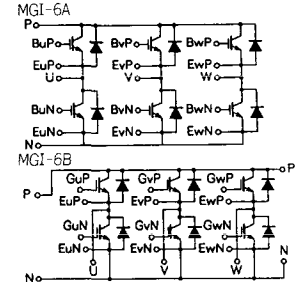
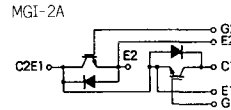
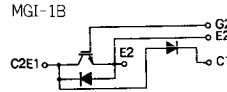
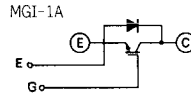


トランジスタ・モジュール (シリコンNチャネル IGBT)

- フリーホイール・ダイオード付
- 絶縁形

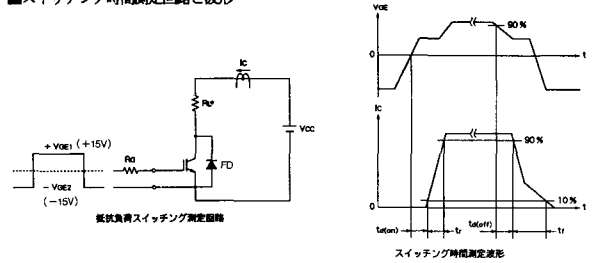
■等価回路



注1.  $T_c = 25^\circ\text{C}$ . 注2. AC, 1分間。

型名	最大定格 ( $T_J = 25^\circ\text{C}$ )										電気的特性 ( $T_J = 25^\circ\text{C}$ )											
	$V_{CES}$	$V_{GSS}$	$I_c$	$I_{CP}$	$I_F$	$I_{FP}$	$P_c$	$T_J$	$T_{stg}$	$V_{I_{EE}}$	$I_{GSS}$	$V_{GE}$	$I_{CES}$	$V_{CE}$	$V_{CES}$	$V_{GE(OFF)}$	$V_{CE}$	$I_c$	$V_{CE(SAT)}$	$I_c$		
	(V)	(V)	(注1) (A)	(注1) (A)	(注1) (A)	(注1) (A)	(注1) (W)	( $^\circ\text{C}$ )	( $^\circ\text{C}$ )	(注2) (V)	(nA) 最大	(V) 最大	(mA) 最大	(V) 最大	(V) 最小	(V) 最小	最大	(V) 最大	(mA) 最大	(V) 最大	(A) 最大	
CM50DY-12E	600	$\pm 20$	50	100	50	100	250	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	5.0	3.5	15	50
CM75DY-12E	600	$\pm 20$	75	150	75	150	310	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	7.5	3.5	15	75
CM100DY-12E	600	$\pm 20$	100	200	100	200	400	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	10	3.5	15	100
CM150DY-12E	600	$\pm 20$	150	300	150	300	600	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	15	3.5	15	150
CM200DY-12E	600	$\pm 20$	200	400	200	400	780	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	20	3.5	15	200
CM300DY-12E	600	$\pm 20$	300	600	300	600	1100	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	30	3.5	15	300
CM400DY-12E	600	$\pm 20$	400	800	400	800	1500	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	40	3.5	15	400
CM50E3Y-12E	600	$\pm 20$	50	100	50	100	250	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	5.0	3.5	15	50
CM75E3Y-12E	600	$\pm 20$	75	150	75	150	310	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	7.5	3.5	15	75
CM100E3Y-12E	600	$\pm 20$	100	200	100	200	400	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	10	3.5	15	100
CM150E3Y-12E	600	$\pm 20$	150	300	150	300	600	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	15	3.5	15	150
CM200E3Y-12E	600	$\pm 20$	200	400	200	400	780	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	20	3.5	15	200
CM300E3Y-12E	600	$\pm 20$	300	600	300	600	1100	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	30	3.5	15	300
CM300HA-12E	600	$\pm 20$	300	600	300	600	1100	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	30	3.5	15	300
CM400HA-12E	600	$\pm 20$	400	800	400	800	1500	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	40	3.5	15	400
CM50TF-12E	600	$\pm 20$	50	100	50	100	250	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	5.0	3.5	15	50
CM75TF-12E	600	$\pm 20$	75	150	75	150	310	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	7.5	3.5	15	75
CM100TF-12E	600	$\pm 20$	100	200	100	200	400	150	-40~125	2500	$\pm 500$	$\pm 20$	1.0	600		3.5	6.5	10	10	3.5	15	100

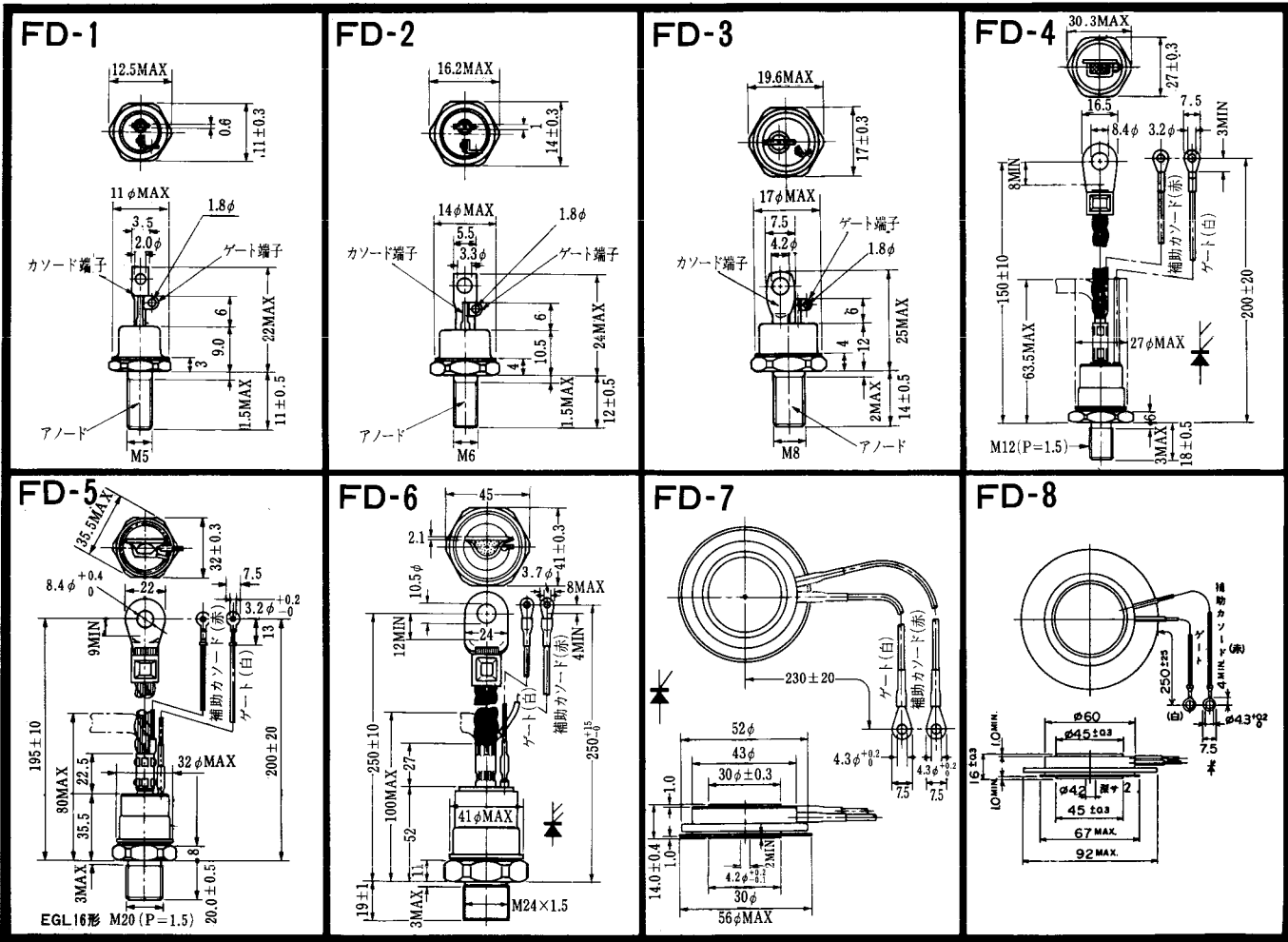
■スイッチング時間測定回路と波形



注3. スwitching時間は低抵抗負荷時の値。

注4. FD: フリーホイール・ダイオード。

C... (pF)	f (MHz)	スイッチング時間 (ns)						エミッタ・コレクタ間ダイオード			熱抵抗			等価回路	外形図	記事	型名			
		V <sub>CE</sub> (V)	V <sub>GE</sub> (V)	t <sub>r</sub> (最大)	t <sub>d</sub> (10%) (最大)	t <sub>f</sub> (最大)	t <sub>d</sub> (OFF) (最大)	R <sub>G</sub> (Ω)	I <sub>C</sub> (A)	V <sub>CE</sub> (V)	V <sub>F</sub> (V)	I <sub>F</sub> (A)	t <sub>rr</sub> (ns)					di/dt (A/μs)	R <sub>th(j-c)</sub> (°C/W)	
																			トランジスタ部	ダイオード部
10000	10	0	300	150	350	400	13	50	300	2.5	50	200	50	-100	0.5	1.0	MG1-2A	M-4A2D	F D付, 直列接続	CM50DY-12E
15000	10	0	300	150	350	400	8.3	75	300	2.5	75	200	75	-150	0.4	0.9	MG1-2A	M-4A2D	F D付, 直列接続	CM75DY-12E
20000	10	0	300	150	350	400	6.3	100	300	2.5	100	200	100	-200	0.31	0.7	MG1-2A	M-4A2D	F D付, 直列接続	CM100DY-12E
30000	10	0	700	400	350	600	4.2	150	300	2.5	150	200	150	-300	0.21	0.47	MG1-2A	M-4C2A	F D付, 直列接続	CM150DY-12E
40000	10	0	700	400	350	700	3.1	200	300	2.5	200	200	200	-400	0.16	0.35	MG1-2A	M-4C2A	F D付, 直列接続	CM200DY-12E
60000	10	0	700	400	350	800	2.1	300	300	2.5	300	200	300	-600	0.11	0.24	MG1-2A	M-9D2A	F D付, 直列接続	CM300DY-12E
80000	10	0	700	400	350	800	1.6	400	300	2.5	400	200	400	-800	0.085	0.18	MG1-2A	M-10A2C	F D付, 直列接続	CM400DY-12E
10000	10	0	300	150	350	400	13	50	300	2.5	50	200	50	-100	0.5	1.0	MG1-1B	M-4A2E	F D付	CM50E3Y-12E
15000	10	0	300	150	350	400	8.3	75	300	2.5	75	200	75	-150	0.4	0.9	MG1-1B	M-4A2E	F D付	CM75E3Y-12E
20000	10	0	300	150	350	400	6.3	100	300	2.5	100	200	100	-200	0.31	0.7	MG1-1B	M-4A2E	F D付	CM100E3Y-12E
30000	10	0	700	400	350	600	4.2	150	300	2.5	150	200	150	-300	0.21	0.47	MG1-1B	M-4C2B	F D付	CM150E3Y-12E
40000	10	0	700	400	350	700	3.1	200	300	2.5	200	200	200	-400	0.16	0.35	MG1-1B	M-4C2B	F D付	CM200E3Y-12E
60000	10	0	700	400	350	800	2.1	300	300	2.5	300	200	300	-600	0.11	0.24	MG1-1B	M-9D2B	F D付	CM300E3Y-12E
60000	10	0	700	400	350	800	2.1	300	300	2.5	300	200	300	-600	0.11	0.24	MG1-1A	M-9B1C	F D付	CM300HA-12E
80000	10	0	700	400	350	800	1.6	400	300	2.5	400	200	400	-800	0.085	0.18	MG1-1A	M-9B1C	F D付	CM400HA-12E
10000	10	0	300	150	350	400	13	50	300	2.5	50	200	50	-100	0.5	1.0	MG1-6A	M-2B6C	F D付, 3相ブリッジ接続	CM50TF-12E
15000	10	0	300	150	350	400	8.3	75	300	2.5	75	200	75	-150	0.4	0.9	MG1-6B	M-12B6A	F D付, 3相ブリッジ接続	CM75TF-12E
20000	10	0	300	150	350	400	6.3	100	300	2.5	100	200	100	-200	0.31	0.7	MG1-6B	M-12B6A	F D付, 3相ブリッジ接続	CM100TF-12E



