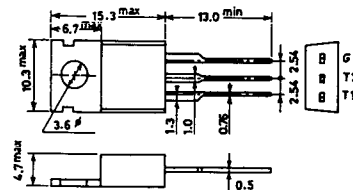
1142



1144



1155

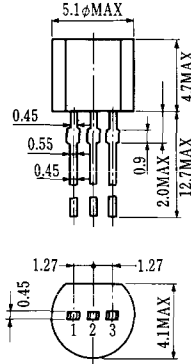


1192A



G: Gate

**T-1 (13-5A1A)**



- 1 ゲート
- 2 アノード
- 3 カソード

**T-2 (13-8A1A)**



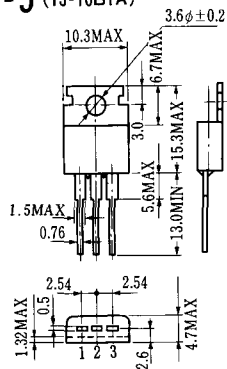
1. カソード
2. ゲート
3. アノード(ケース)

**T-3 (13-8C1A)**



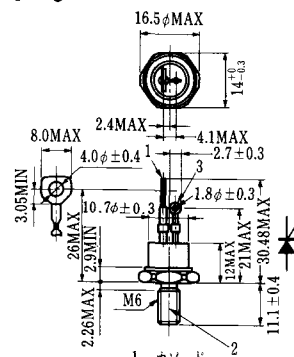
- 1 カソード
- 2 アノード
- 3 ゲート

**T-5 (13-10B1A)**



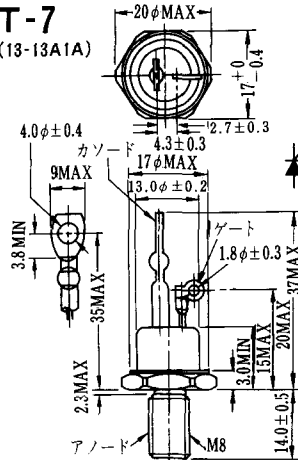
- 1 カソード
- 2 アノード
- 3 ゲート

**T-6 (13-11D1A)**

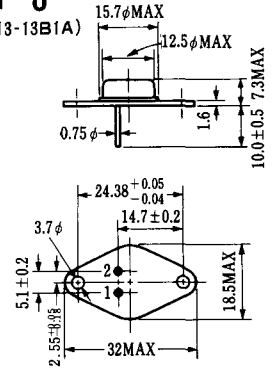


- 1 カソード
- 2 アノード
- 3 ゲート

**T-7 (13-13A1A)**

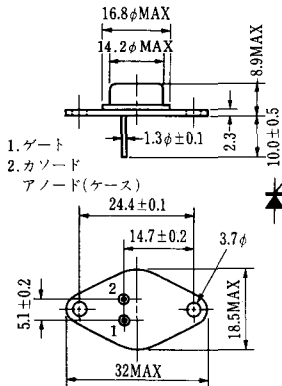


**T-8 (13-13B1A)**



1. ゲート
2. カソード
3. アノード(ケース)

### T-9 (13-14A1A)



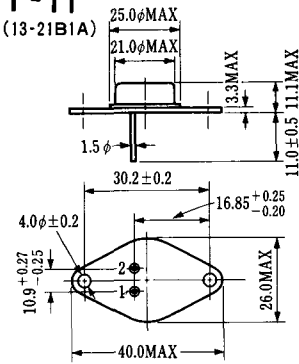
- 1. ゲート
- 2. カソード
- アノード(ケース)

### T-10 (13-19A1A)



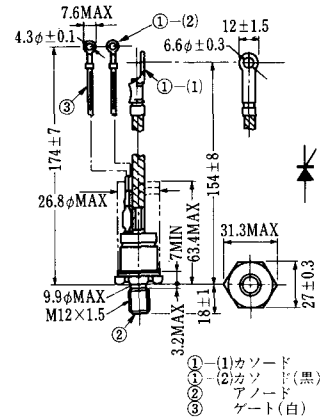
- 1. カソード
- 2. アノード
- 3. ゲート

### T-11 (13-21B1A)



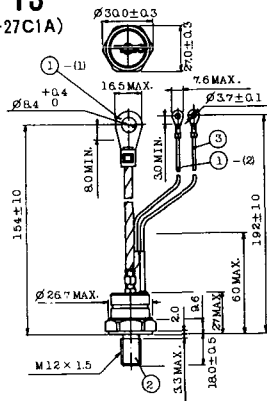
- 1. ゲート
- 2. カソード
- アノード(ケース)

### T-12 (13-27B1B)



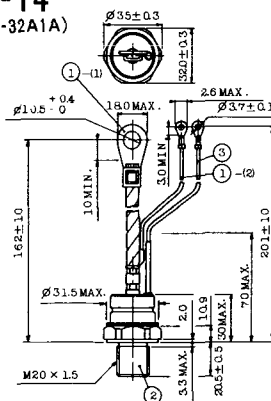
- ① (1) カソード
- ② (1) カソード(黒)
- ③ (1) アノード
- ④ (1) ゲート(白)

### T-13 (13-27C1A)



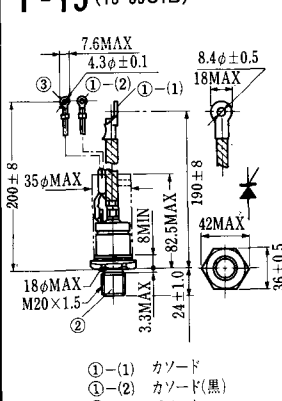
- 1-(1) カソード
- 2-(1) カソード(黒)
- 3-(1) アノード
- 4-(1) ゲート(白)

### T-14 (13-32A1A)



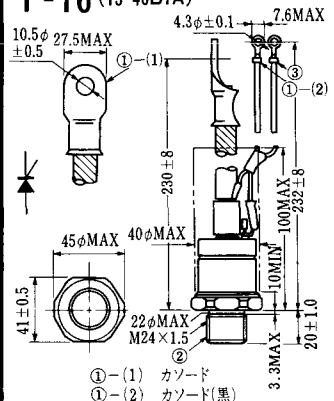
- 1-(1) カソード
- 2-(1) カソード(黒)
- 3-(1) アノード
- 4-(1) ゲート(白)

### T-15 (13-35C1B)



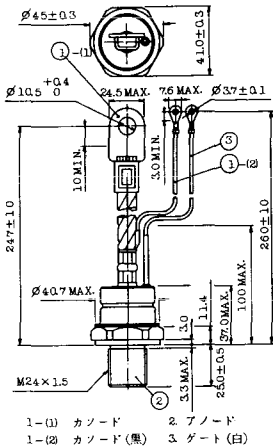
- ① (1) カソード
- ② (2) カソード(黒)
- ③ (1) アノード
- ④ (1) ゲート(白)

### T-16 (13-40B1A)



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

**T-17 (13-42A1A)**



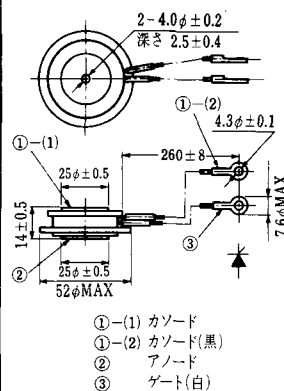
**T-18 (13-45D1A)**



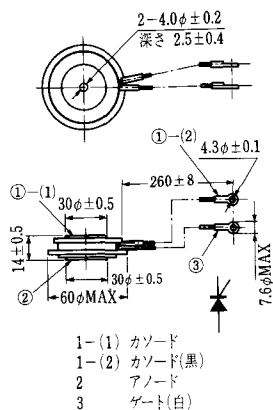
**T-19 (13-52B1A)**



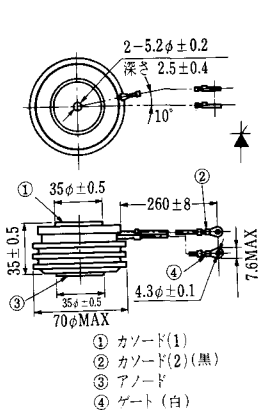
**T-20 (13-52C1A)**



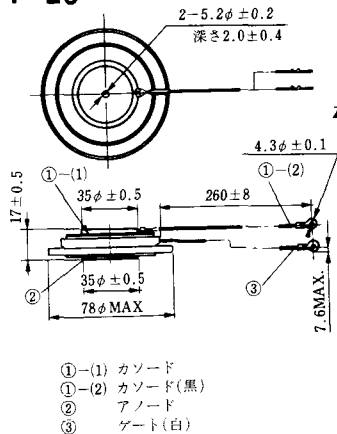
**T-21 (13-60A1A)**



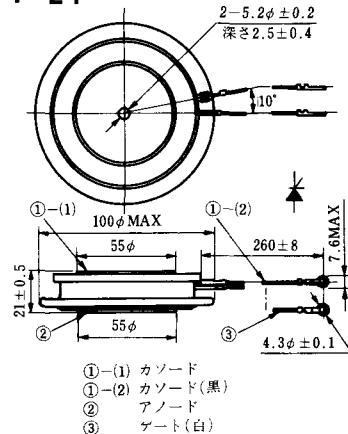
**T-22 (13-70C1A)**



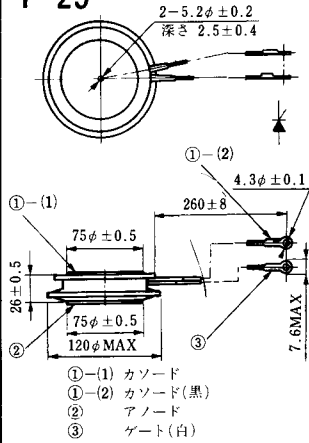
**T-23 (13-78A1A)**



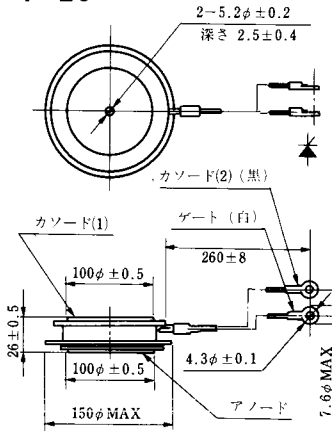
**T-24 (13-100C1A)**



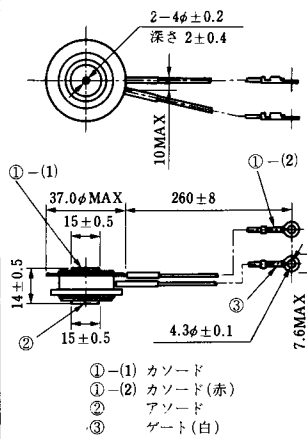
**T-25** (13-120A2A)