FD-9

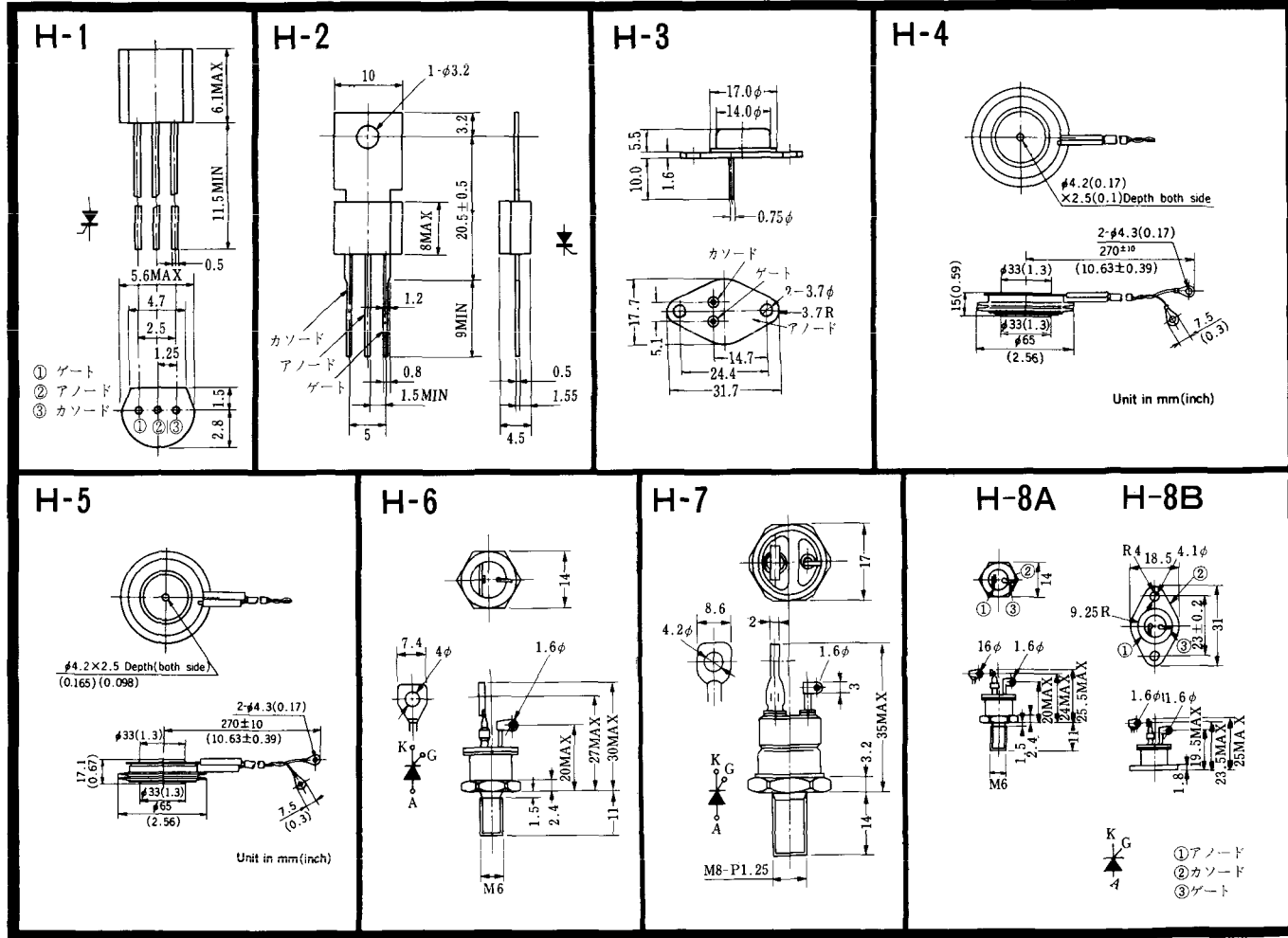


FD-10

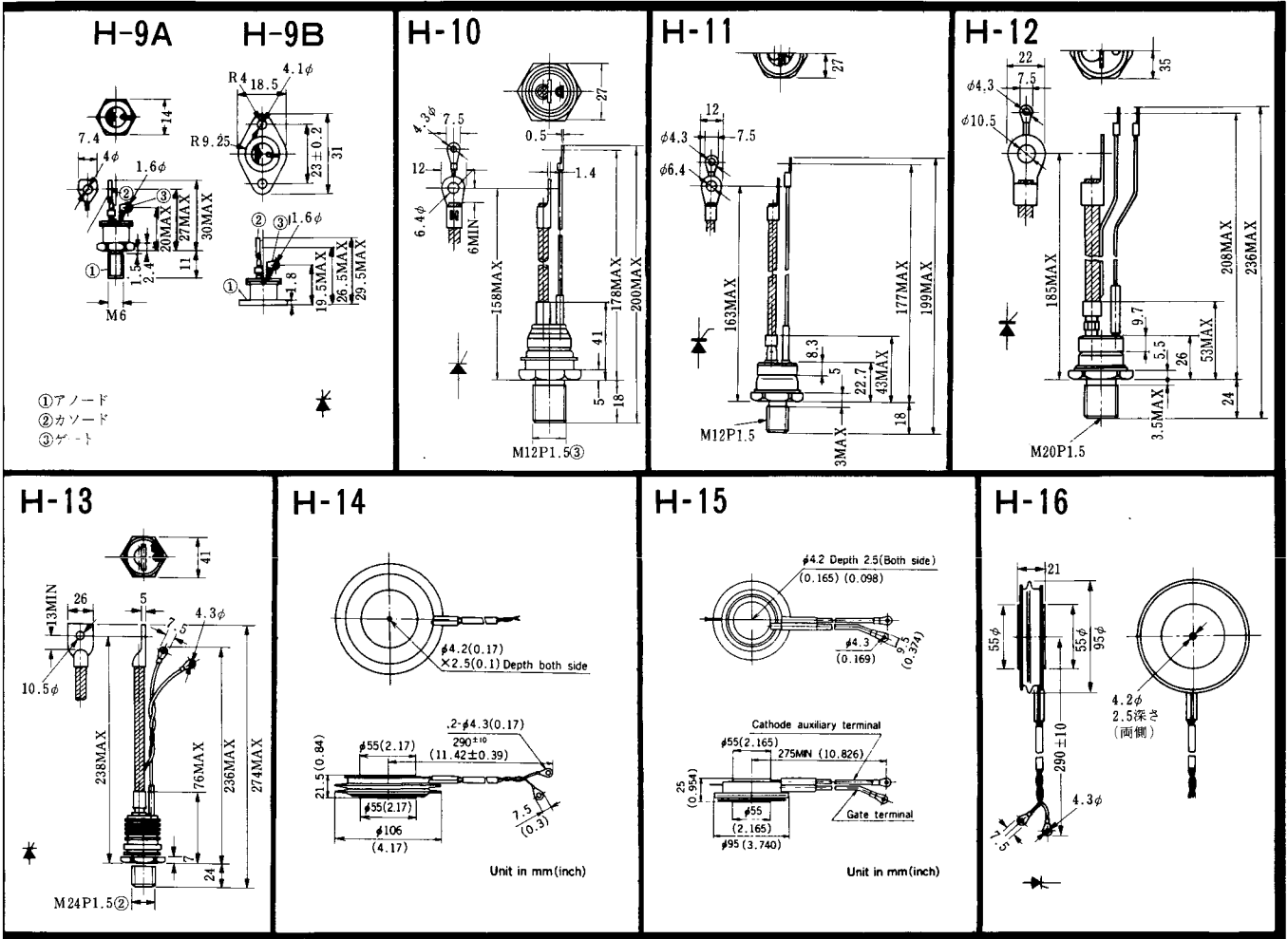


FD-11

FD-12

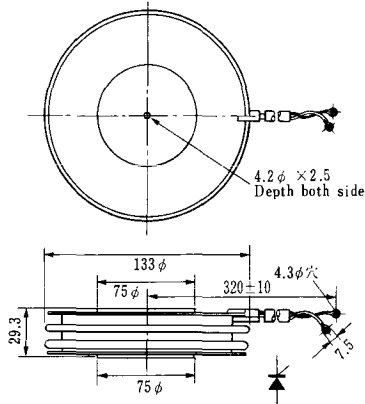


〈寸法図単位：mm〉



《寸法図単位：mm》

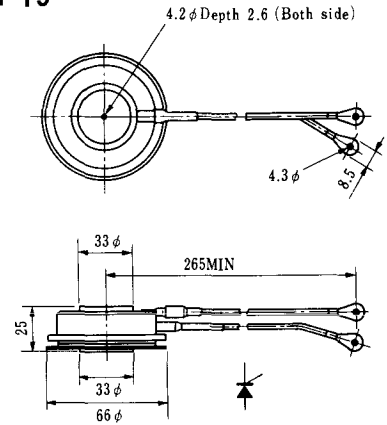
### H-17



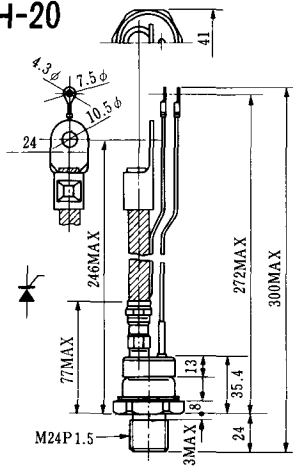
### H-18



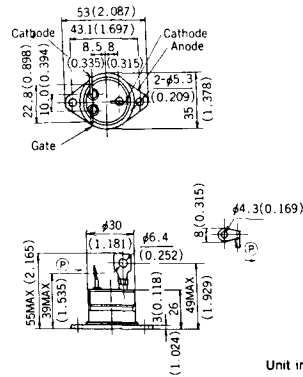
### H-19



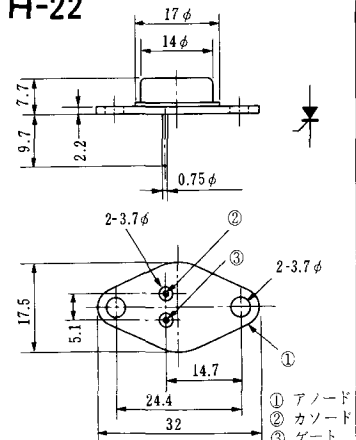
### H-20



### H-21



### H-22



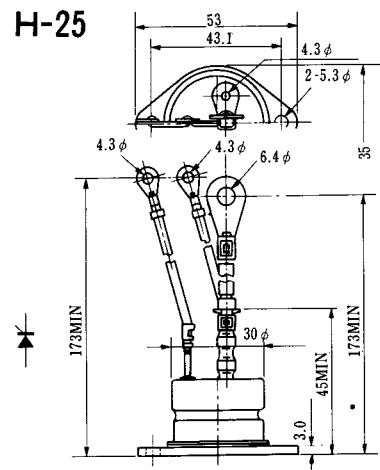
### H-23



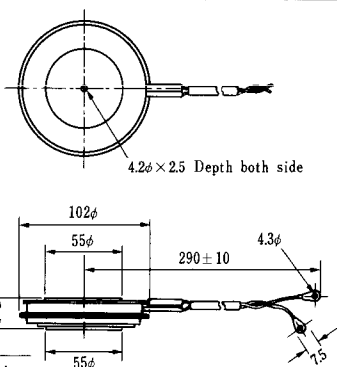
### H-24



### H-25

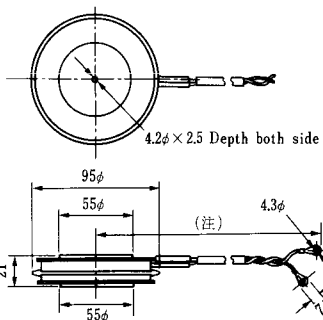


### H-26



Type	Direction of polarity
CA12	

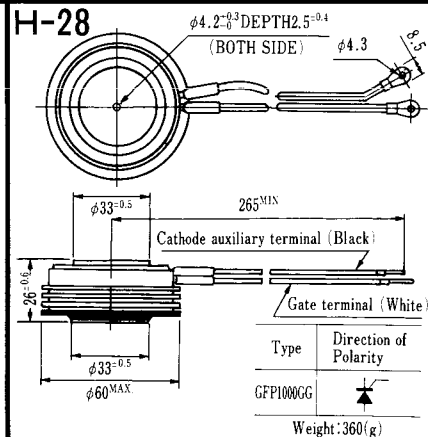
### H-27



Type	Direction of polarity
CF11V	

(注) CC11V : 400 ± 10  
CF11V : 250 ± 10

### H-28

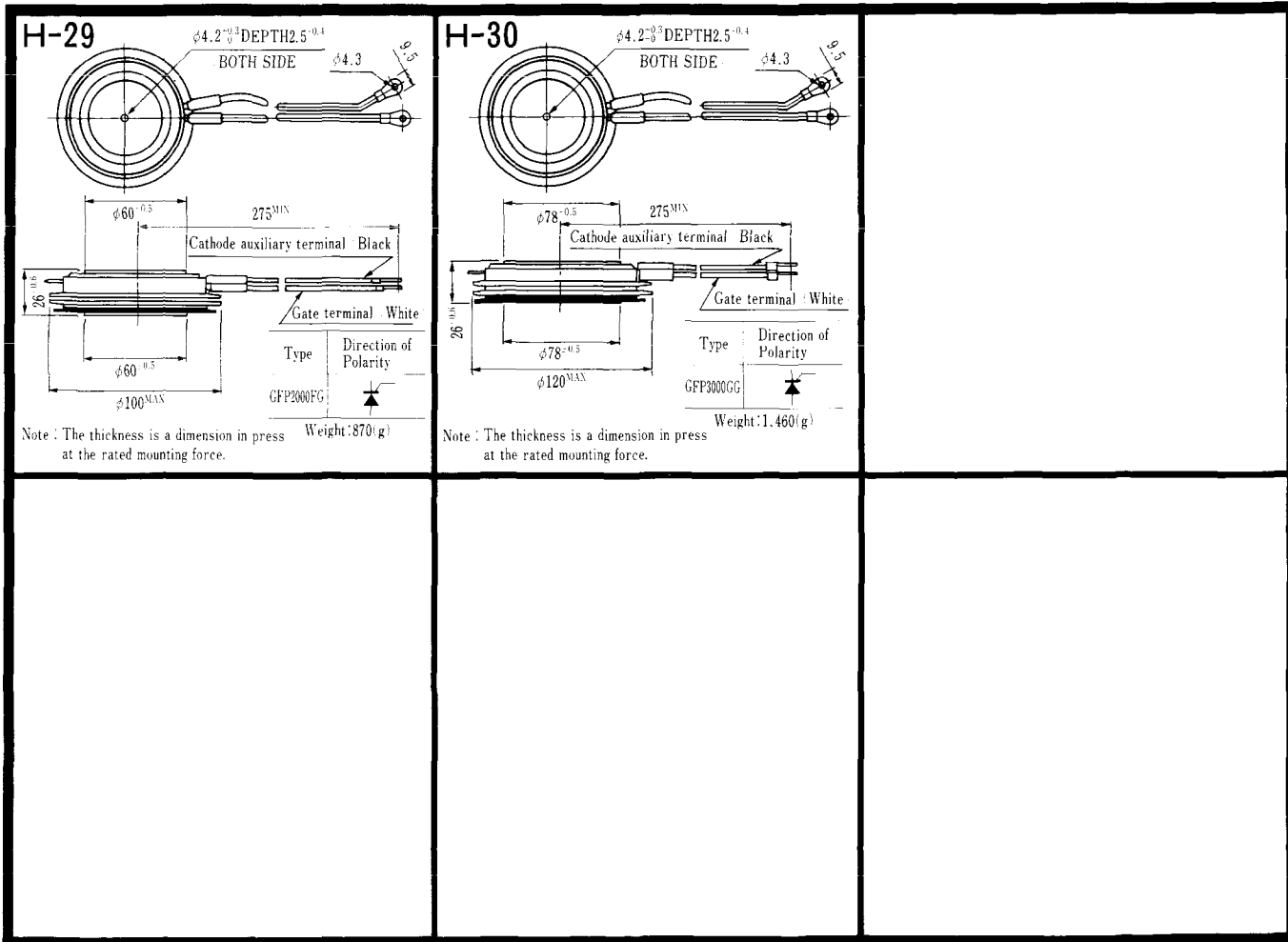


Type	Direction of Polarity
GFP100GG	

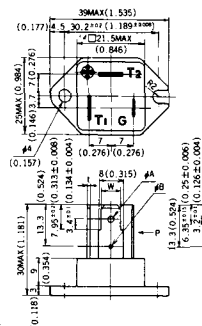
Weight: 360(g)

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





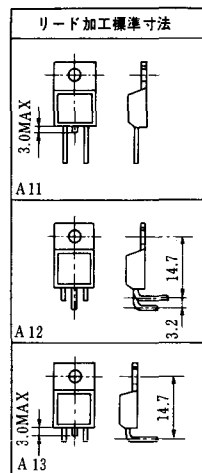
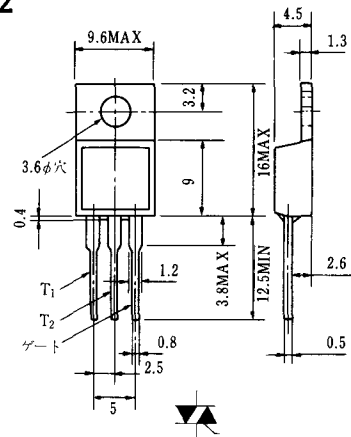
# HT-1



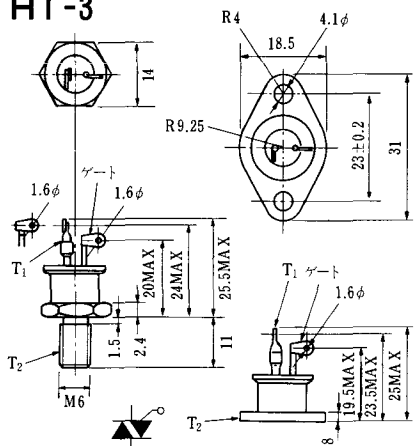
TERMINAL	t	W	φA	φB
T <sub>1</sub>	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 <sup>+0.1</sup> <sub>0</sub> (0.079 <sup>+0.004</sup> <sub>0</sub> )	1.3 (0.051)
T <sub>2</sub>	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 <sup>+0.1</sup> <sub>0</sub> (0.079 <sup>+0.004</sup> <sub>0</sub> )	1.3 (0.051)
G	0.5±0.025 (0.020±0.001)	4.75±0.1 (0.187±0.004)	1.55 <sup>+0.1</sup> <sub>0</sub> (0.061 <sup>+0.004</sup> <sub>0</sub> )	1.3 (0.051)

Unit in mm (inch)

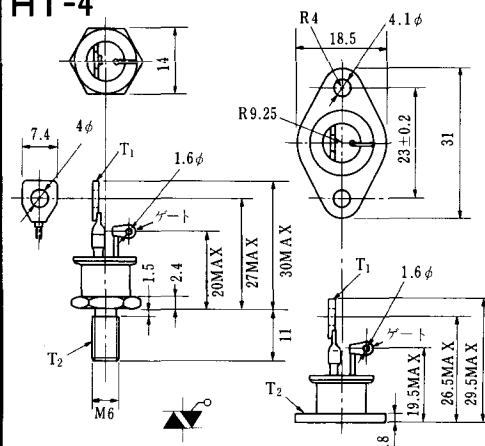
# HT-2



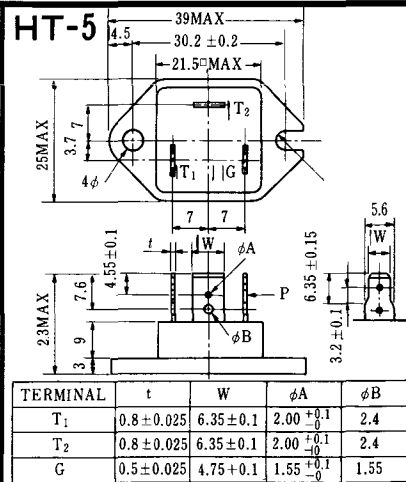
# HT-3



# HT-4



# HT-5



TERMINAL	t	W	φA	φB
T <sub>1</sub>	0.8±0.025	6.35±0.1	2.00 <sup>+0.1</sup> <sub>0</sub>	2.4
T <sub>2</sub>	0.8±0.025	6.35±0.1	2.00 <sup>+0.1</sup> <sub>0</sub>	2.4
G	0.5±0.025	4.75±0.1	1.55 <sup>+0.1</sup> <sub>0</sub>	1.55