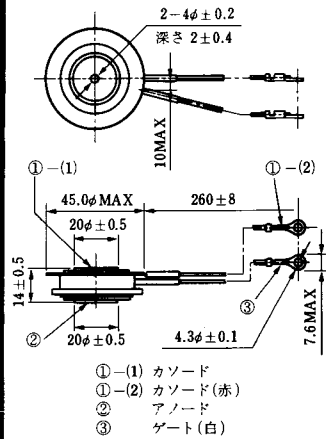
**T-26** (13-150A1A)



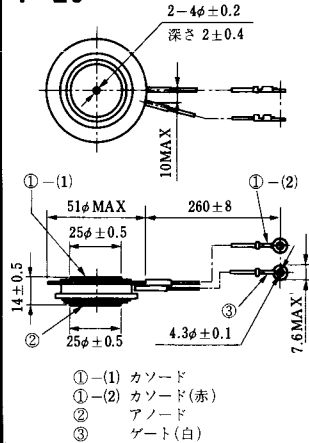
**T-27** (13-37A1A)



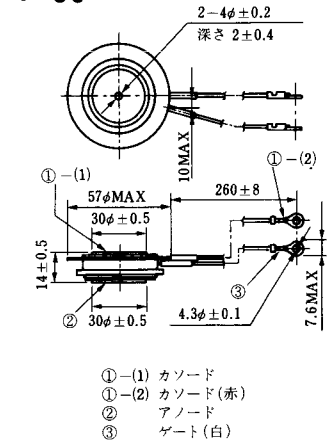
**T-28** (13-45E1A)



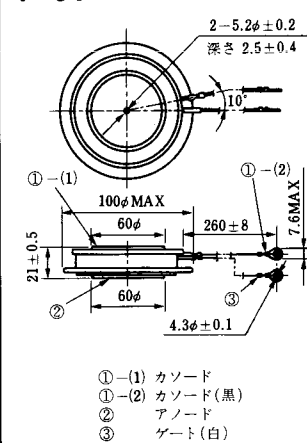
**T-29** (13-51A1A)



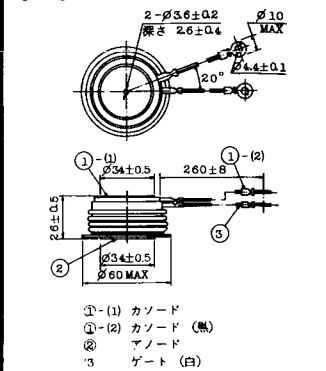
**T-30** (13-57A1A)



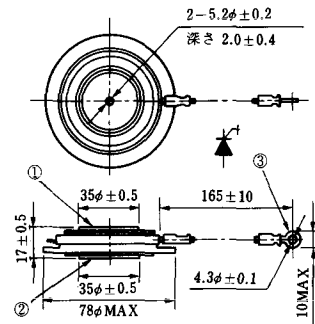
**T-31** (13-100E1A)



**T-32** (13-60E3A)

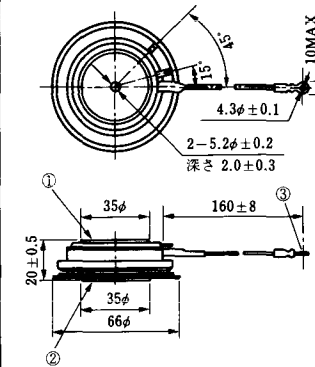


**T-33 (13-78B1A)**



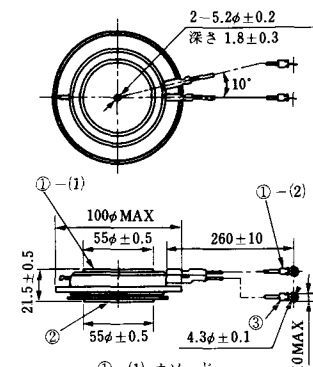
- ① カソード
- ② アノード
- ③ ゲート

**T-34 (13-66A1A)**



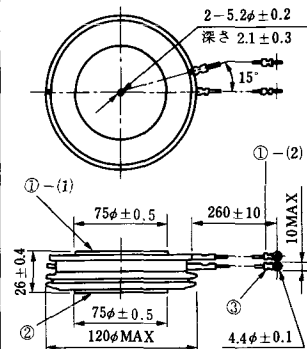
- ① カソード
- ② アノード
- ③ ゲート

**T-35 (13-100D1A)**



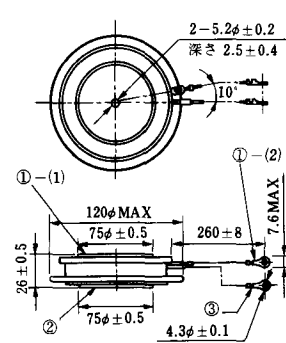
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

**T-36 (13-120E1A)**



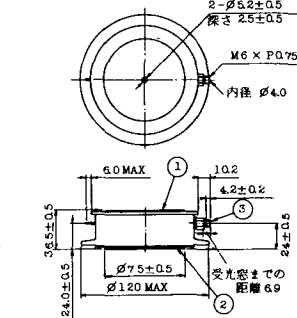
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

**T-37 (13-120A1A)**



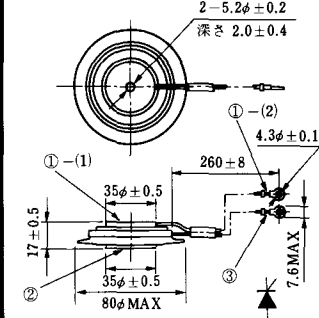
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

**T-38 (13-120C1A)**



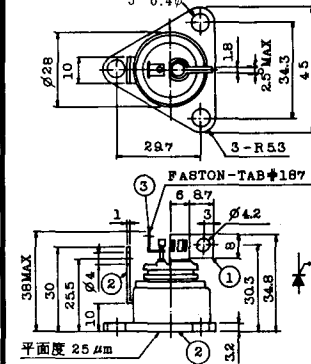
- ① カソード
- ② アノード
- ③ ゲート

**T-39 (13-80B1A)**



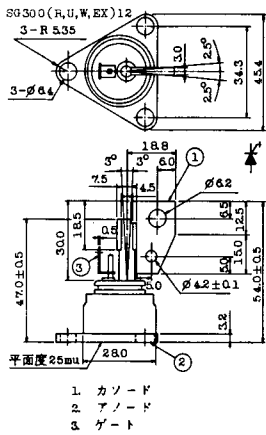
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

**T-40 (13-28A1A)**

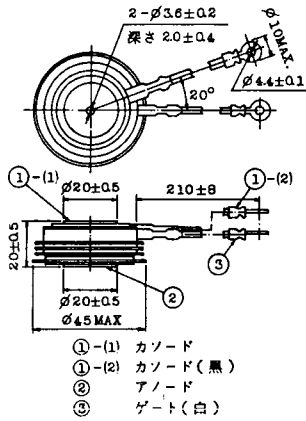


- 1. カソード
- 2. アノード
- 3. ゲート

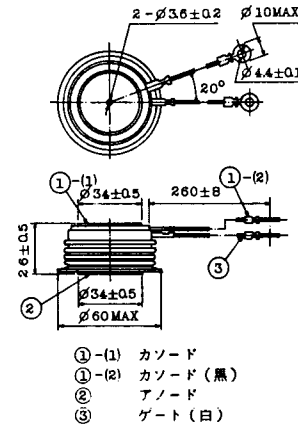
### T-41 (13-28A2A)



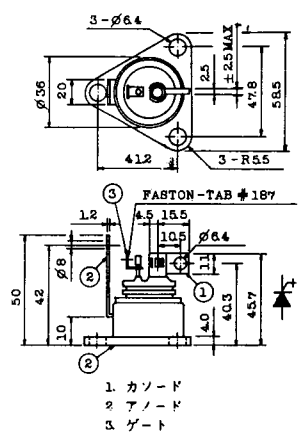
### T-42 (13-45F1A)



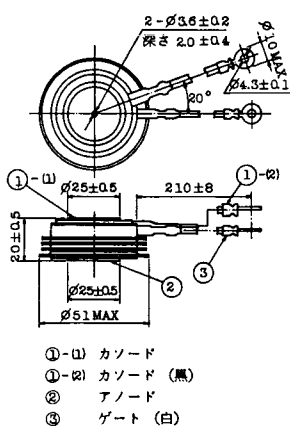
### T-43 (13-60E2A)



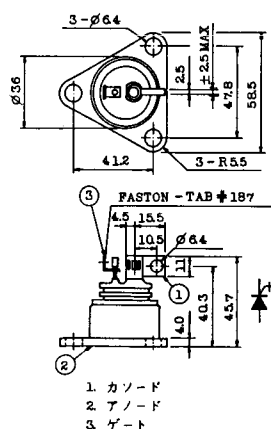
### T-44 (13-36A1A)



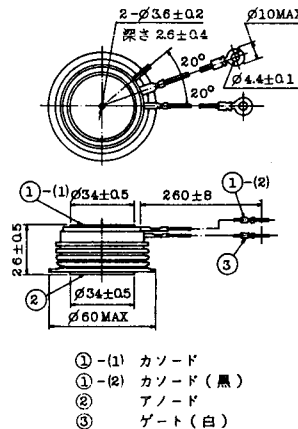
### T-45 (13-51B1A)



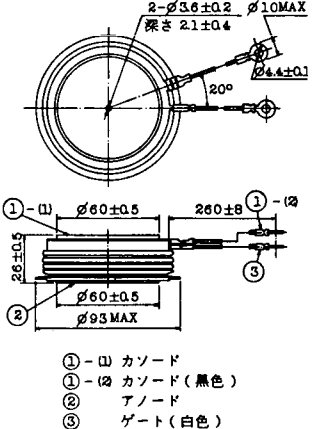
### T-46 (13-36B1A)



### 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)



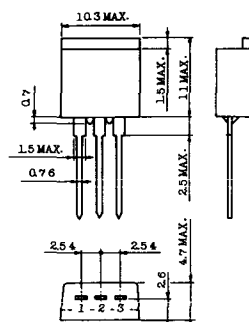
- 1 カソード
- 2 アノード
- 3 ゲート

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)



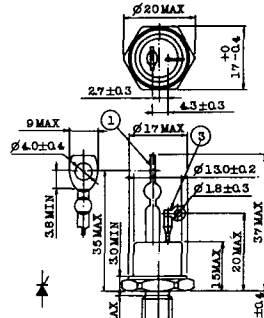
- 1 カソード
- 2 アノード
- 3 ゲート

T-55 (13-5A1D)



- 1 カソード
- 2 アノード
- 3 アノード

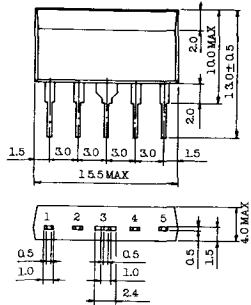
T-56 (13-13C1A)



- 1 カソード
- 2 アノード
- 3 ゲート

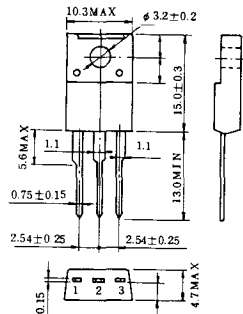


T-57 (12-16C1A)



- 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)



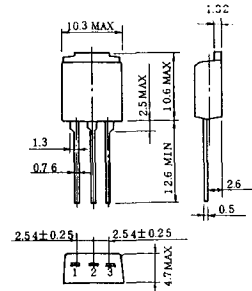
- 1. カソード
- 2. アノード
- 3. ゲート

T-59 (13-120A1A)



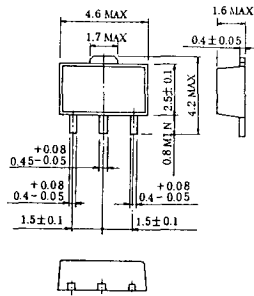
- 1-(1) カソード
- 1-(2) カソード (黒)
- 2. アノード
- 3. ゲート (白)

T-60



- 1. カソード
- 2. アノード
- 3. ゲート

T-61 (13-5B1A)



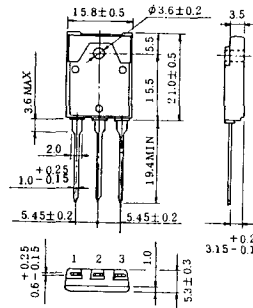
- 1. ゲート
- 2. アノード
- 3. カソード

T-62 (13-10H1A)



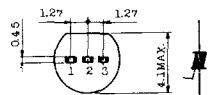
- 1. カソード
- 2. アノード
- 3. ゲート

T-63 (13-16A1B)



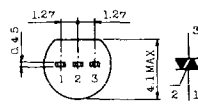
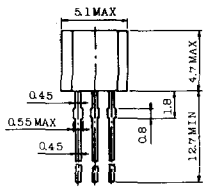
- 1. カソード
- 2. アノード
- 3. ゲート

TT-1



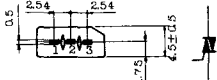
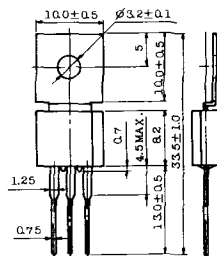
- 1 ゲート
- 2 T<sub>2</sub>
- 3 T<sub>1</sub>

TT-2



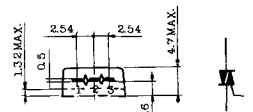
- 1 T<sub>1</sub>
- 2 ゲート
- 3 T<sub>2</sub>

TT-3



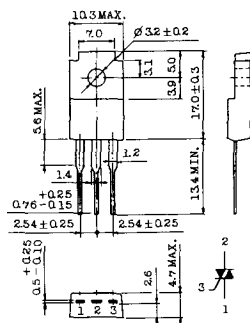
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-4



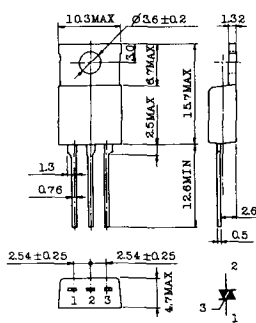
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-5



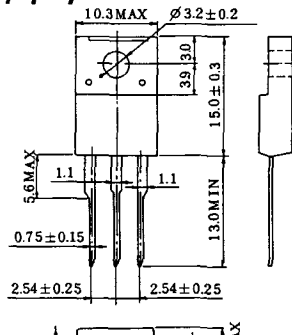
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-6



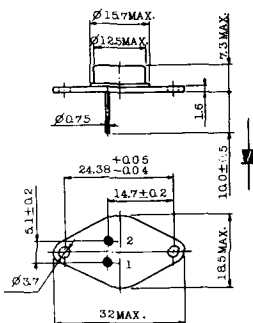
- 1 T<sub>1</sub>
- 2 T<sub>2</sub> (放熱板)
- 3 ゲート

TT-7



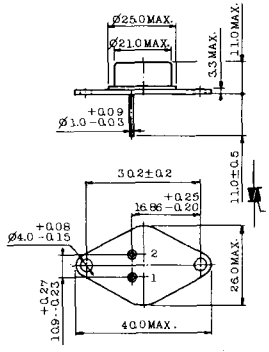
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-8



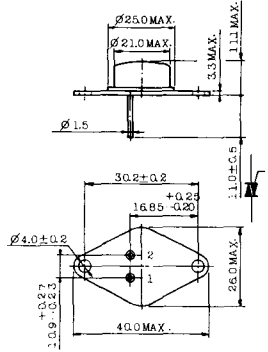
- 1 ゲート
- 2 T<sub>1</sub>
- T<sub>2</sub> (ケース)

TT-9



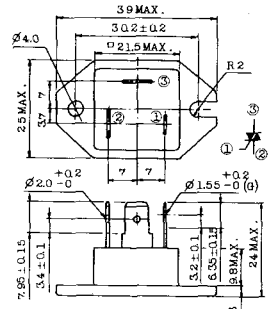
- 1. ゲート
- 2. T<sub>1</sub>
- 3. T<sub>2</sub> (ケース)

TT-10



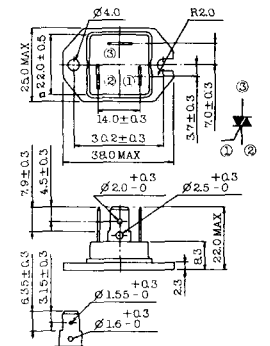
- 1. ゲート
- 2. T<sub>1</sub>
- 3. T<sub>2</sub> (ケース)

TT-11



- 1. ゲート (フーストン端子 #187)
- 2. T<sub>1</sub> ( " #250)
- 3. T<sub>2</sub> ( " #250)

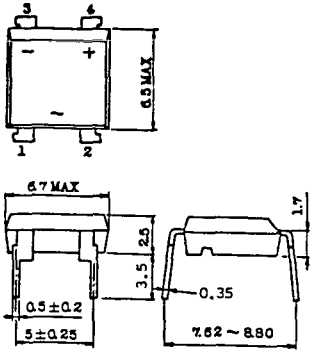
TT-12



ゲート端子詳細

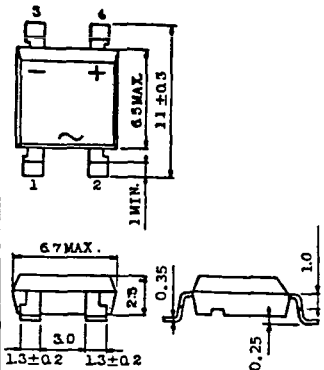
- ① ゲート (フーストン端子 #187)
- ② T<sub>1</sub> ( " #250)
- ③ T<sub>2</sub> ( " #250)

TT-13



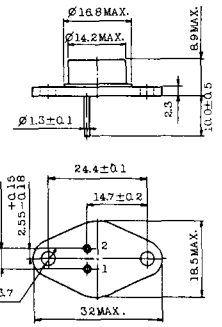
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

TT-14



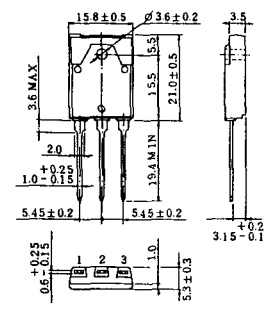
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