《寸法図単位：mm》

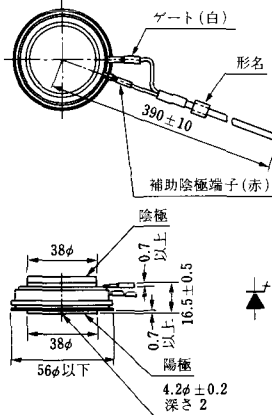
### M-1



### M-2



### M-3



### M-4



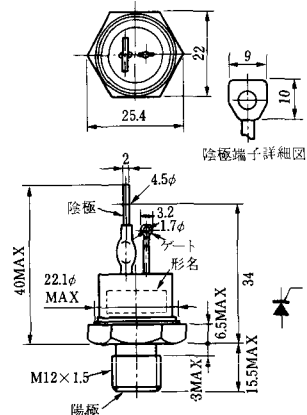
### M-5



### M-6



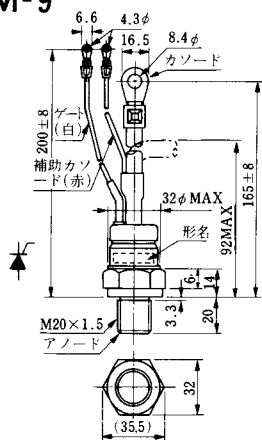
### M-7



### M-8



M-9



M-10



M-11



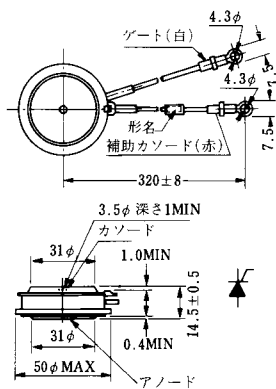
M-12



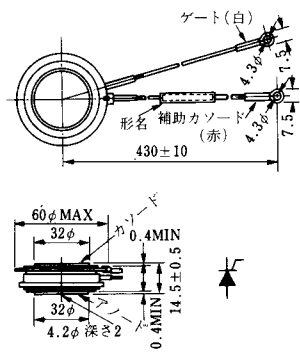
M-13



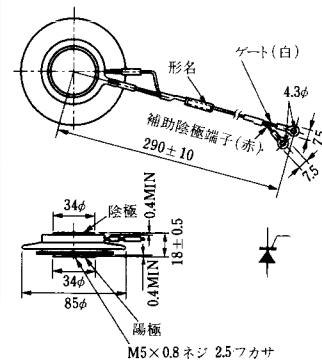
M-14



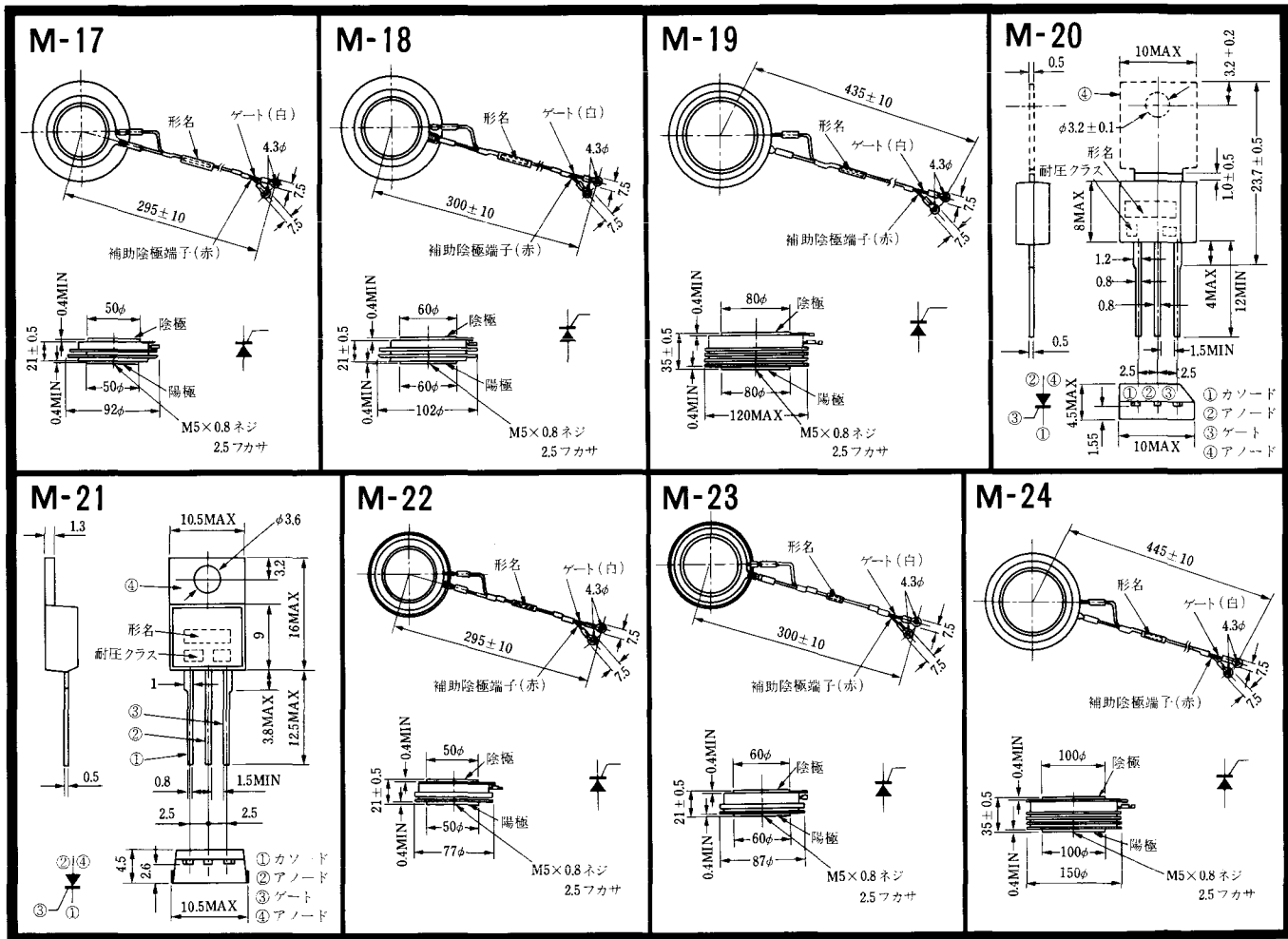
M-15



M-16



〈寸法図単位：mm〉



《寸法図単位：mm》

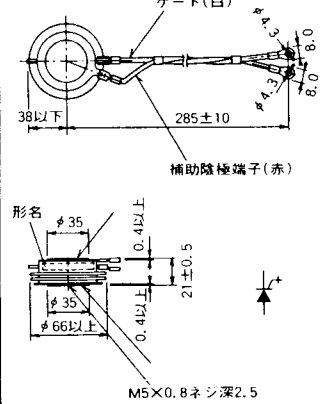
M-25



M-26



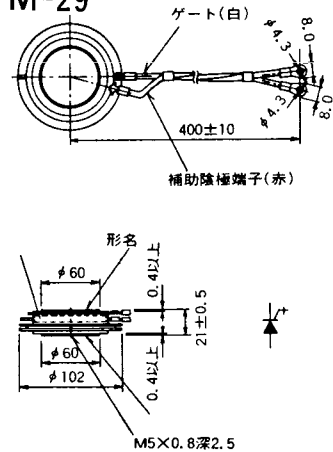
M-27



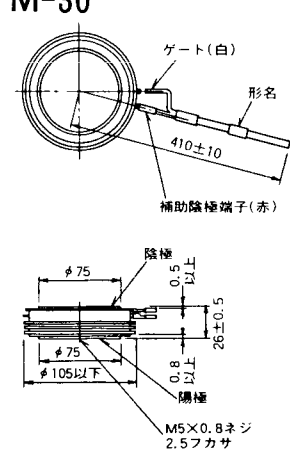
M-28



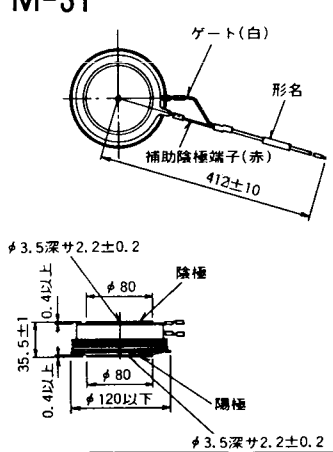
M-29



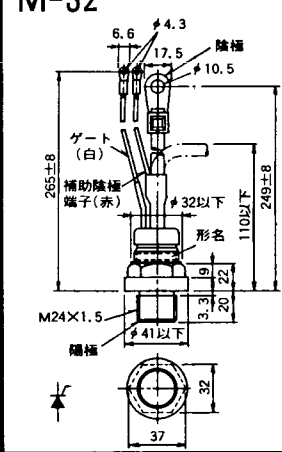
M-30



M-31

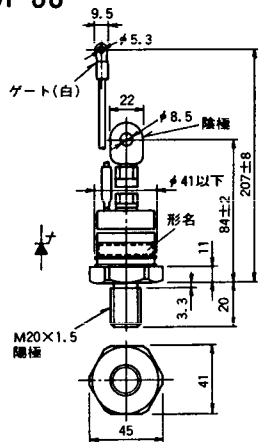


M-32



《寸法図単位：mm》

### M-33



### M-34



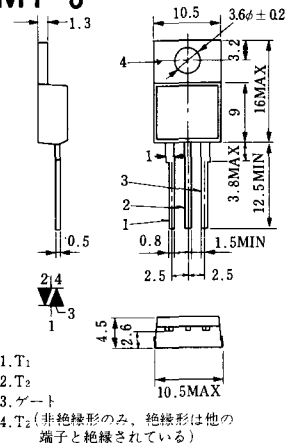
### MT-1



### MT-2



### MT-3



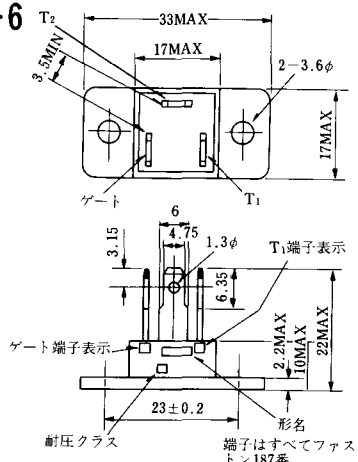
### MT-4



### MT-5



### MT-6



### MT-7



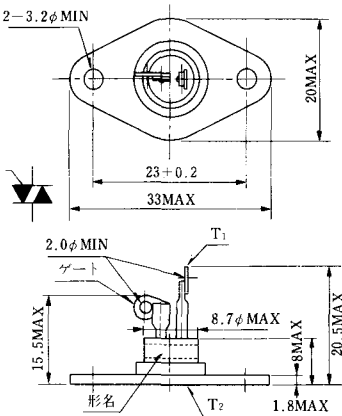
1. T<sub>1</sub>
2. T<sub>2</sub>
3. ゲート
4. T<sub>2</sub> (非絶縁形のみ、絶縁形は他の端子と絶縁されている)



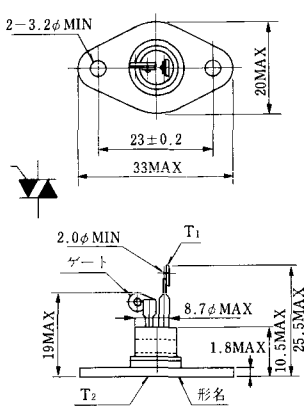
MT-8



MT-9



MT-10



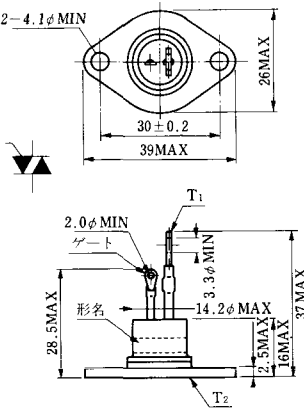
MT-11



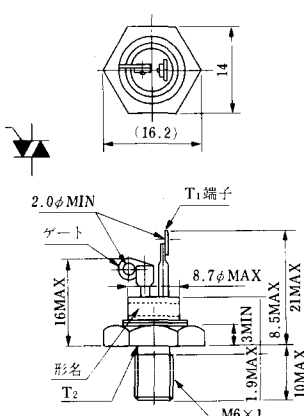
MT-12



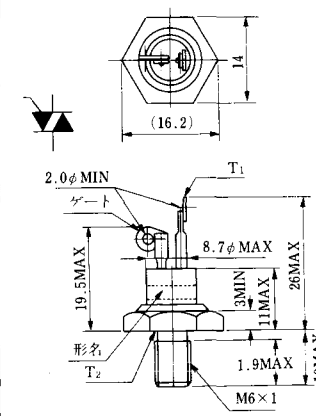
MT-13



MT-14



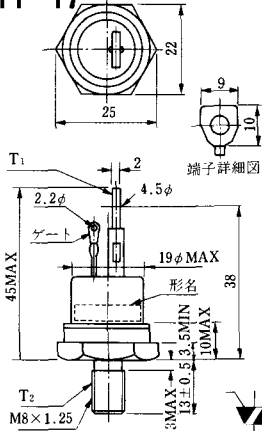
MT-15



MT-16



MT-17



MT-18



MT-19



MT-20



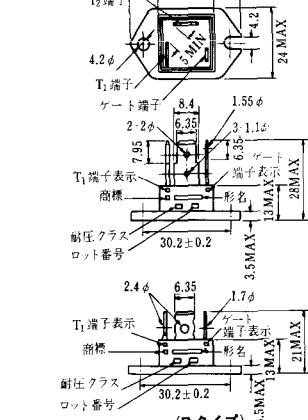
MT-21



MT-22

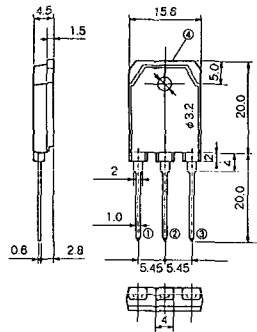


MT-23



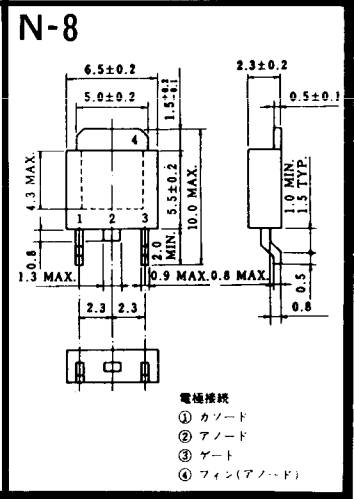
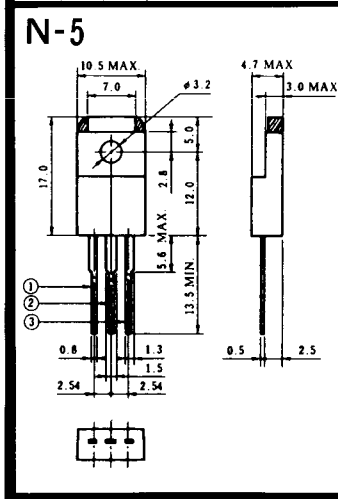
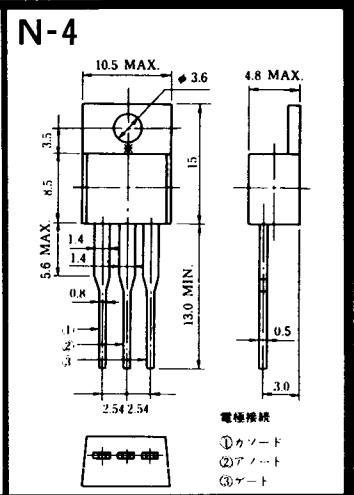
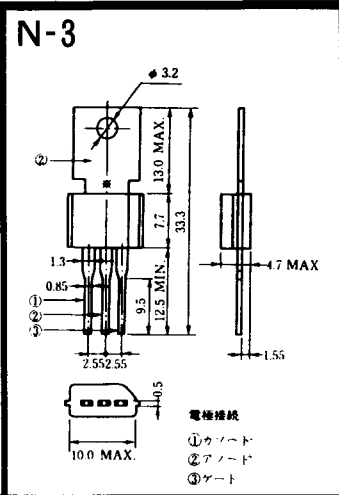
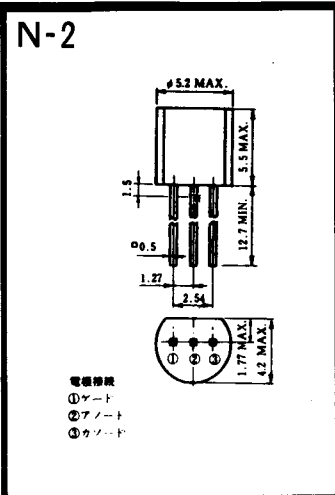
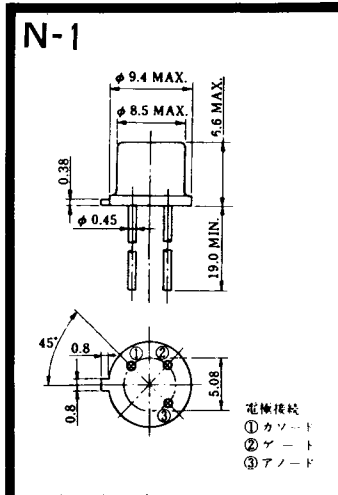
《寸法図単位：mm》

# MT-24

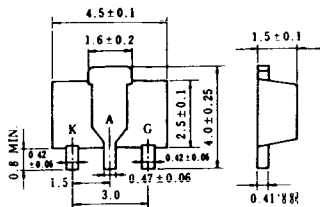


TO - 3P

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



# N-9



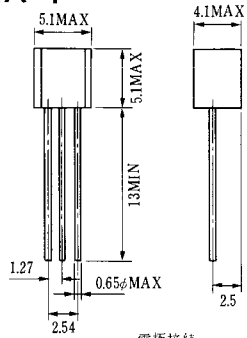
## 電極接続

K : カソード

A : アノード

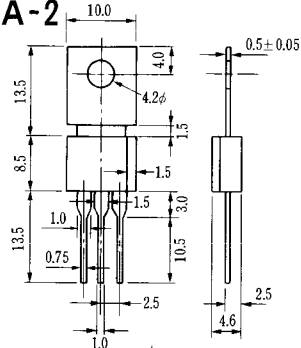
G : ゲート

### NA-1



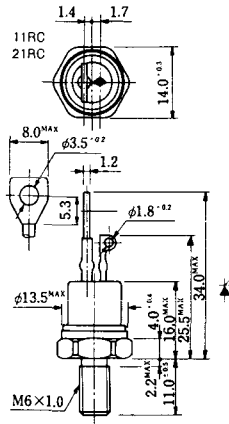
電極接続  
1. ゲート  
2. アノード  
3. カソード  
JEDEC: TO-92

### NA-2



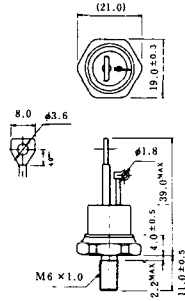
電極接続  
1. カソード  
2. アノード  
3. ゲート  
JEDEC: TO-202AA

### NI-1



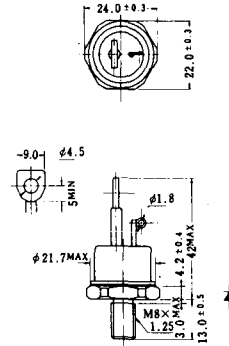
### NI-2

29RD



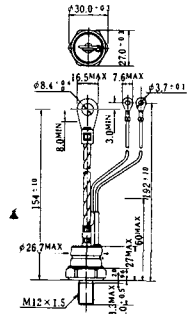
### NI-3

39RC  
59RC  
39RF  
59RF



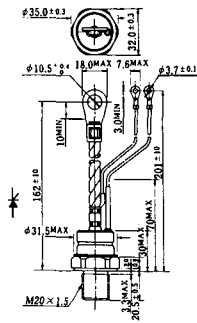
### NI-4

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



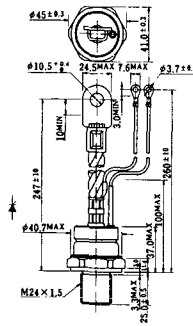
### NI-5

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



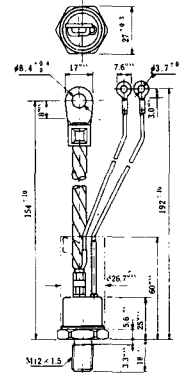
### NI-6

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



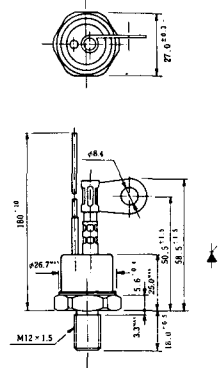
### NI-7

89RW<sub>JL</sub>  
129RW<sub>JL</sub>



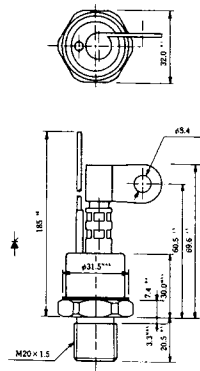
### NI-8

89RW  
129RW



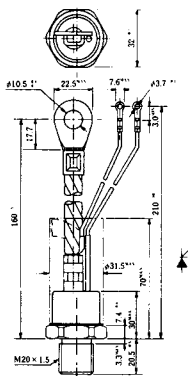
### NI-9

259RW  
309RW



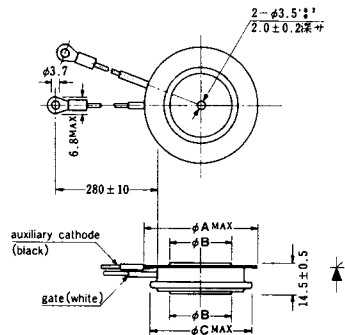
### NI-10

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



### NI-11

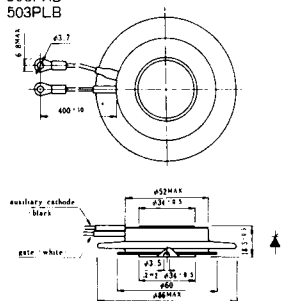
103PA  
253PA  
503PA  
553PA  
803PA  
103PLE  
103PLG  
103PLH  
203PLG  
253PLE  
253PLH  
353PLG  
403PLE  
403PLH