TT-15 (13-14A1B)



- 1. ゲート
- 2. T<sub>1</sub>
- T<sub>2</sub> (ケース)

TT-16 (13-16A1A)



- 1. T<sub>1</sub>
- 2. T<sub>2</sub>
- 3. ゲート

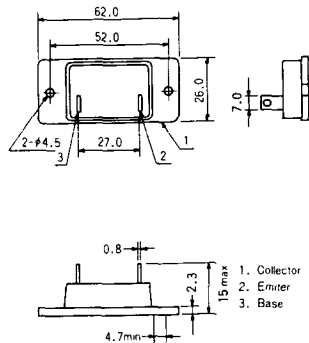


TS-8

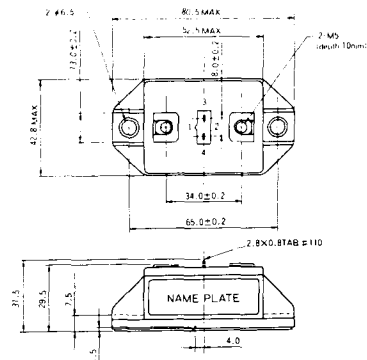


- 1. ベース
- 2. エミッタ  
コレクタ  
(ケース)

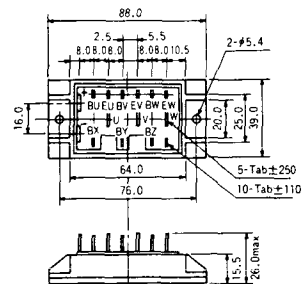
### S-62A1A



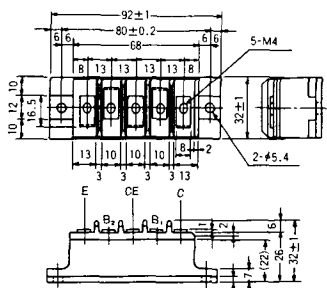
### S-80A1A



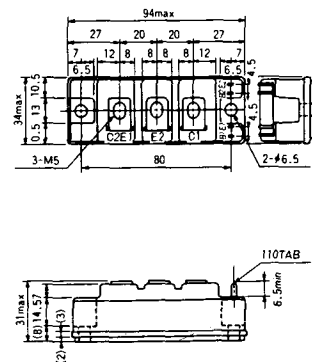
### S-88D1A



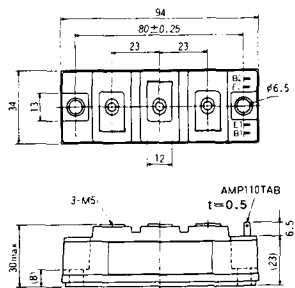
### S-92B1A



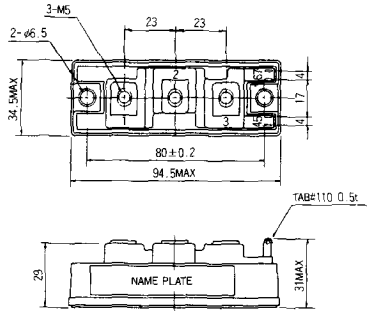
### S-94B1A



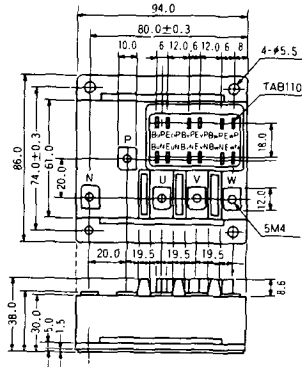
### S-94B1B



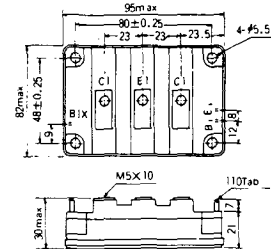
S-94B2A



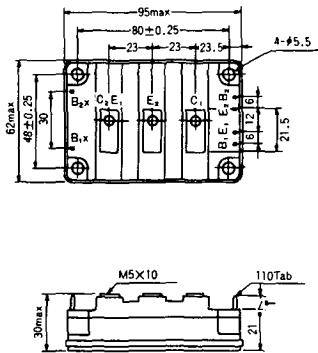
S-94D1A



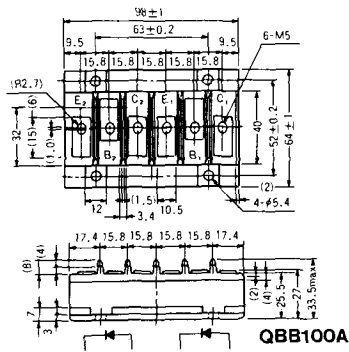
S-95A1A



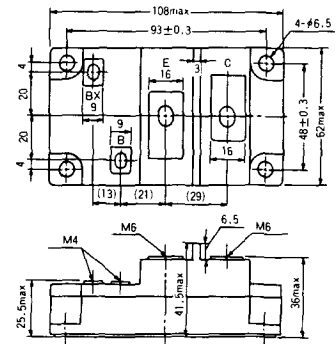
S-95B1A



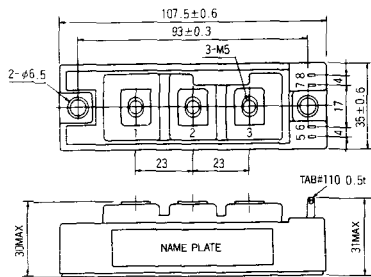
S-98B1B



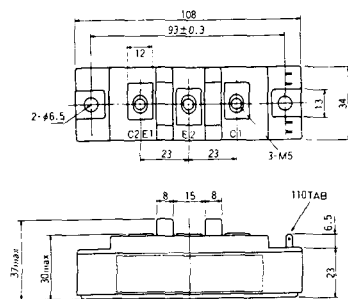
S-108A2A



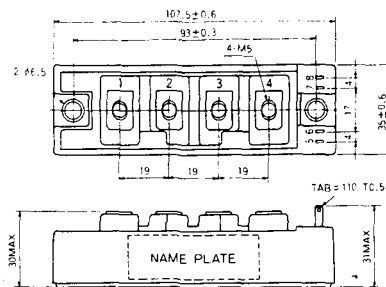
S-108B1A



S-108B1B



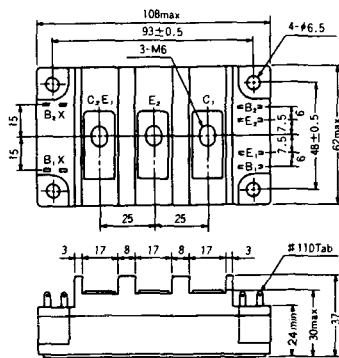
S-108B1C



S-108B2A



S-108B2B





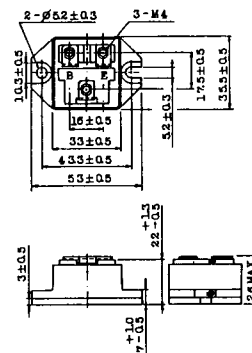
### 2-22B1A



### 2-27A4A



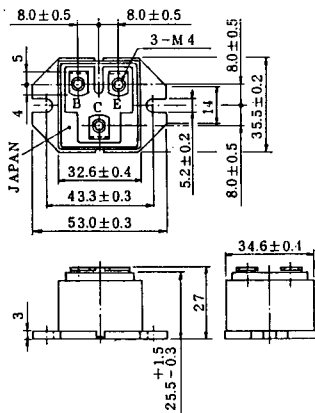
### 2-33C1A



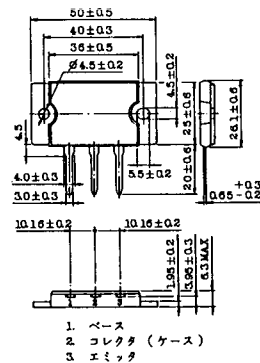
### 2-33D1A



### 2-33F1A



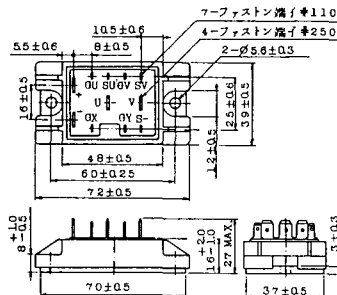
### 2-37A1A



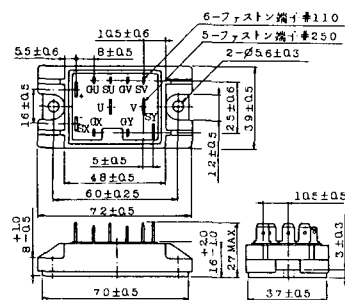
2-48A3A



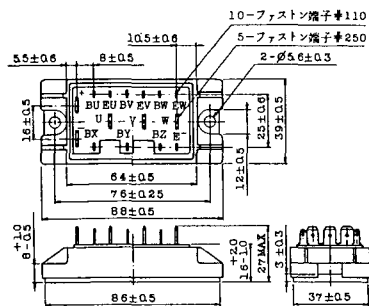
2-48A3B