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

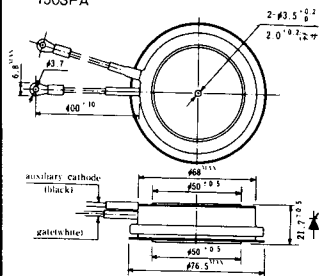
### NI-12

403PAB  
503PAB  
503PLB



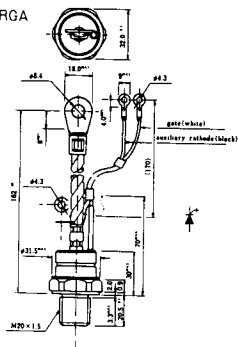
### NI-13

1003PA  
1003PAB  
1003PLF  
1003PLH  
1503PA



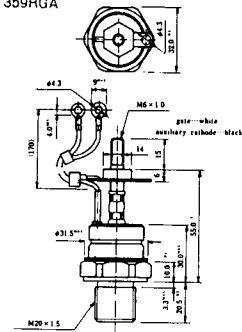
### NI-14

358RGA

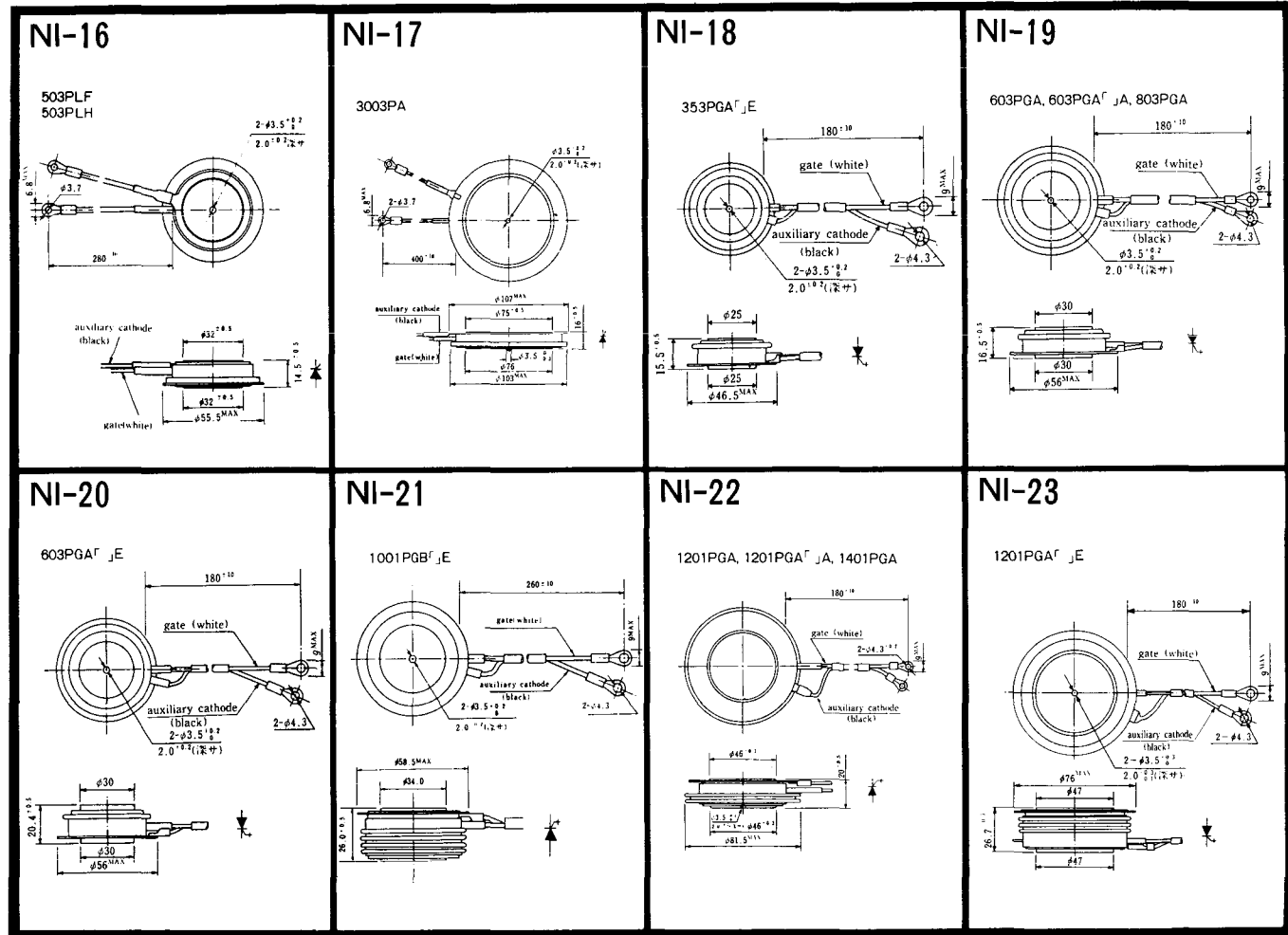


### NI-15

359RGA



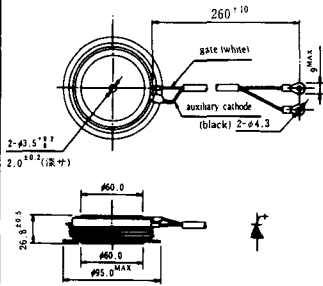




《寸法图单位:mm》

NI-24

2001PGB<sup>r</sup> JE



NI-25

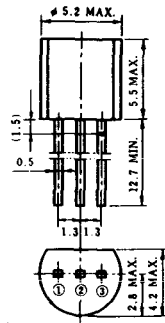
NI-26

### NT-1



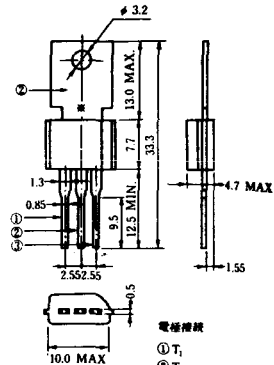
電極接続  
 ① T<sub>1</sub>  
 ② ゲート  
 ③ T<sub>2</sub>

### NT-2



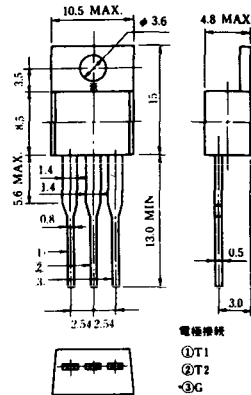
電極接続  
 ① T<sub>1</sub>  
 ② ゲート  
 ③ T<sub>2</sub>

### NT-3



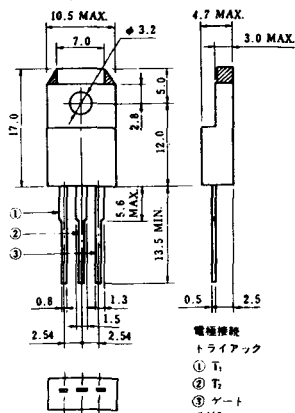
電極接続  
 ① T<sub>1</sub>  
 ② T<sub>2</sub>  
 ③ ゲート

### NT-4



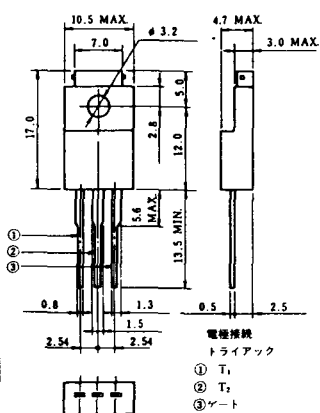
電極接続  
 ① T<sub>1</sub>  
 ② T<sub>2</sub>  
 ③ G

### NT-5



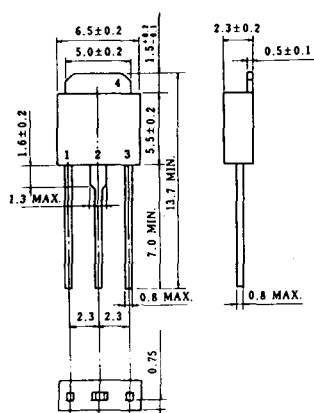
電極接続  
 トライアック  
 ① T<sub>1</sub>  
 ② T<sub>2</sub>  
 ③ ゲート  
 ④ G

### NT-6

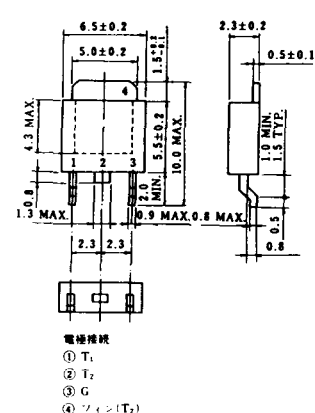


電極接続  
 トライアック  
 ① T<sub>1</sub>  
 ② T<sub>2</sub>  
 ③ ゲート  
 ④ G

### NT-7

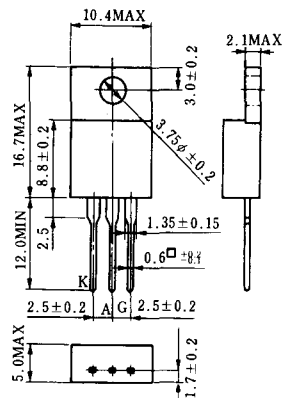


### NT-8



電極接続  
 ① T<sub>1</sub>  
 ② T<sub>2</sub>  
 ③ G  
 ④ フォン(T<sub>2</sub>)

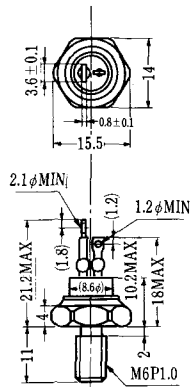
### S-1



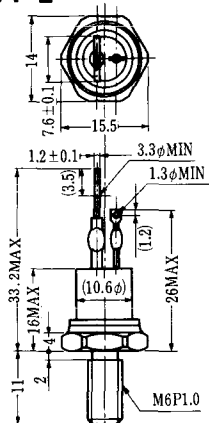
### ST-1



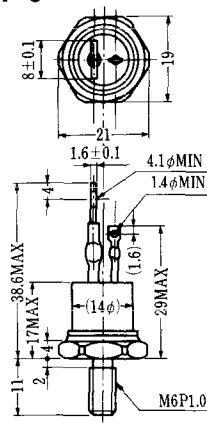
SA-1



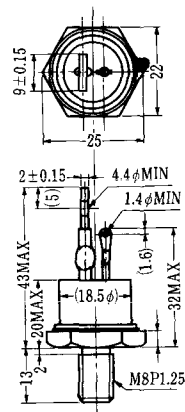
SA-2



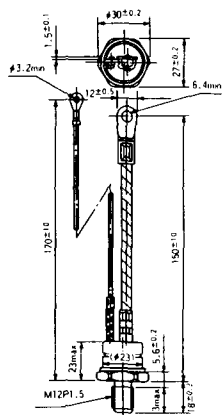
SA-3



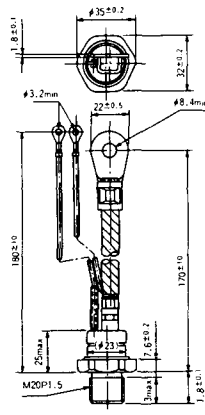
SA-4



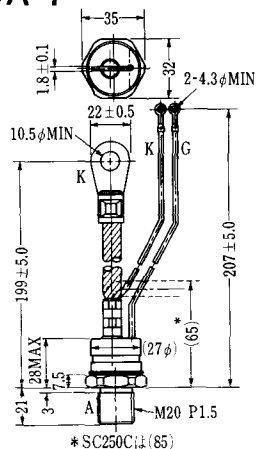
SA-5



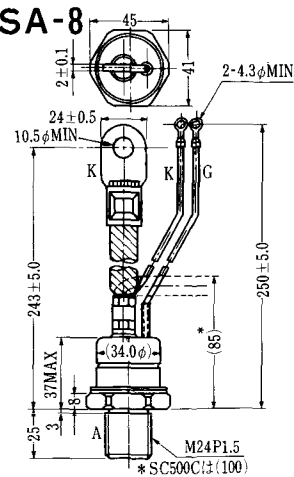
SA-6

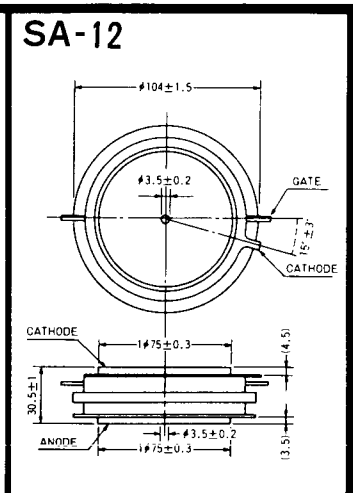
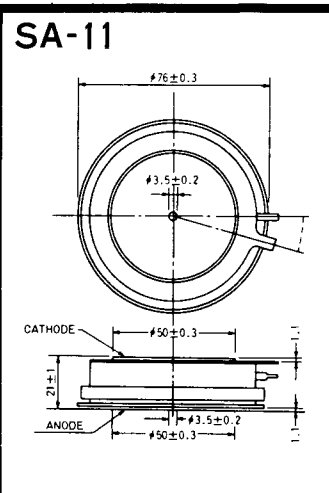
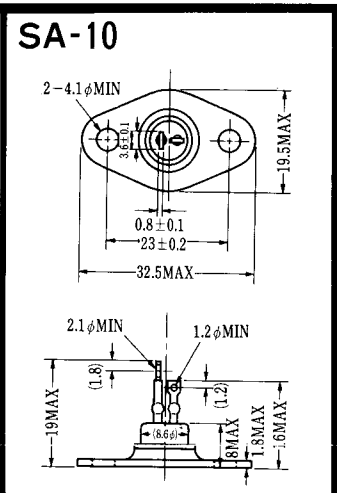
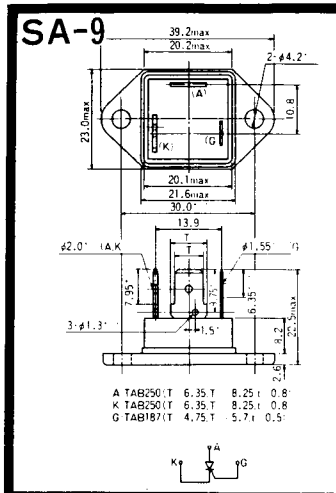


SA-7

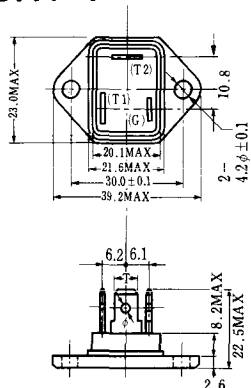


SA-8



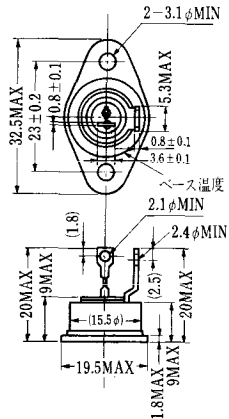


### SAT-1

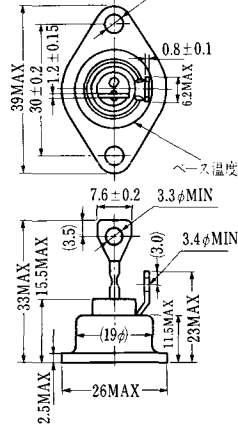


T1端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 T2端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 C 端子: フラスト > 187 (T=4.75, t=0.5, φ=1.3)

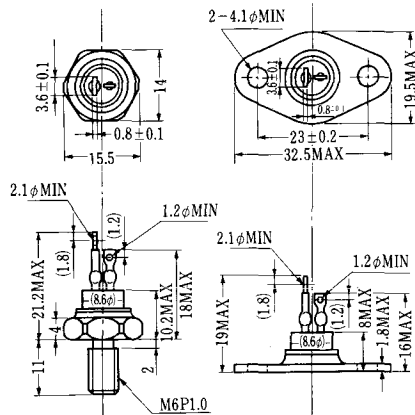
### SAT-2



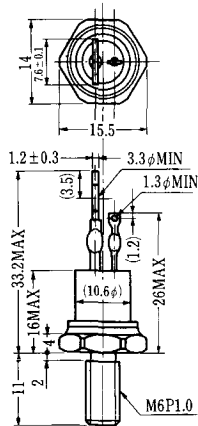
### SAT-3



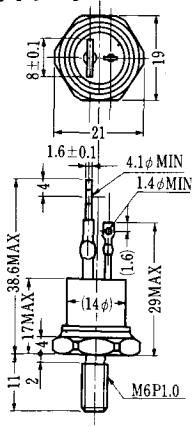
### SAT-4



### SAT-5



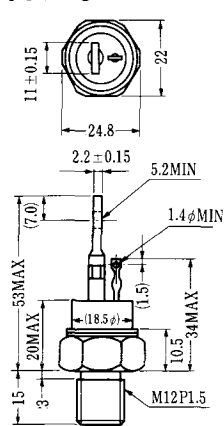
### SAT-6



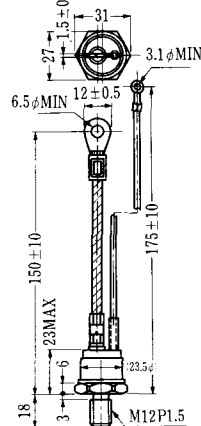
### SAT-7



### SAT-8



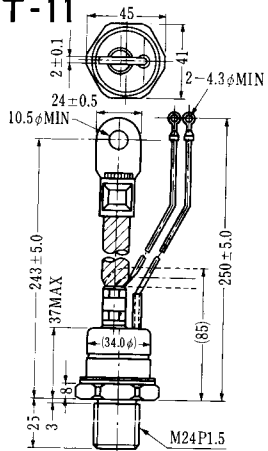
### SAT-9



SAT-10



SAT-11





### SY-1 (1096A)



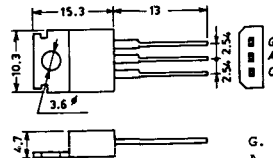
C: Cathode  
A: Anode  
G: Gate

### SY-2 (1151)



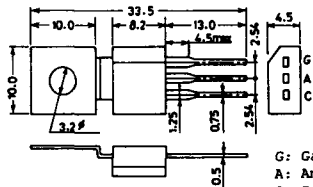
G: Gate  
A: Anode  
C: Cathode

### SY-3 (1104)



G: Gate  
A: Anode  
C: Cathode

### SY-4 (1150)



G: Gate  
A: Anode  
C: Cathode

1097A



G: Gate

1102



1141



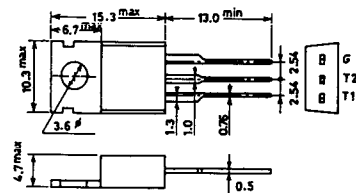
1142



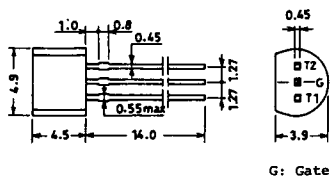
1144



1155

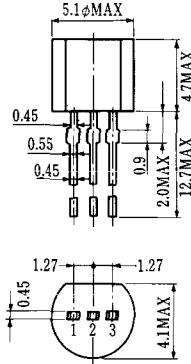


1192A



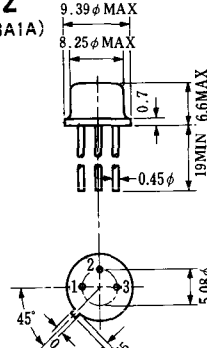
G: Gate

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



- 1 ゲート
- 2 アノード
- 3 カソード

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



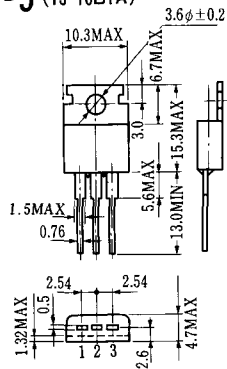
1. カソード
2. ゲート
3. アノード(ケース)

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



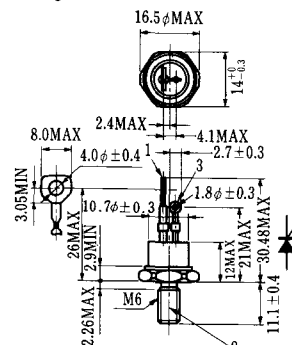
- 1 カソード
- 2 アノード
- 3 ゲート

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



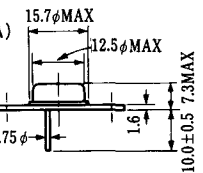
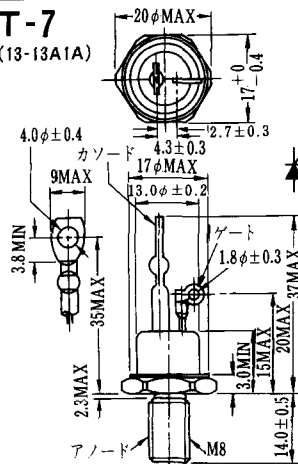
- 1 カソード
- 2 アノード
- 3 ゲート

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



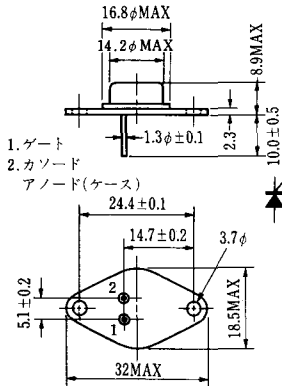
- 1 カソード
- 2 アノード
- 3 ゲート

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



1. ゲート
2. カソード
3. アノード(ケース)

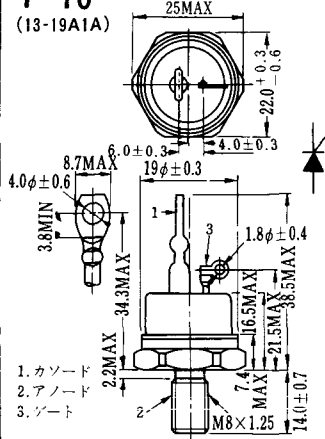
### T-9 (13-14A1A)



1. ゲート
2. カソード

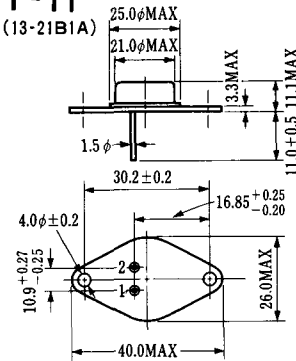
アノード(ケース)

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



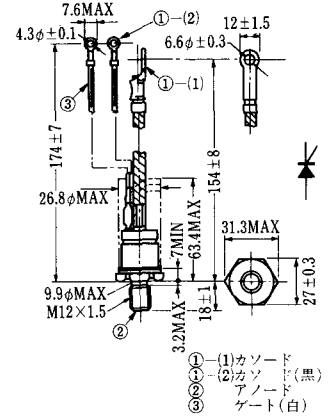
1. カソード
2. アノード
3. ゲート

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



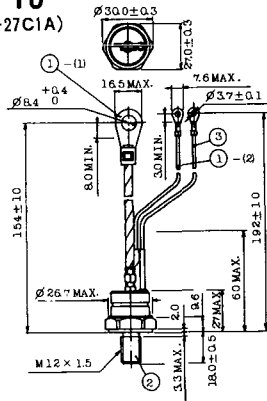
1. ゲート
  2. カソード
- アノード(ケース)

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



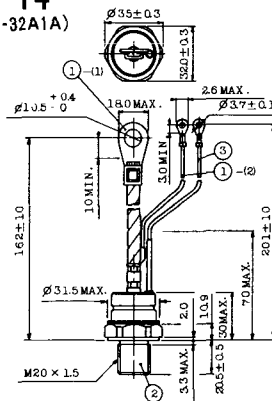
- ① カソード
- ② カソード(黒)
- ③ アノード
- ④ ゲート(白)

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



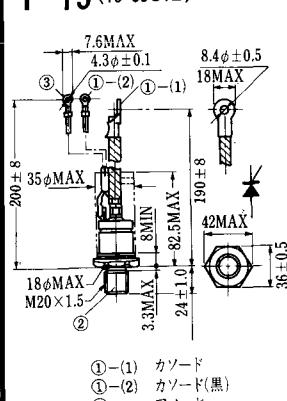
- 1-(1) カソード
  - 1-(2) カソード(黒)
- アノード  
ゲート(白)

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



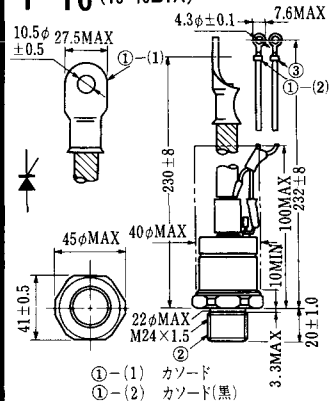
- 1-(1) カソード
  - 1-(2) カソード(黒)
- アノード  
ゲート(白)

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

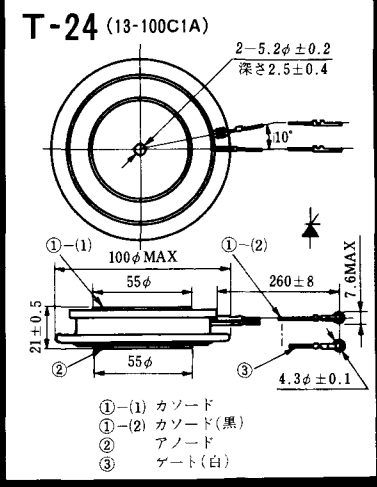
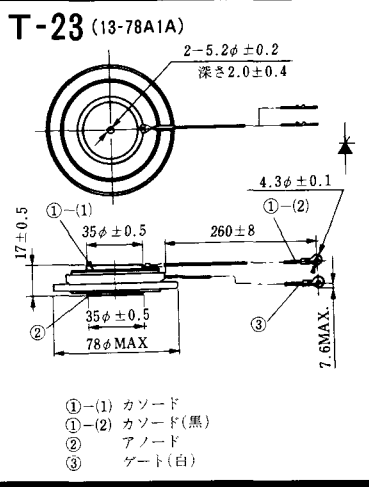
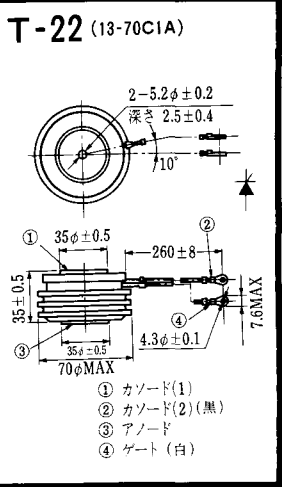
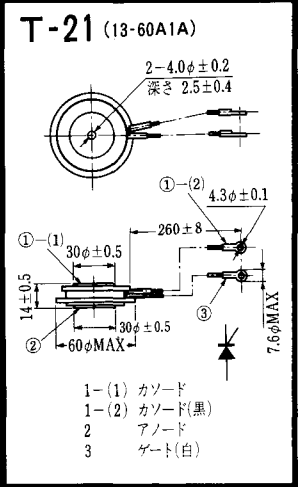
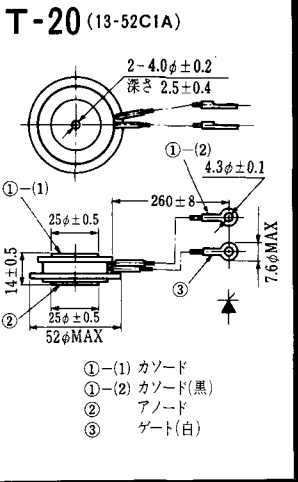
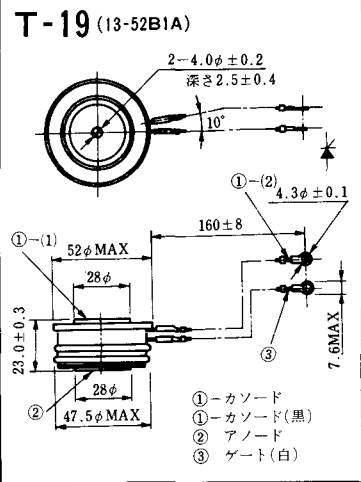
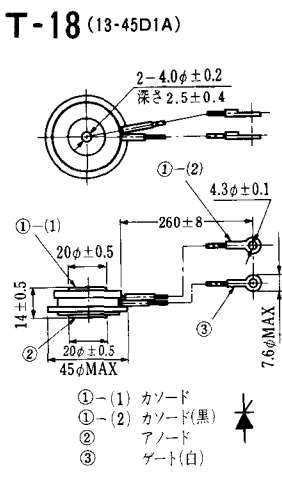
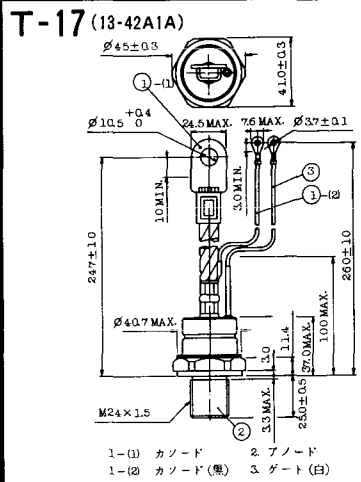


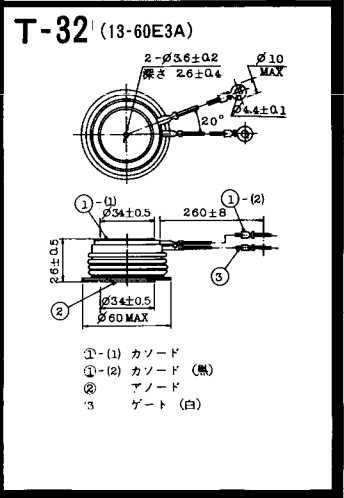
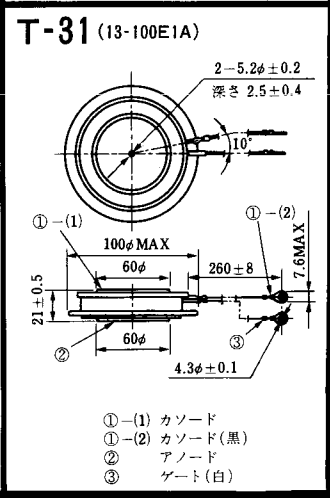
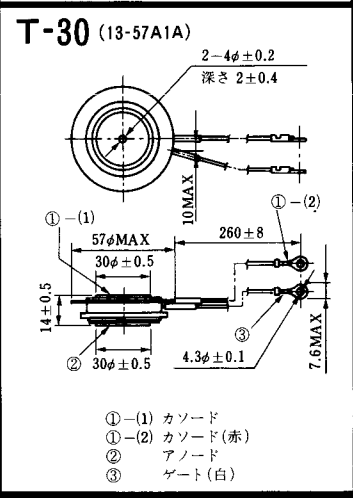
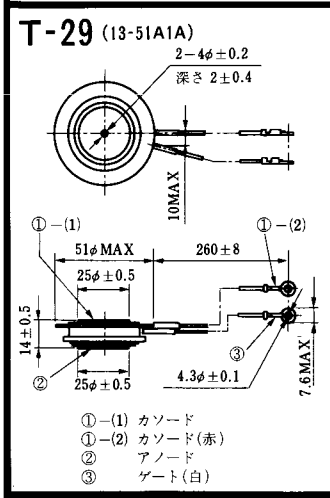
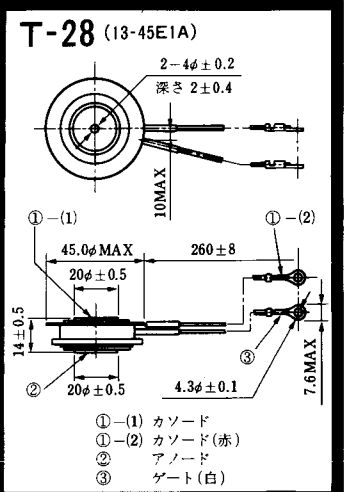
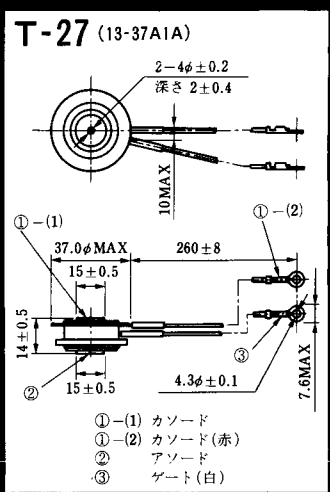
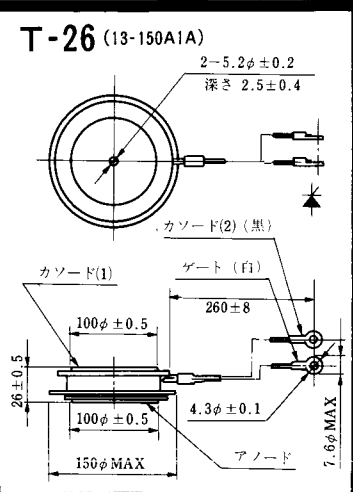
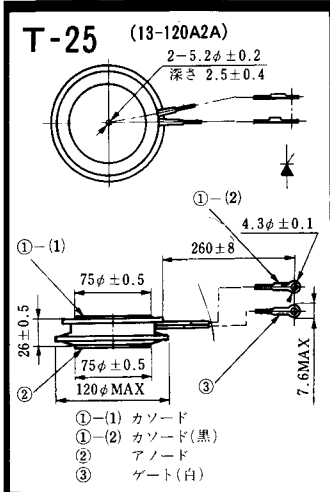
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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

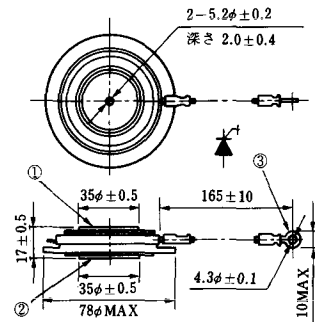


- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)



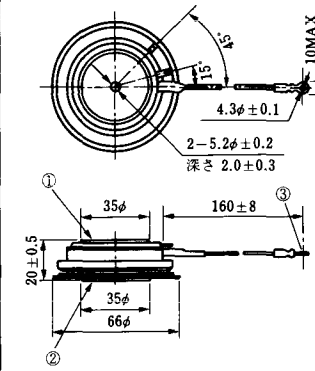


**T-33** (13-78B1A)



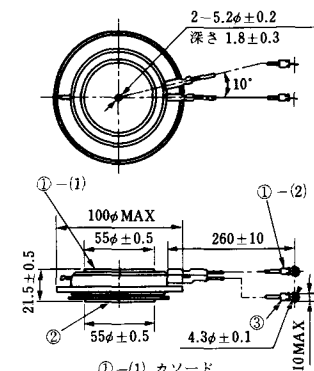
- ① カソード
- ② アノード
- ③ ゲート

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



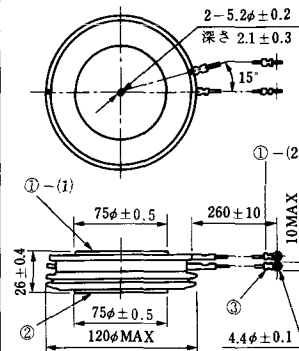
- ① カソード
- ② アノード
- ③ ゲート

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



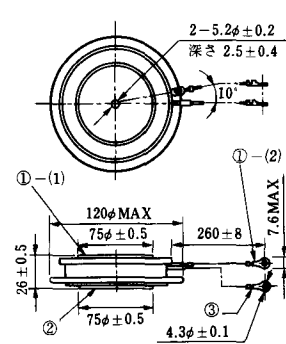
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



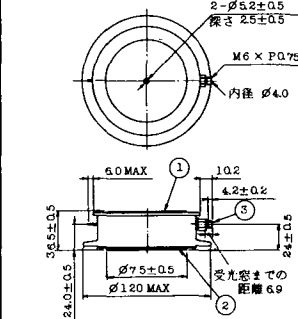
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



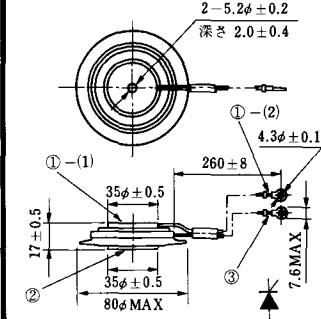
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



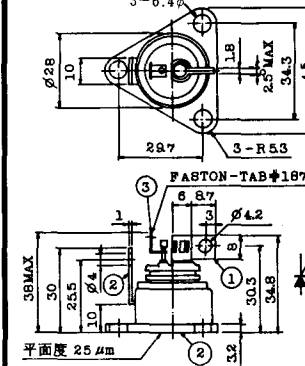
- ① カソード
- ② アノード
- ③ ゲート

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



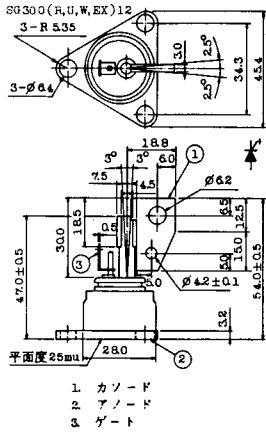
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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

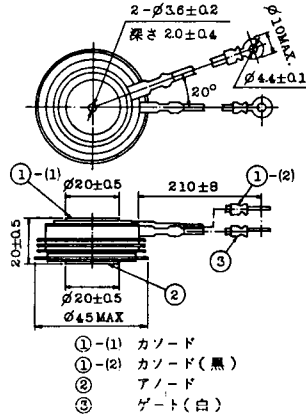


- 1. カソード
- 2. アノード
- 3. ゲート

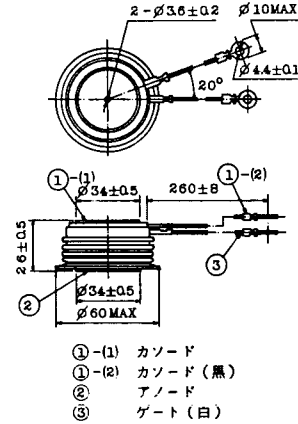
### T-41 (13-28A2A)



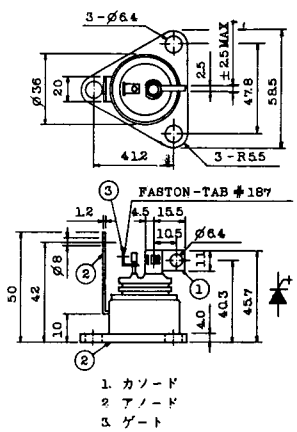
### T-42 (13-45F1A)