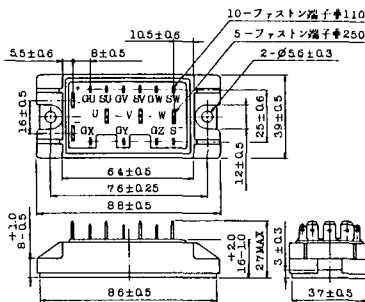
2-48A4A



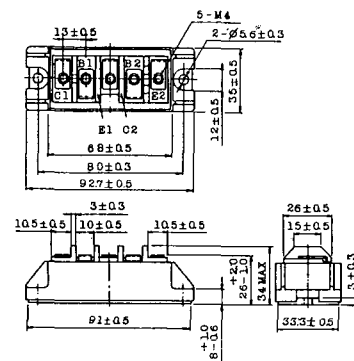
2-64A2A



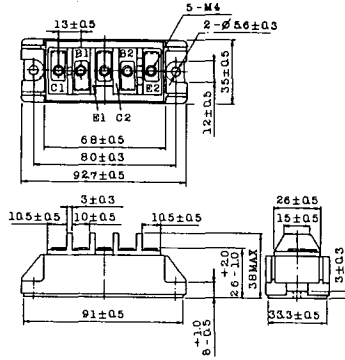
2-64A2B



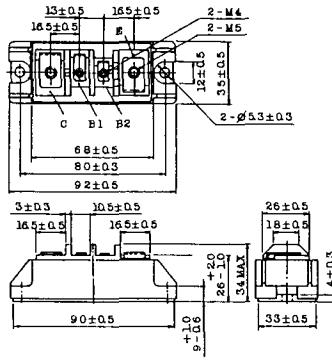
2-68A2A



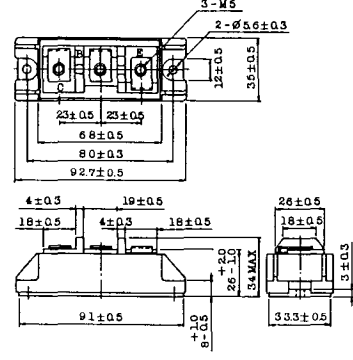
2-68B2A



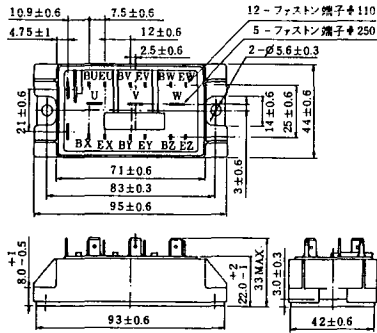
2-68C1A



2-68D2A



2-72A3A



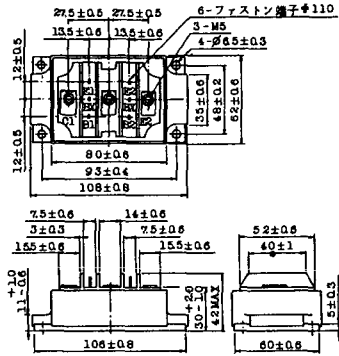
2-80A1A



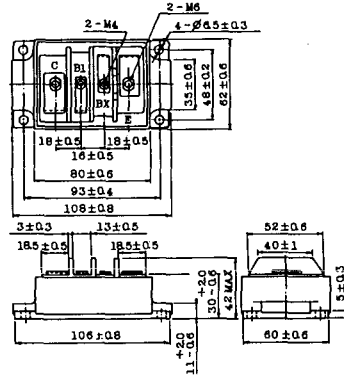
2-80B1A



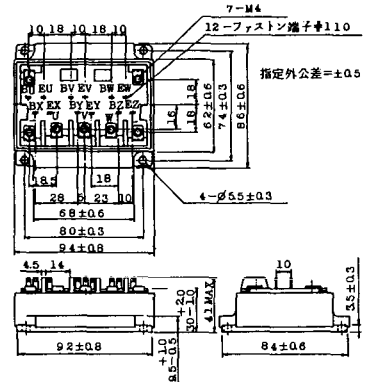
### 2-80C1A



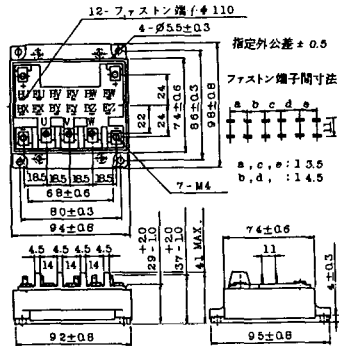
### 2-80D2A



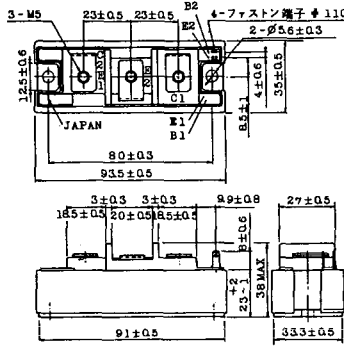
### 2-94A2A



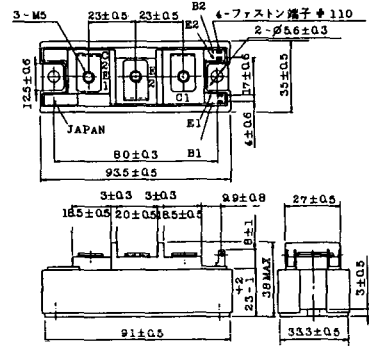
### 2-94B1A



### 2-94C2A



### 2-94C3A



### 2-94D1A



### 2-96A3A



### 2-96A4A



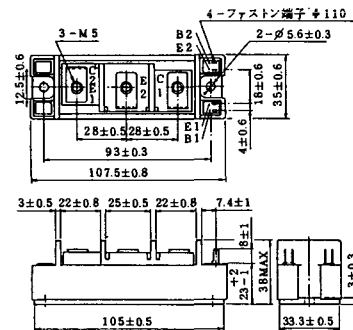
### 2-98B1A



### 2-98C2A



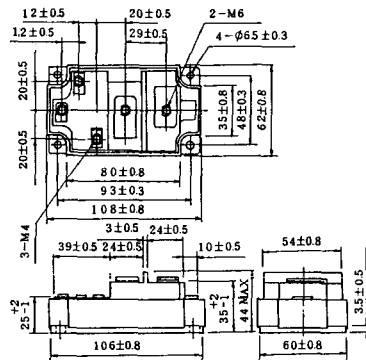
### 2-108A2A



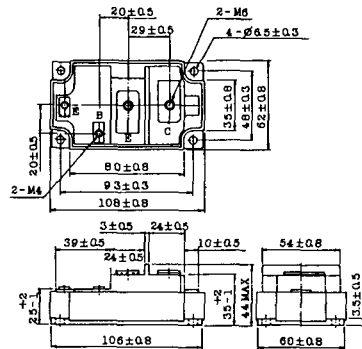
### 2-108B1A



### 2-109A3A



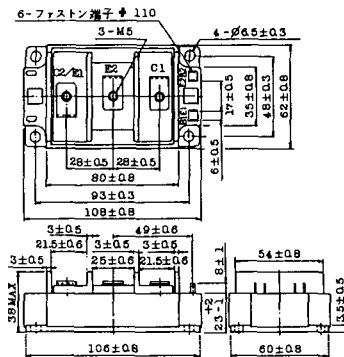
### 2-109A4A



### 2-109B3A

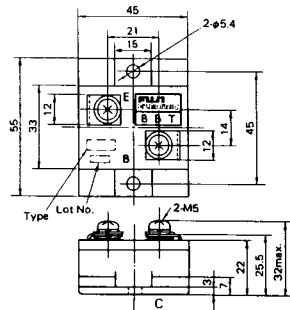


### 2-109B4A



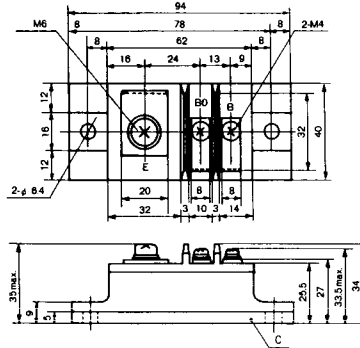
### BBT-II

BBTII  
1D200A-020



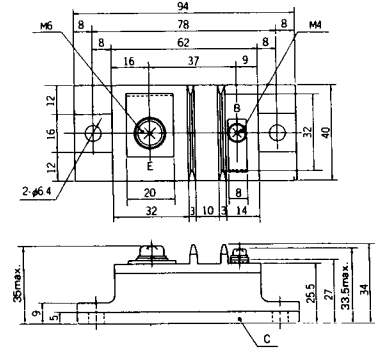
### BBT-III

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



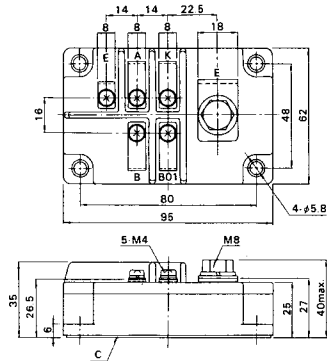
### BBT-III

BBTIII  
ETN01-055  
ET1257

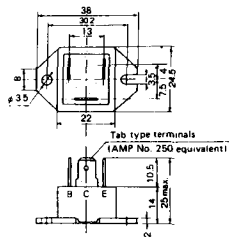


### BBT-IV

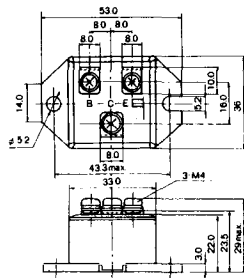
BBTIV  