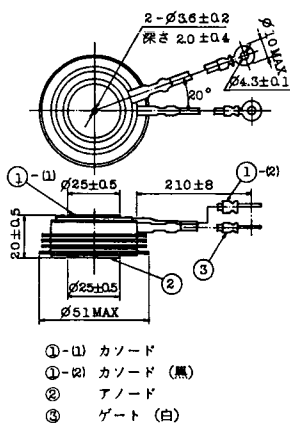
### T-43 (13-60E2A)



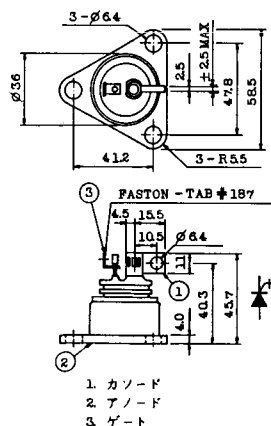
### T-44 (13-36A1A)



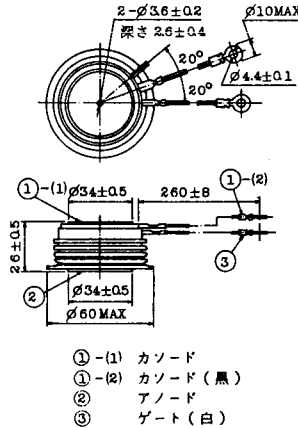
### T-45 (13-51B1A)



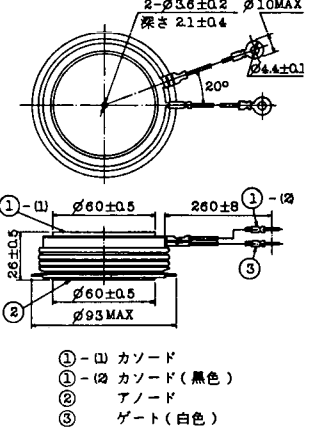
### T-46 (13-36B1A)



### 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)



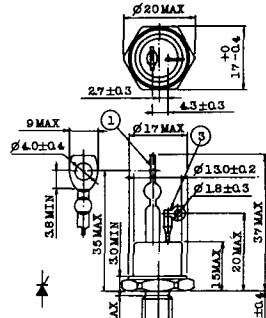
- 1 カソード
- 2 アノード
- 3 ゲート

**T-55** (13-5A1D)



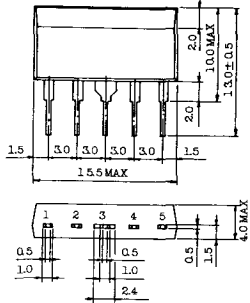
- 1 カソード
- 2 アノード
- 3 アノード

**T-56** (13-13C1A)



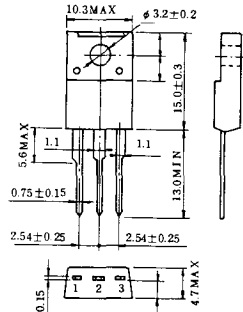
- 1 カソード
- 2 アノード
- 3 ゲート

T-57 (12-16C1A)



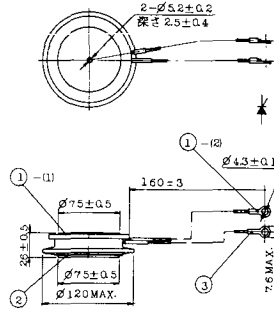
- 1. アノード (主)
- 2. ゲート (主)
- 3. カソード (共通)
- 4. ゲート (補助)
- 5. アノード (補助)

T-58 (13-10H1B)



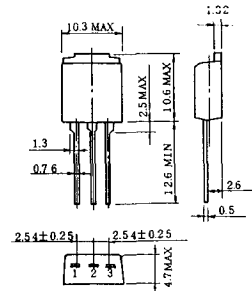
- 1. カソード
- 2. アノード
- 3. ゲート

T-59 (13-120A1A)



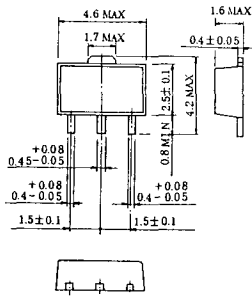
- 1-(1) カソード
- 1-(2) カソード (黒)
- 2 アノード
- 3 ゲート (白)

T-60



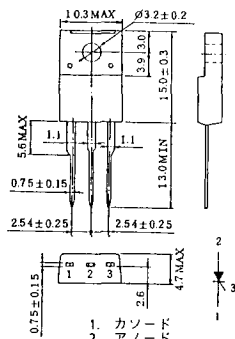
- 1. カソード
- 2. アノード
- 3. ゲート

T-61 (13-5B1A)



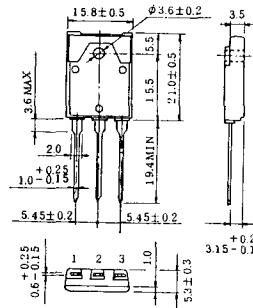
- 1. ゲート
- 2. アノード
- 3. カソード

T-62 (13-10H1A)

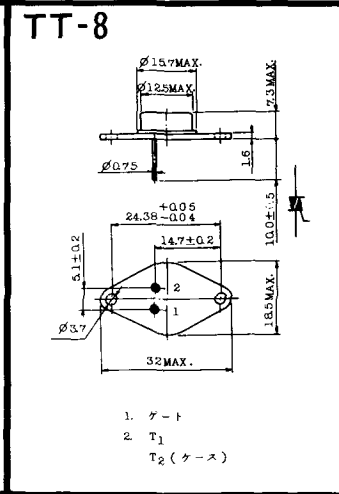
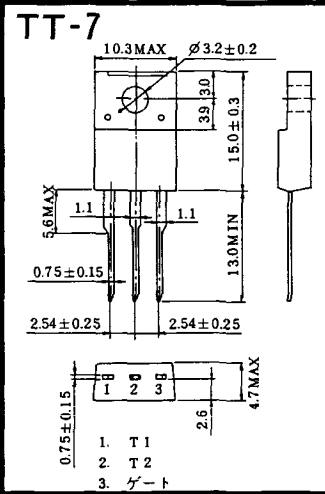
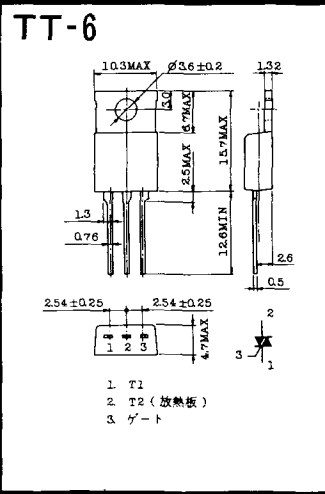
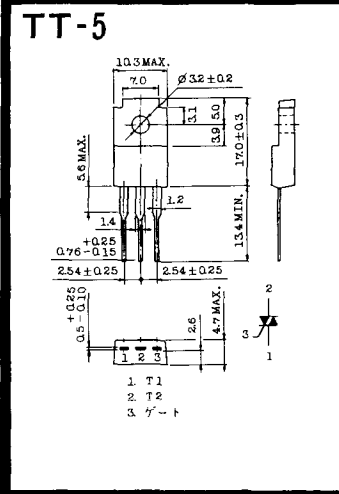
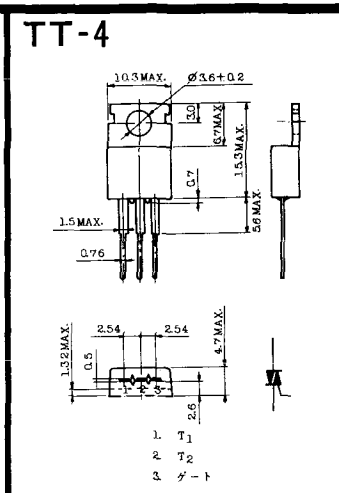
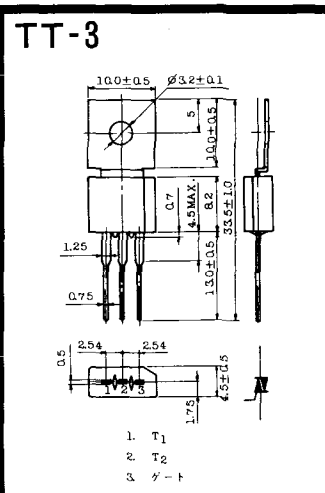
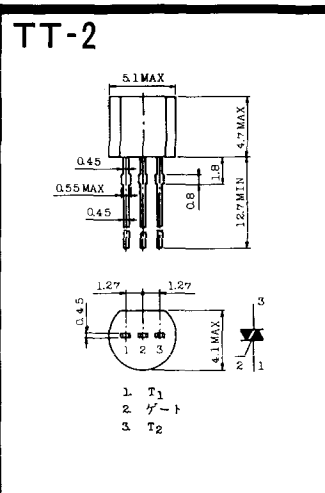
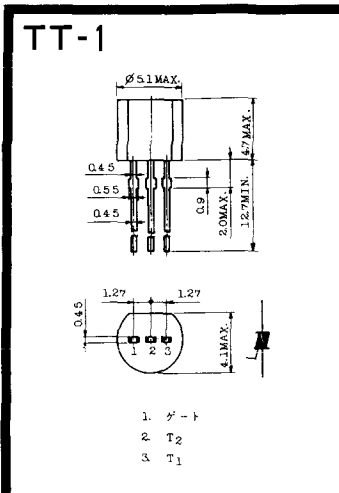


- 1. カソード
- 2. アノード
- 3. ゲート

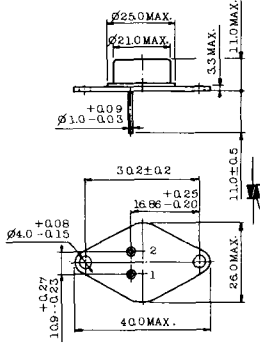
T-63 (13-16A1B)



- 1. カソード
- 2. アノード
- 3. ゲート

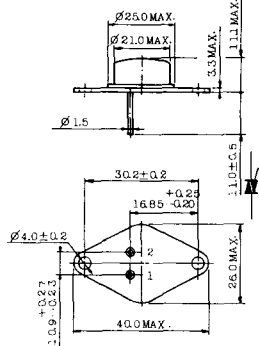


### TT-9



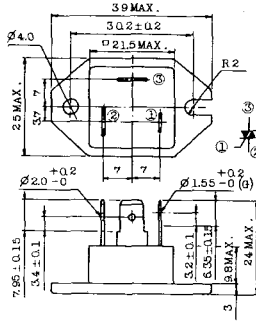
- 1. ゲート
- 2. T<sub>1</sub>
- 3. T<sub>2</sub> (ケース)

### TT-10



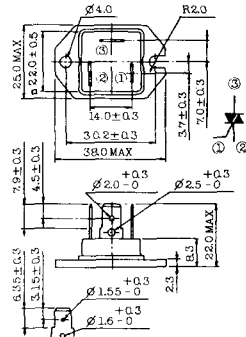
- 1. ゲート
- 2. T<sub>1</sub>
- 3. T<sub>2</sub> (ケース)

### 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)

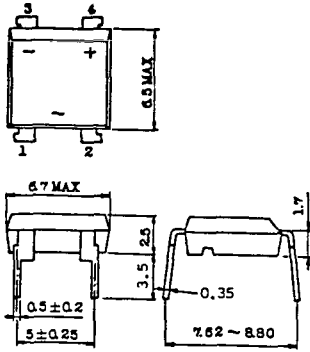
### TT-12



ゲート端子詳細

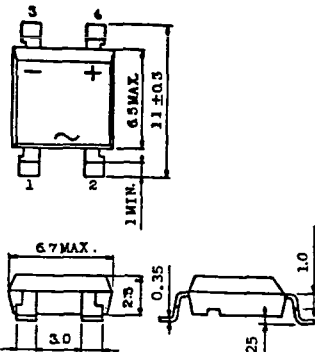
- ① ゲート (フーストン端子 # 187)
- ② T<sub>1</sub> ( " # 250)
- ③ T<sub>2</sub> ( " # 250)

### TT-13



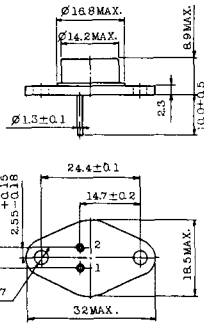
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

### TT-14



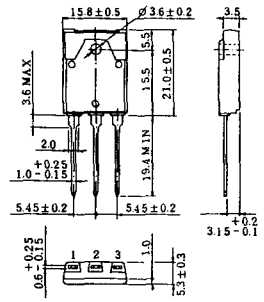
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

### 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



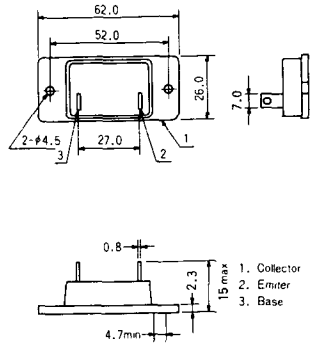
《寸法図単位：mm》

# TS-8

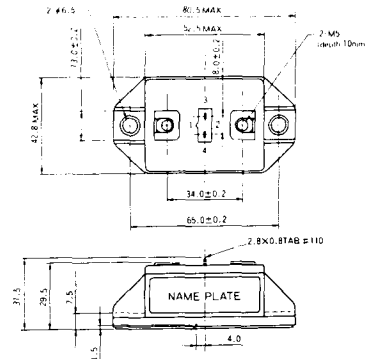


- 1. ベース
- 2. エミッタ  
コレクタ  
(ケース)