1D500A-030



M-101



M-102



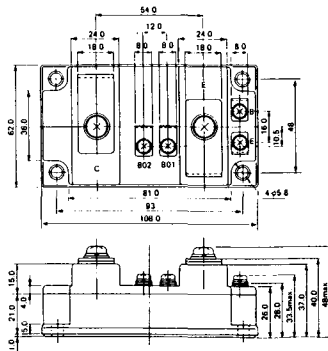
M-103



M-104



M-105



M-106

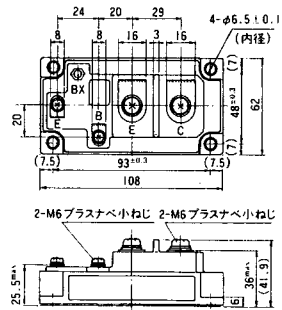




### M-107



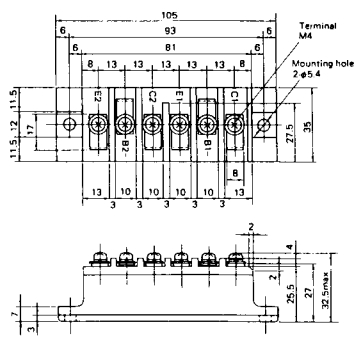
### M-116



### M-201



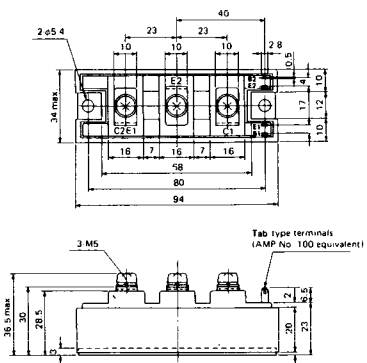
### M-202



### M-203



### M-204



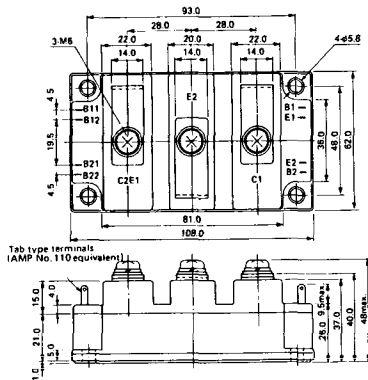
### M-205



### M-206



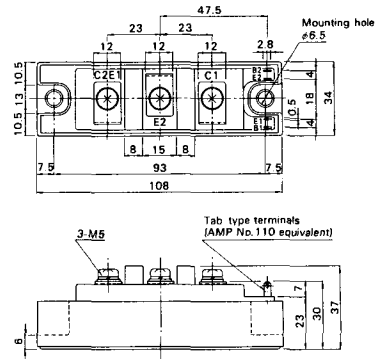
M-207



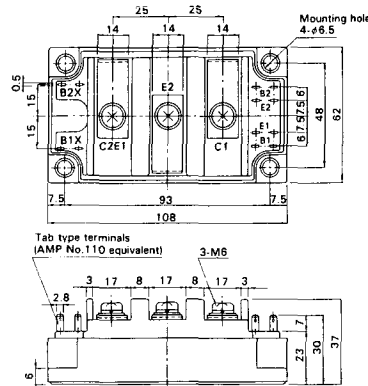
M-208



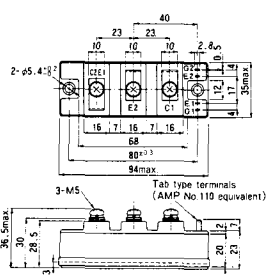
M-209



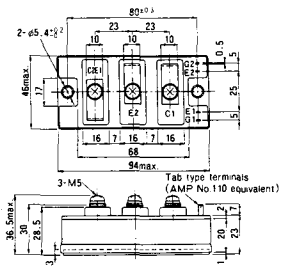
M-210



M-211



M-212



M-213

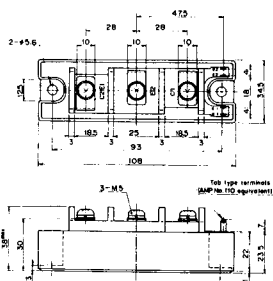


M-214

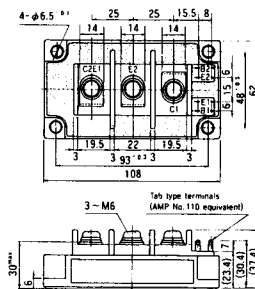
M-215



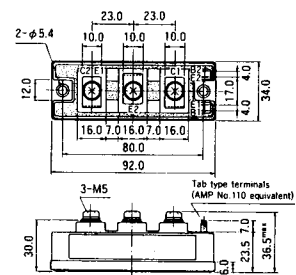
M-216



M-217



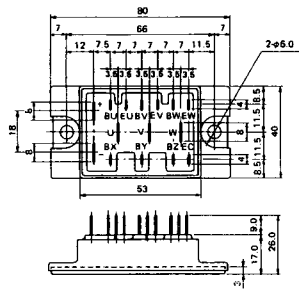
M-218



M-219



### M-601



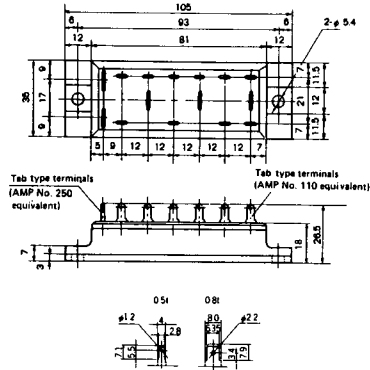
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



### M-602



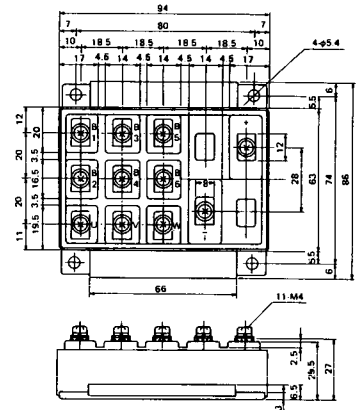
Tab type terminals  
(AMP No. 250 equivalent)



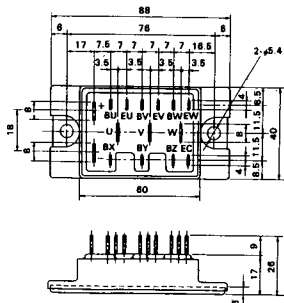
Tab type terminals  
(AMP No. 110 equivalent)



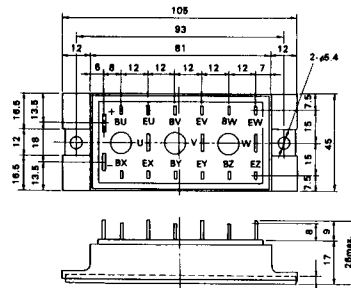
### M-603



### M-604



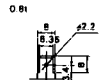
### M-605



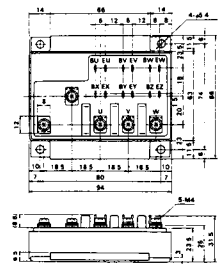
Tab type terminals  
(AMP No. 110 equivalent)



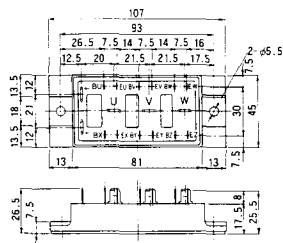
Tab type terminals  
(AMP No. 250 equivalent)



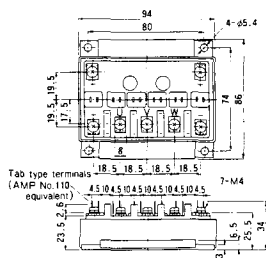
### M-606



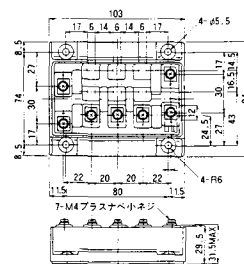
M-607



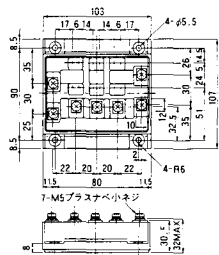
M-608



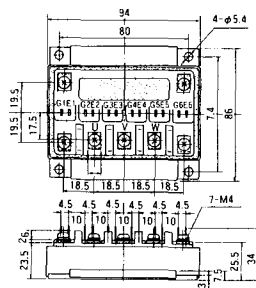
M-609



M-610



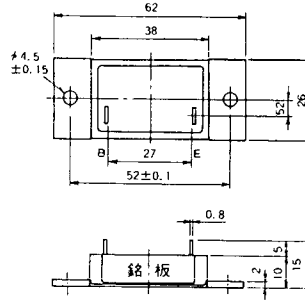
M-616



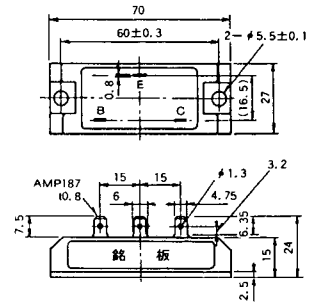
M-1A1A



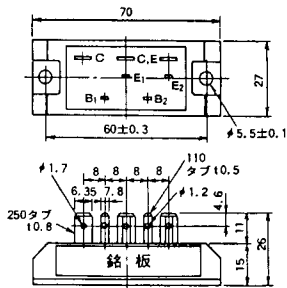
M-2A1A



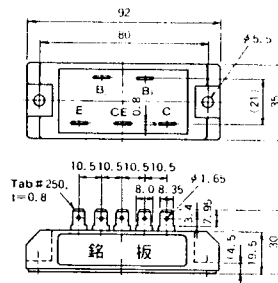
M-2B1A



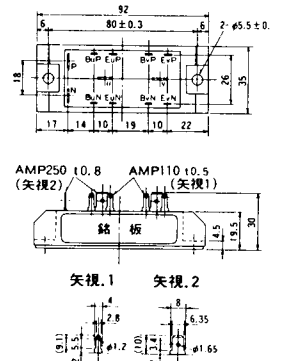
M-2B2A



M-2C2A

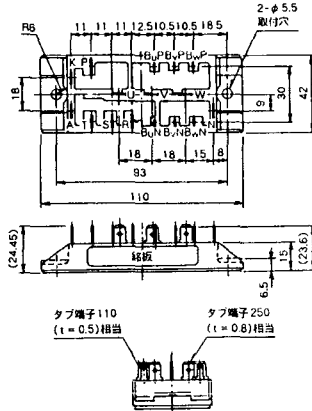


M-2D4A

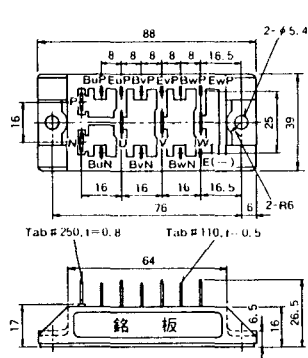




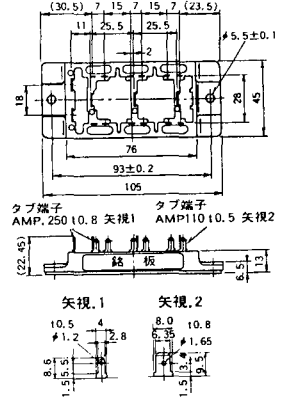
### M-2E6A



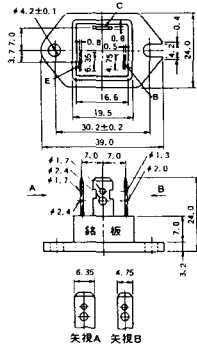
### M-2F6A



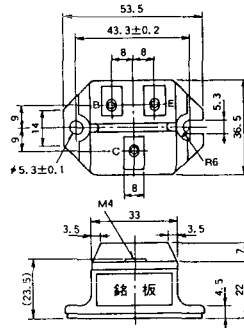
### M-2G6A



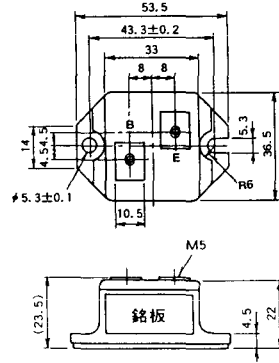
### M-3A1A



### M-3B1A



### M-3B1B



M-3C1A



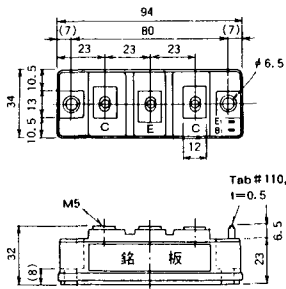
M-3D6A



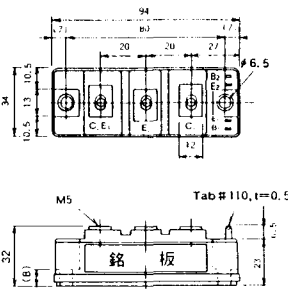
M-3E6A



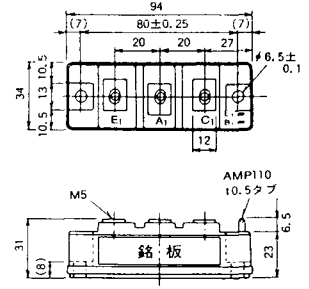
M-4A1A



M-4A2A



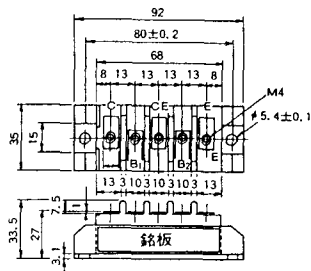
M-4A1B



M-4A2B



M-4B2A



M-5A1A



M-5A1B



M-5A2A



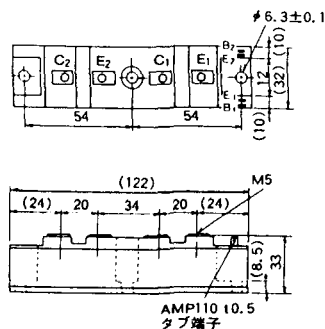
M-5B2A



### M-5C2A



### M-5D2A



### M-6A1A



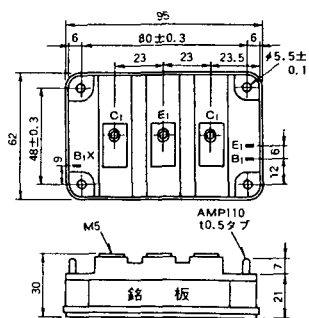
### M-7A1A



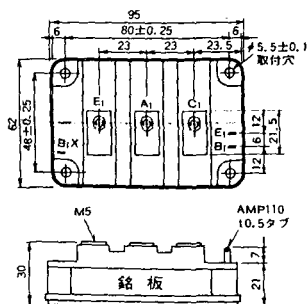
### M-7B1A



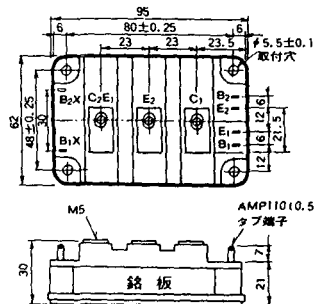
### M-8A1A



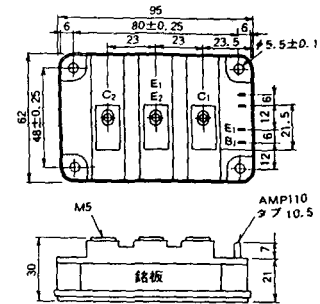
M-8A1B



M-8A2A



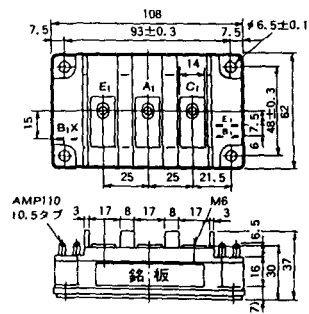
M-8A2B



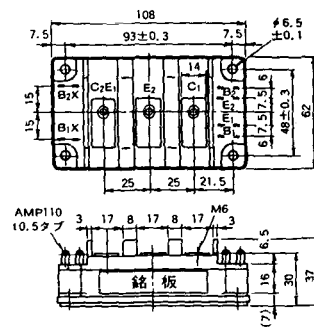
M-8B2A



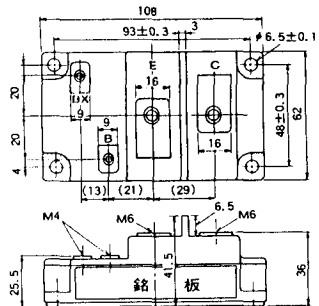
M-9A1A



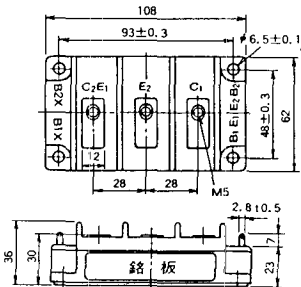
M-9A2A



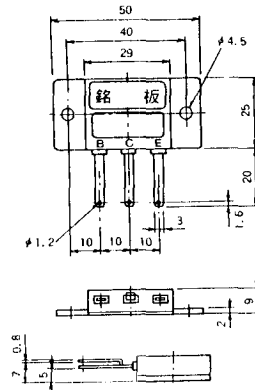
### M-9B1A



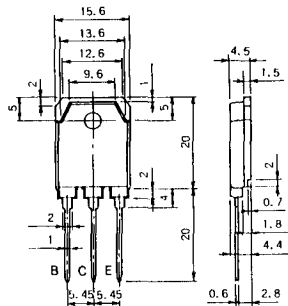
### M-9C2A



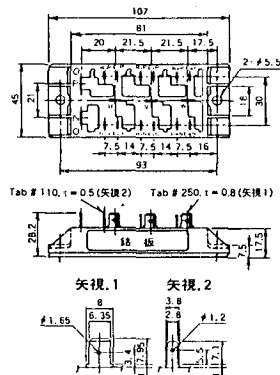
### M-1A1B



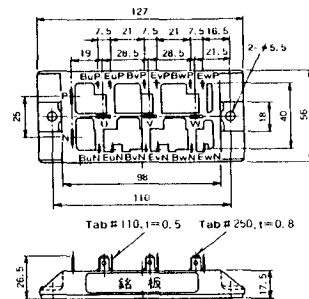
### M-1A1C



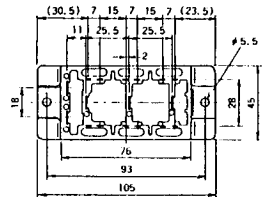
### M-2E6B



### M-2E6C



### M-2G6B

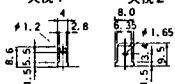


Tab # 250, t = 0.8 (矢視 1) Tab # 110, t = 0.5 (矢視 2)

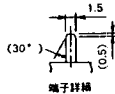
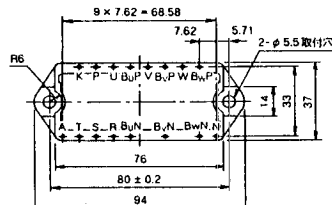