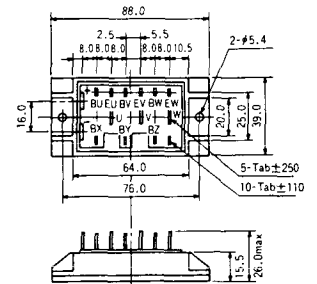
S-62A1A



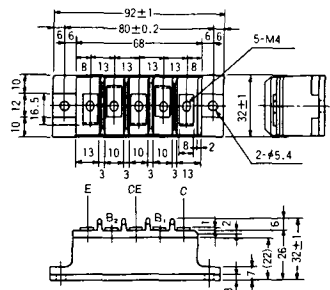
S-80A1A



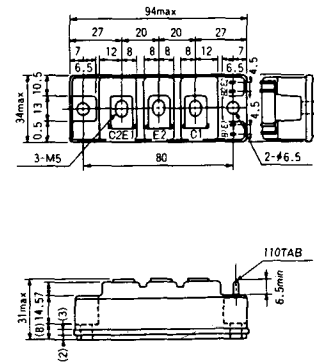
S-88D1A



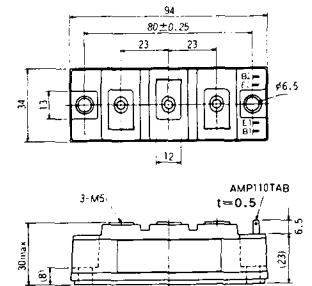
S-92B1A



S-94B1A



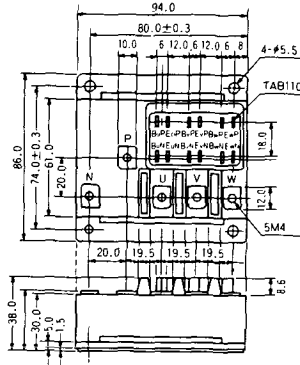
S-94B1B



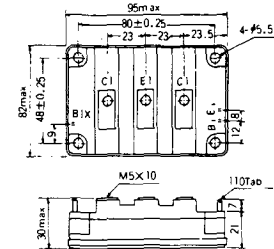
S-94B2A



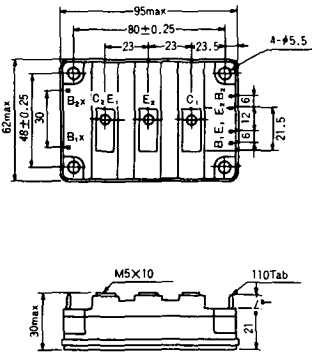
S-94D1A



S-95A1A



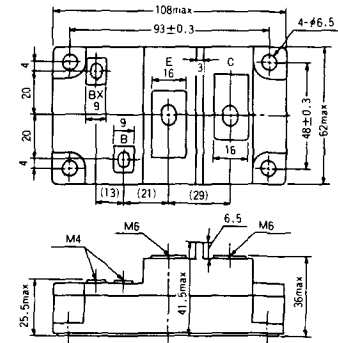
S-95B1A



S-98B1B



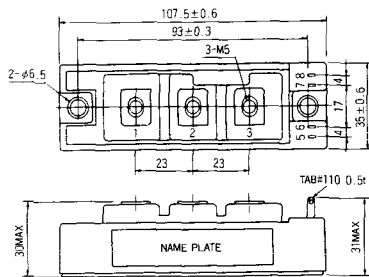
S-108A2A



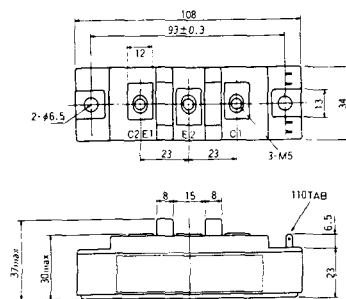
〈寸法图单位：mm〉



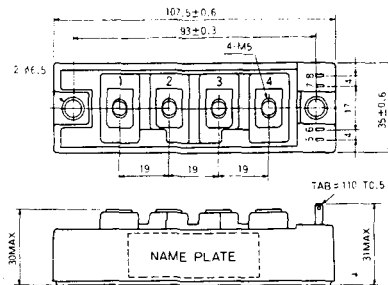
S-108B1A



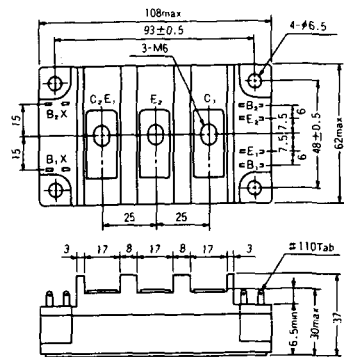
S-108B1B



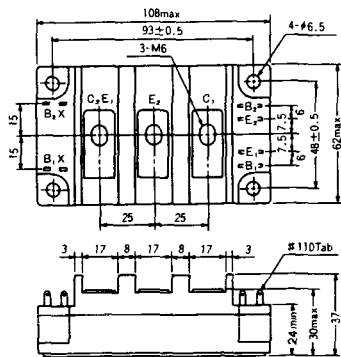
S-108B1C



S-108B2A



S-108B2B



### 2-22B1A



### 2-27A4A



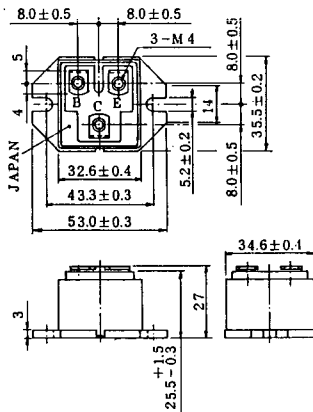
### 2-33C1A



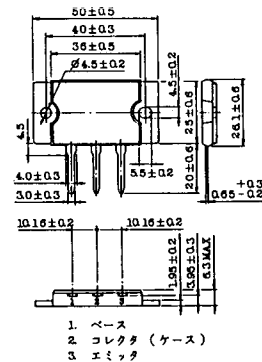
### 2-33D1A



### 2-33F1A

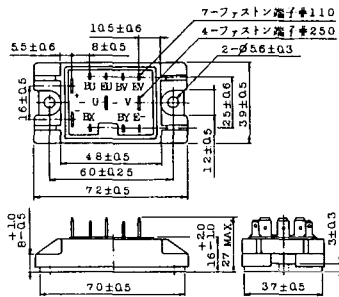


### 2-37A1A

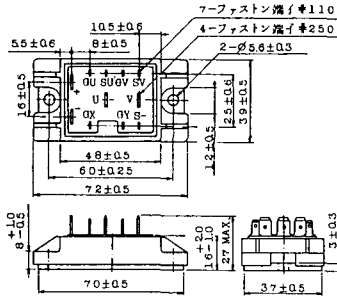


1. スイス  
2. コレクタ (ケース)  
3. ハミツク

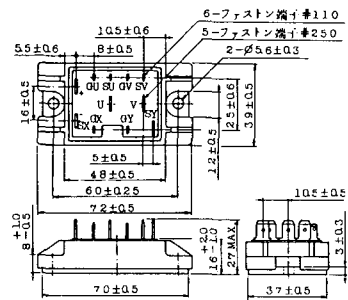
2-48A3A



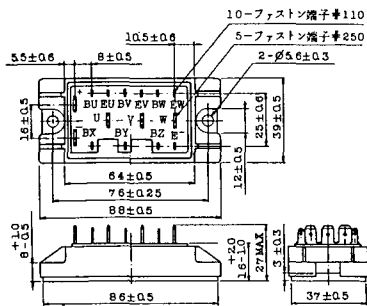
2-48A3B



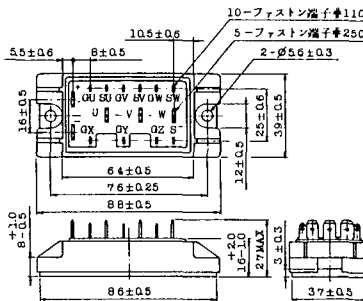
2-48A4A



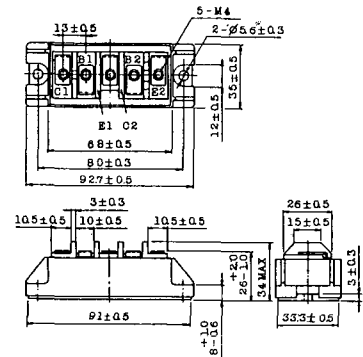
2-64A2A



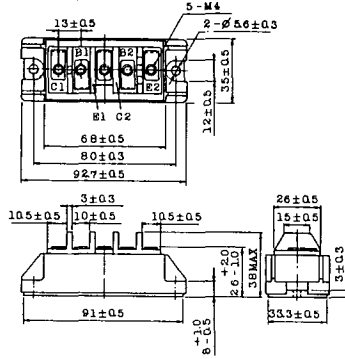
2-64A2B



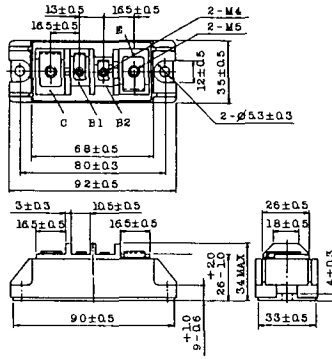
2-68A2A



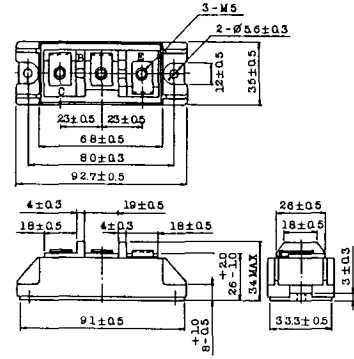
2-68B2A



2-68C1A



2-68D2A



2-72A3A



2-80A1A

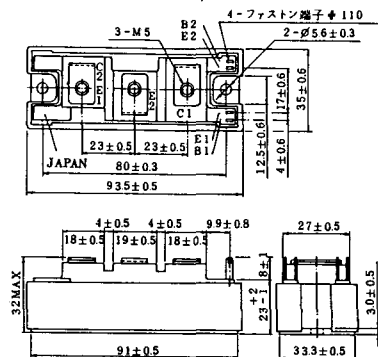


2-80B1A

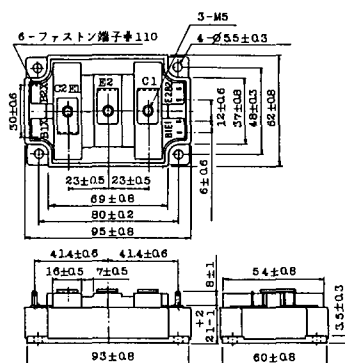




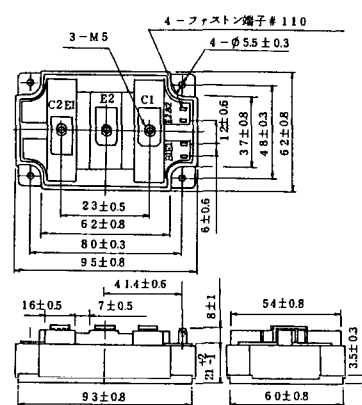
### 2-94D1A



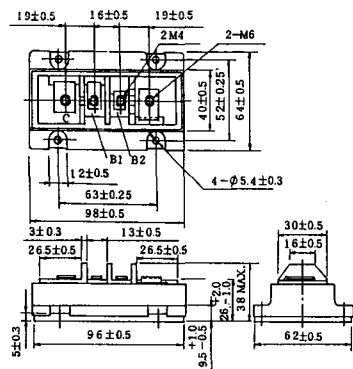
### 2-96A3A



### 2-96A4A



### 2-98B1A



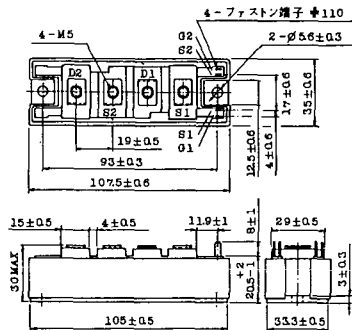
### 2-98C2A



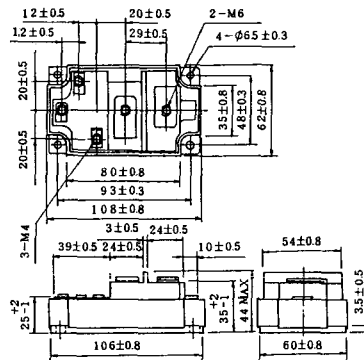
### 2-108A2A



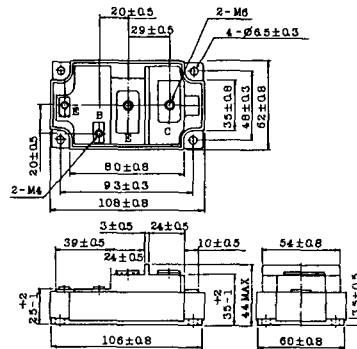
### 2-108B1A



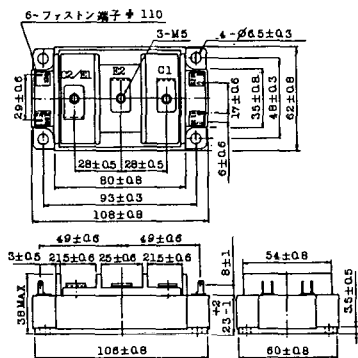
### 2-109A3A



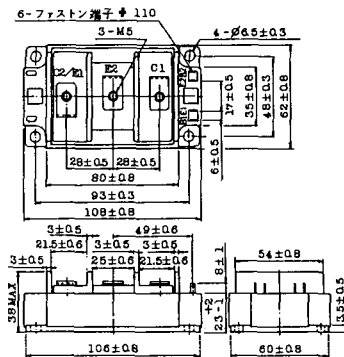
### 2-109A4A



### 2-109B3A



### 2-109B4A



### BBT-II

BBTII  
1D200A-020



### BBT-III

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



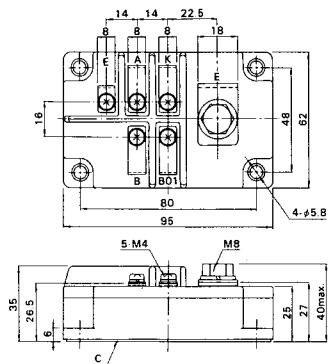
### BBT-III

BBTIII  
ETN01-055  
ET1257



### BBT-IV

BBTIV  
1D500A-030

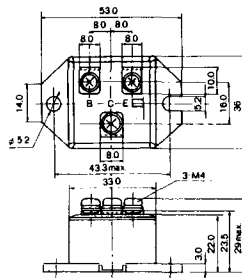




M-101



M-102



M-103



M-104



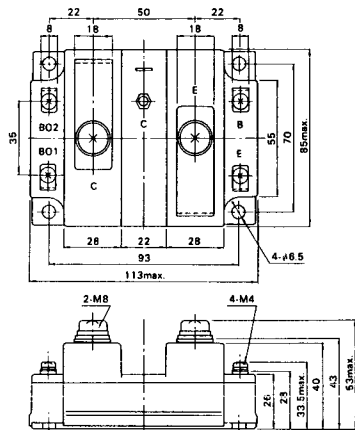
M-105



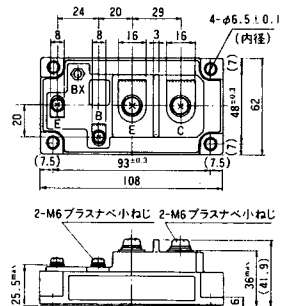
M-106



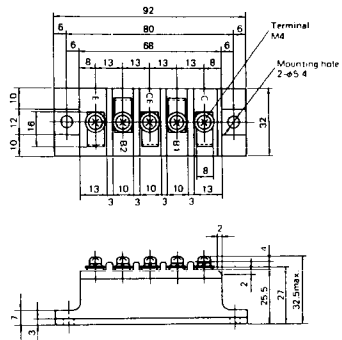
### M-107



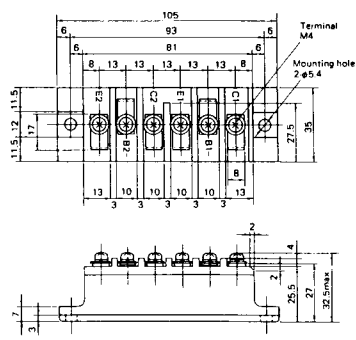
### M-116



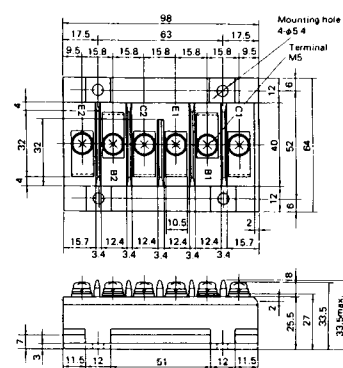
### M-201



### M-202



### M-203



### M-204



### M-205



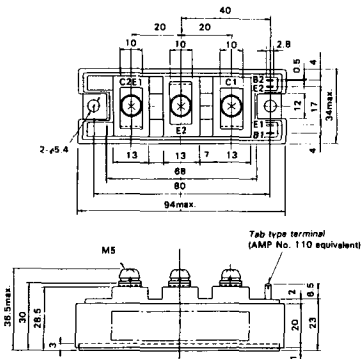
### M-206



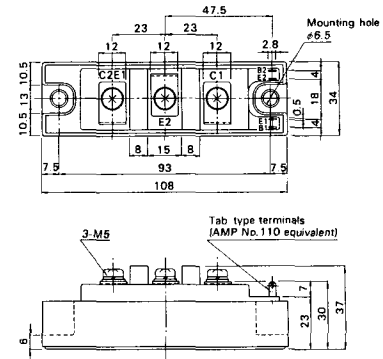
M-207



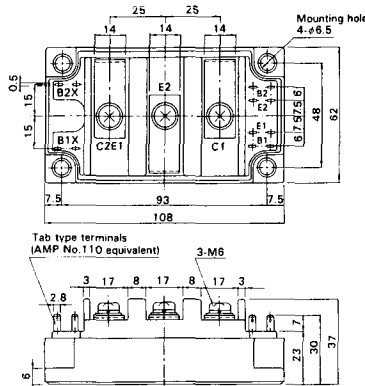
M-208



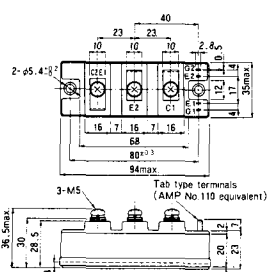
M-209



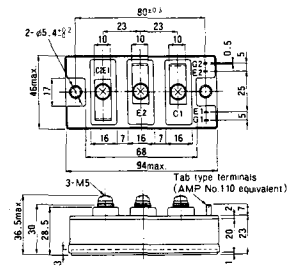
M-210



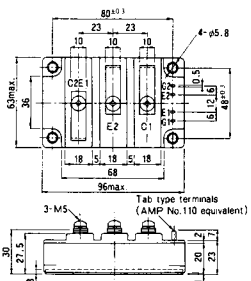
M-211



M-212

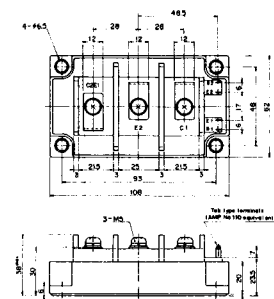


M-213

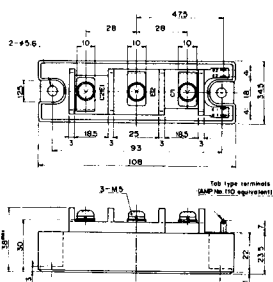


M-214

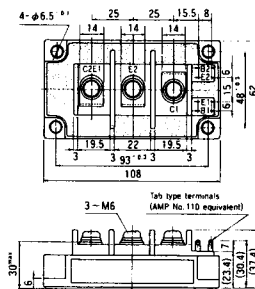
M-215



M-216



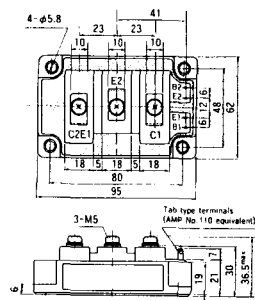
M-217



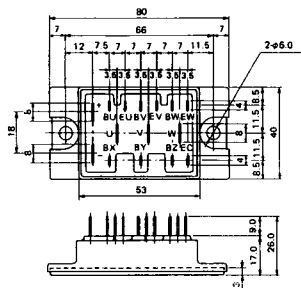
M-218



M-219



M-601



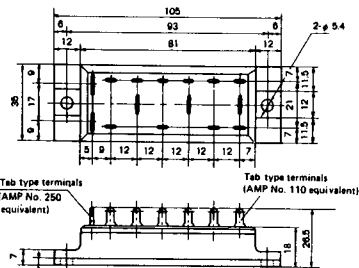
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



M-602



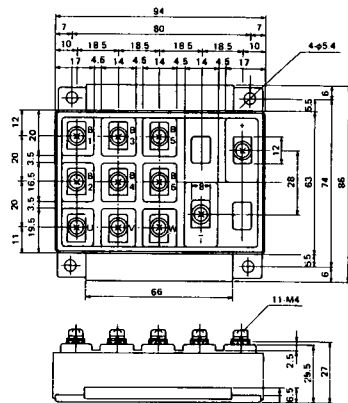
Tab type terminals  
(AMP No. 250 equivalent)



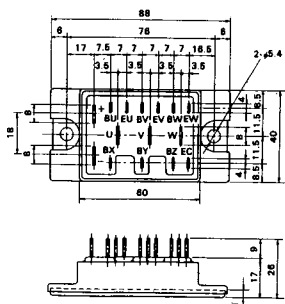
Tab type terminals  
(AMP No. 110 equivalent)



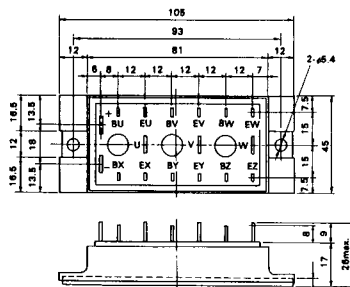
M-603



M-604



M-605



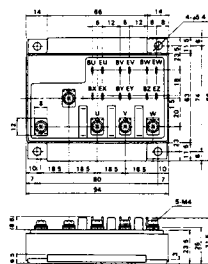
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



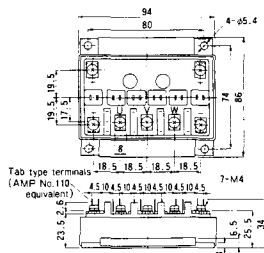
M-606



M-607



M-608



M-609



M-610

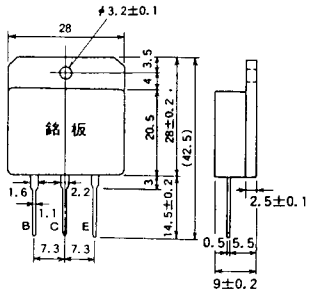


M-616

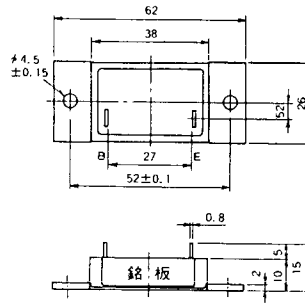




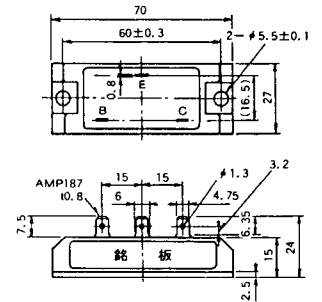
M-1A1A



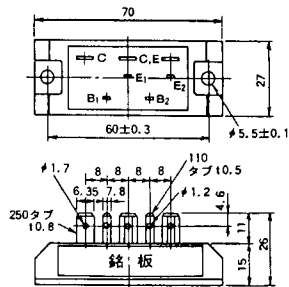
M-2A1A



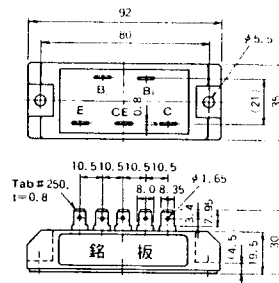
M-2B1A



M-2B2A



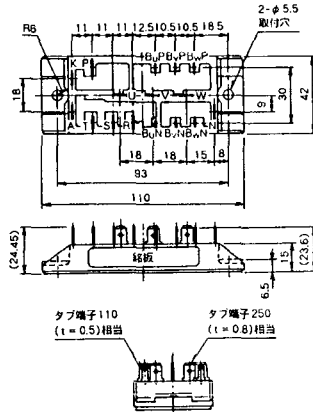
M-2C2A



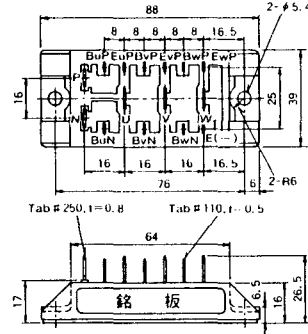
M-2D4A



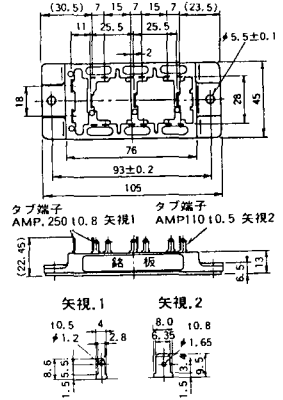
### M-2E6A



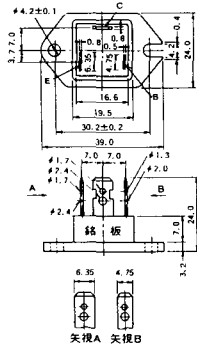
### M-2F6A



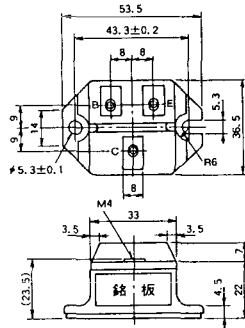
### M-2G6A



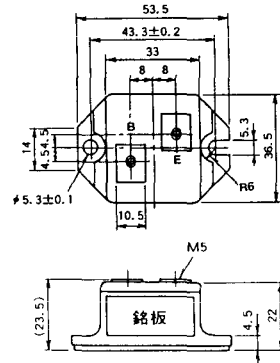
### M-3A1A



### M-3B1A



### M-3B1B



M-3C1A



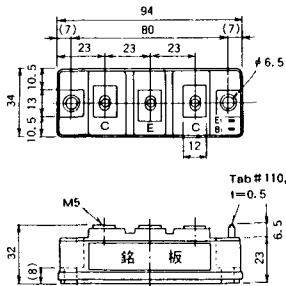
M-3D6A



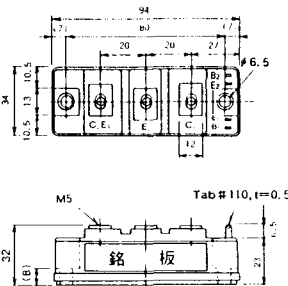
M-3E6A



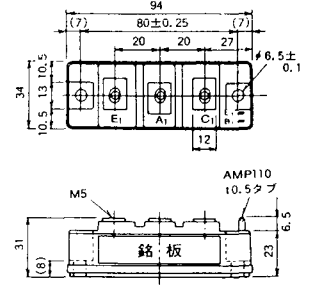
M-4A1A



M-4A2A



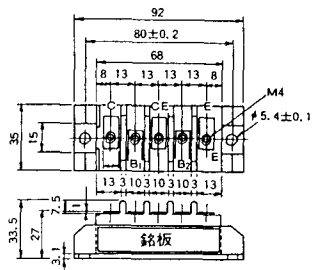
M-4A1B



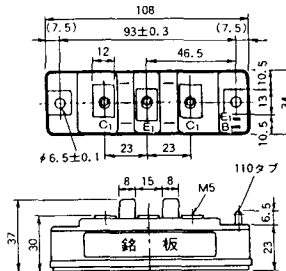
M-4A2B



M-4B2A



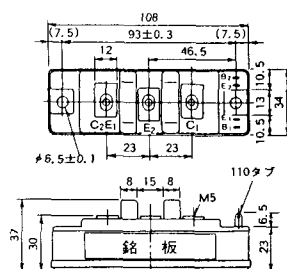
M-5A1A



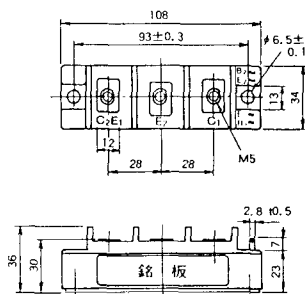
M-5A1B



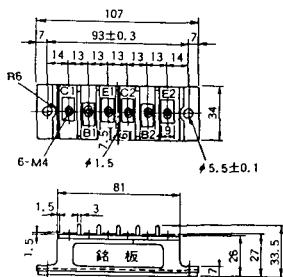
M-5A2A



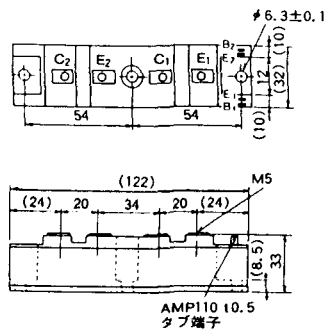
M-5B2A



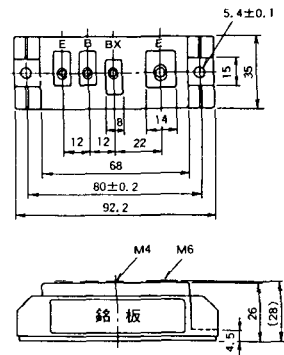
M-5C2A



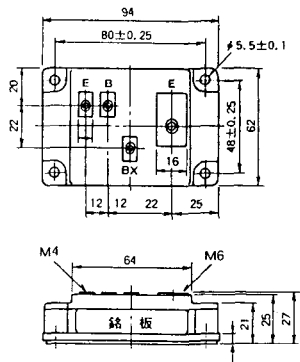
M-5D2A



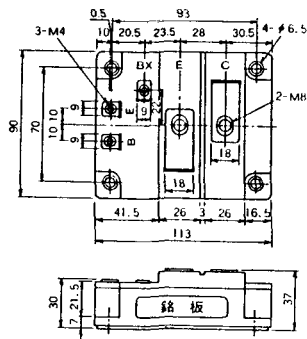
M-6A1A



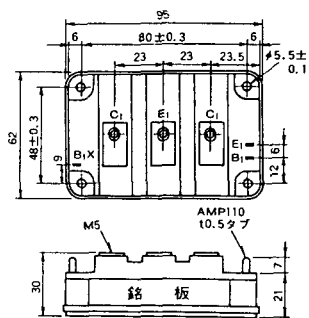
M-7A1A



M-7B1A



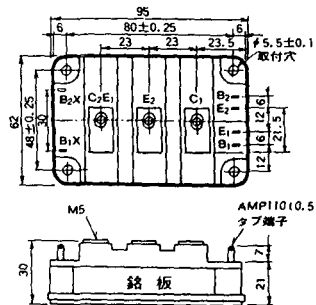
M-8A1A



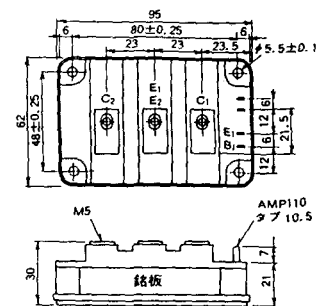
M-8A1B



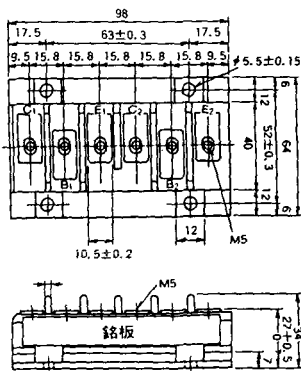
M-8A2A



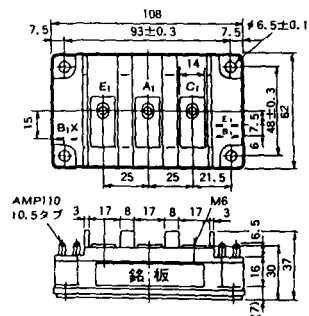
M-8A2B



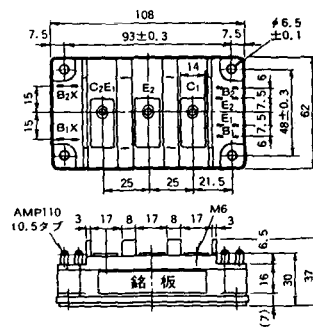
M-8B2A



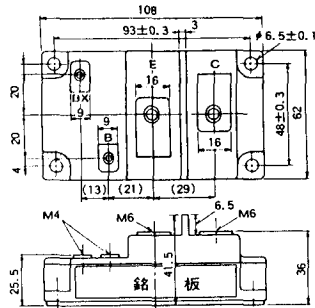
M-9A1A



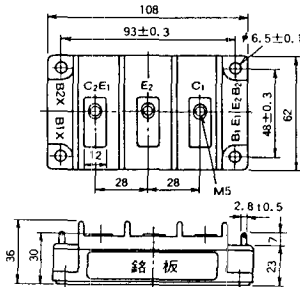
M-9A2A



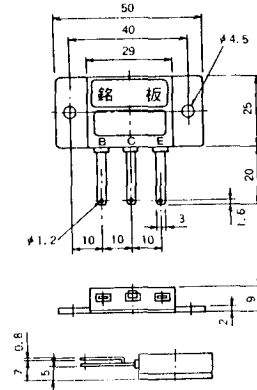
M-9B1A



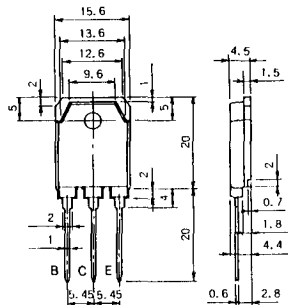
M-9C2A



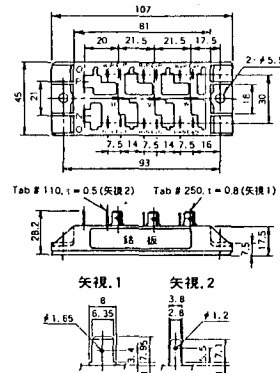
M-1A1B



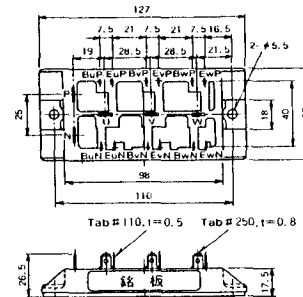
M-1A1C



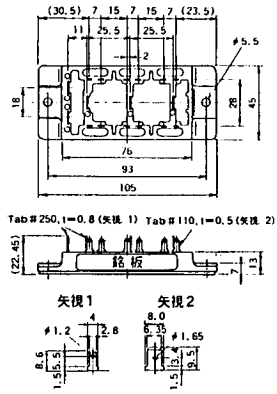
M-2E6B



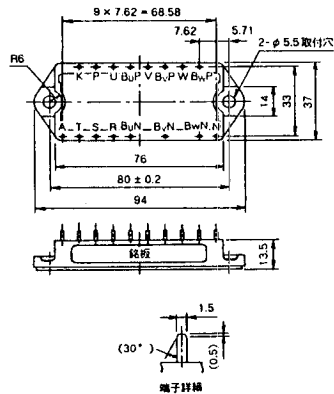
M-2E6C



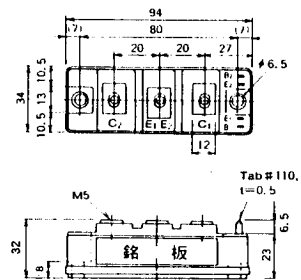
### M-2G6B



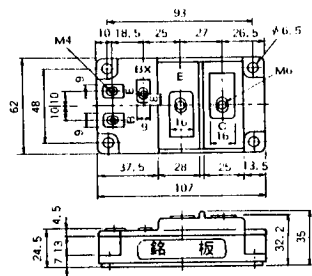
### M-3D6B



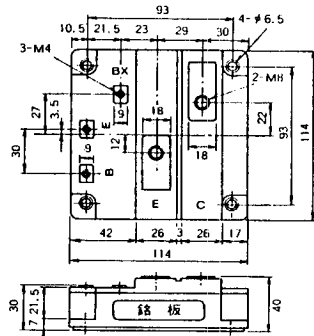
### M-4A2C



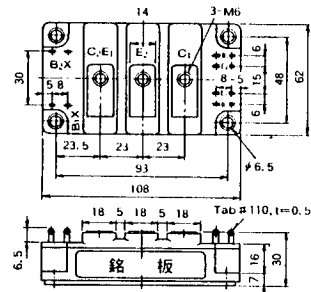
### M-7A1B



### M-7C1A

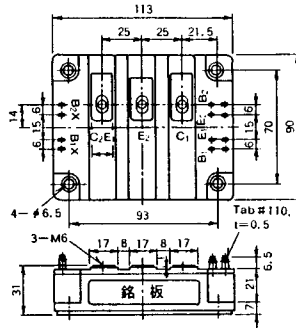


### M-8A2C

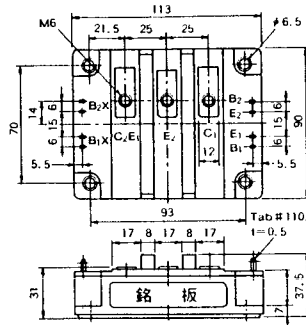




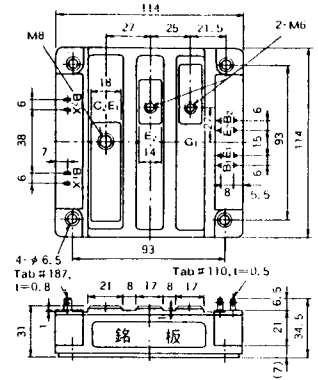
M-10A2A



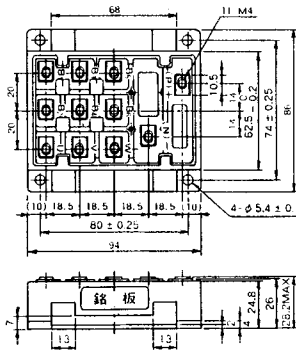
M-10A2B



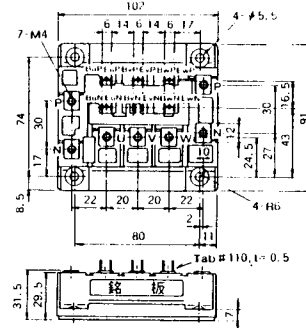
M-11A2A



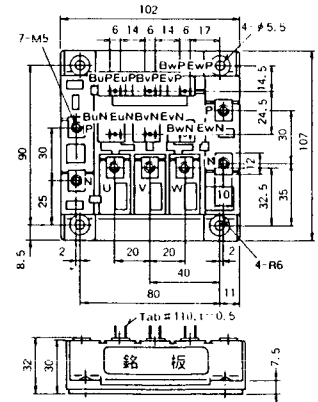
M-12A6A



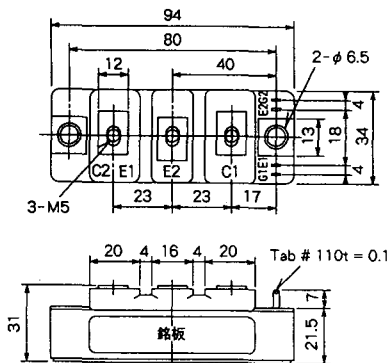
M-12B6A



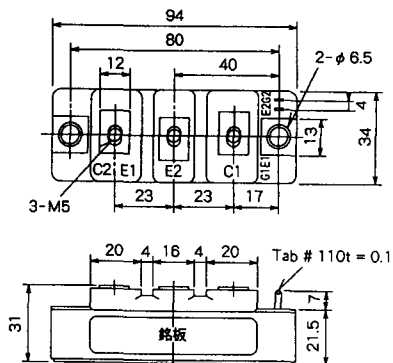
M-12B6B



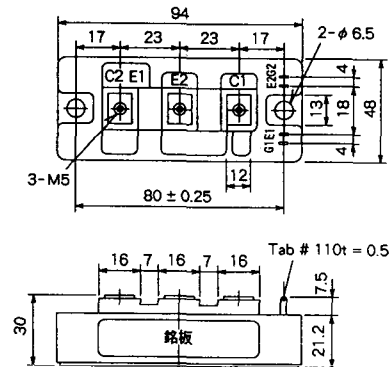
### M-4A2D



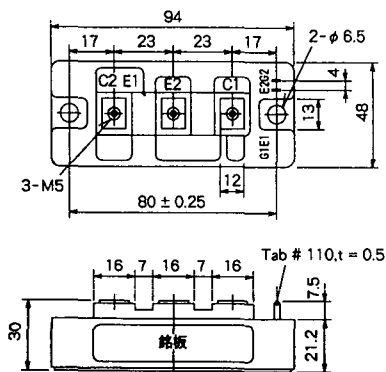
### M-4A2E



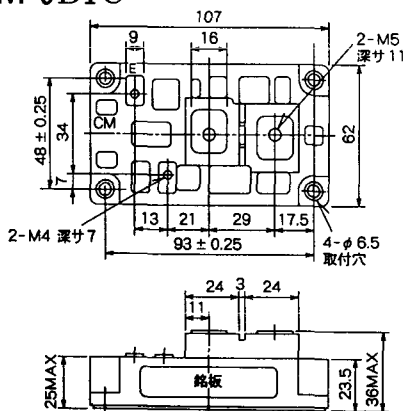
### M-4C2A



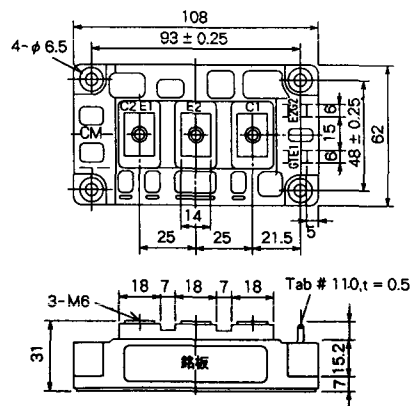
### M-4C2B



### M-9B1C



### M-9D2A



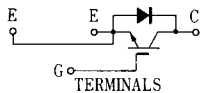
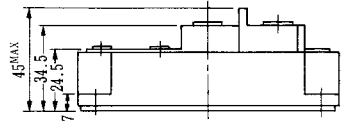
M-9D2B



M-10A2C



H-101



Weight :480g

### H-201



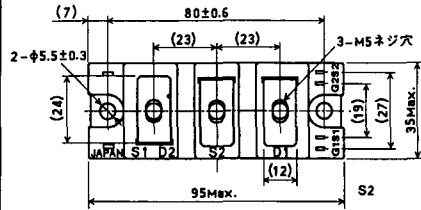
Weight: 200g

### H-202



Weight: 360g

### LF-J



### LF-K