矢視 1

矢視 2

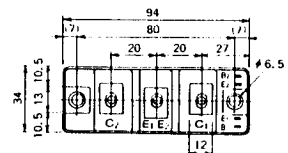


### M-3D6B

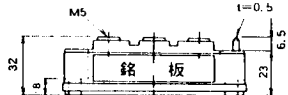


端子詳細

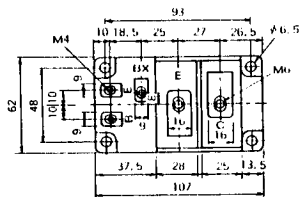
### M-4A2C



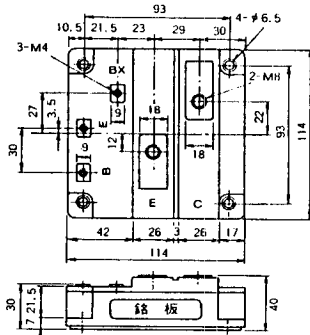
Tab # 110, t = 0.5



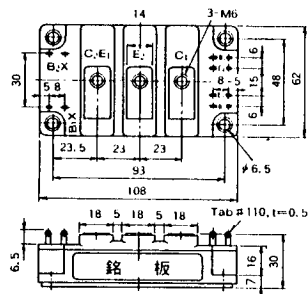
### M-7A1B



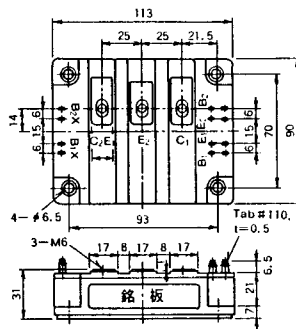
### M-7C1A



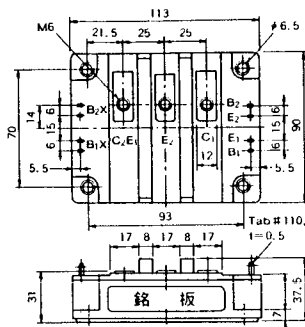
### M-8A2C



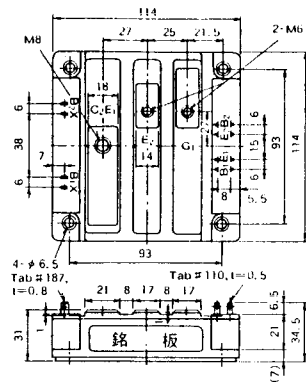
M-10A2A



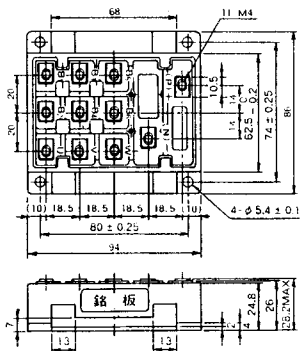
M-10A2B



M-11A2A



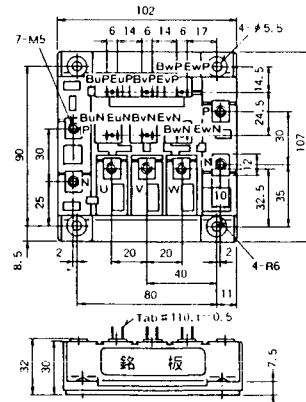
M-12A6A



M-12B6A

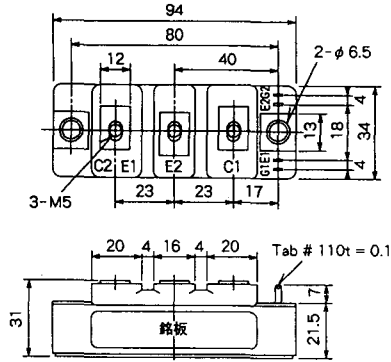


M-12B6B

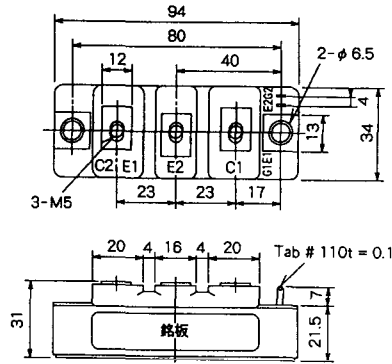




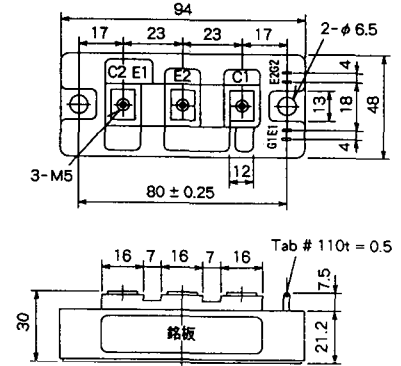
M-4A2D



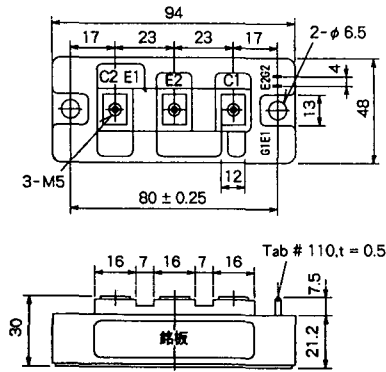
M-4A2E



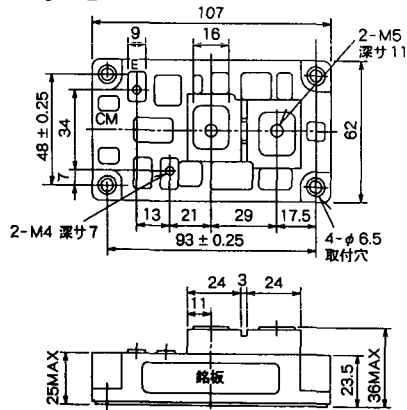
M-4C2A



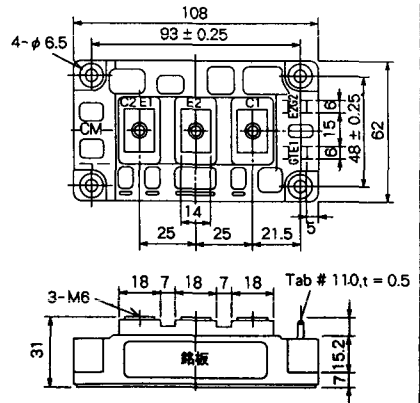
M-4C2B



M-9B1C



M-9D2A



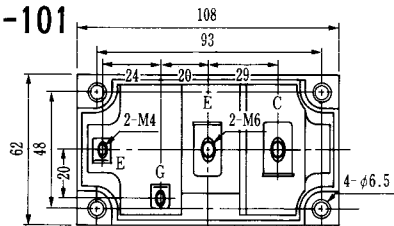
M-9D2B



M-10A2C

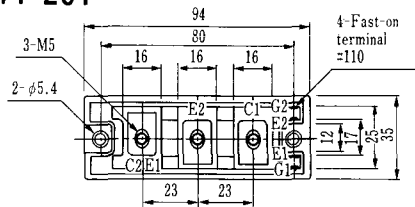


H-101



Weight :480g

### H-201



Weight: 200g

### H-202

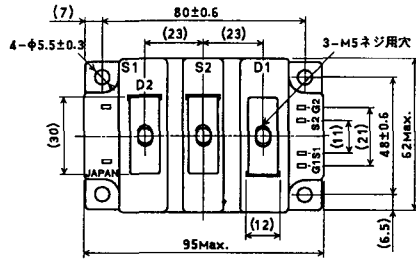


Weight: 360g

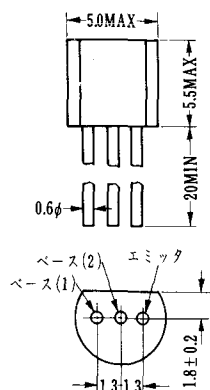
### LF-J



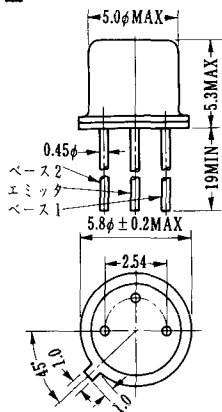
### LF-K



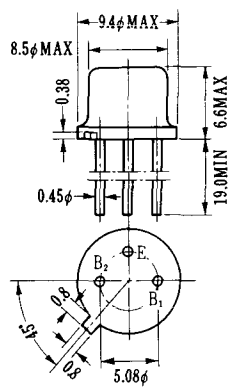
U-1



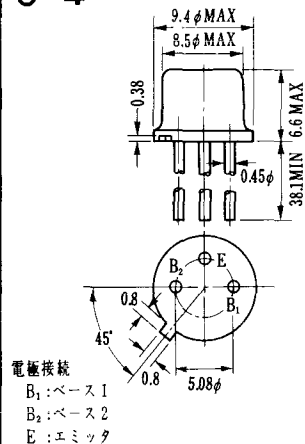
U-2



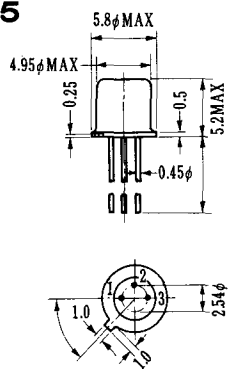
U-3



U-4

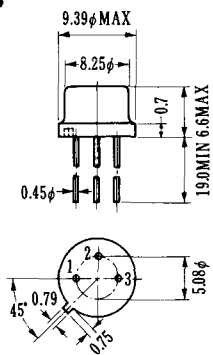


U-5



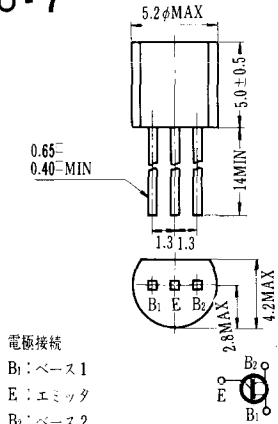
1. BASE 1
2. EMITTER
3. BASE 2 (CASE)

U-6



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

U-7



- 電極接続  
 B<sub>1</sub>:ベース1  
 E:エミッタ  
 B<sub>2</sub>:ベース2

U-8

