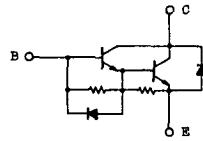


トランジスタ・モジュール (NPN, ダーリントン接続, 1個内蔵)

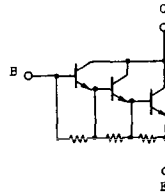
- ダーリントン・トランジスタ1個内蔵
- フリーホイール・ダイオード付
- 電極と金属ケース部が絶縁されている
- 直流電流増幅率は80以上(定格電流にて)

■等価回路

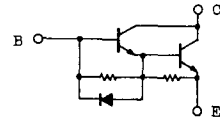
AL-1



BK-1



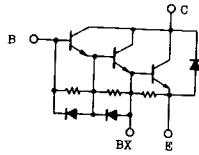
BL-1



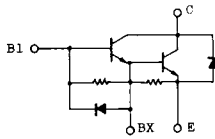
注1.  $T_c = 25^\circ\text{C}$ 。 注2. A.C. 1分間。

型 名	最 大 定 格 ( $T_c = 25^\circ\text{C}$ )											電 気 的 特 性									
	$V_{CB0}$	$V_{CEX(SUS)}$	$V_{EBO}$	$I_c$	$I_{CP}$ (1ms)	$I_B$	$I_F$	$I_{FM}$ (1ms)	$P_c$ (注1)	$T_j$	$T_{jstg}$	$V_{iso}$ (注2)	$I_{CBO}$ (mA)		$I_{EBO}$ (mA)		$V_{CEX(SUS)}$ (V)		$h_{FE}$		
	(V)	(V)	(V)	(A)	(A)	(A)	(A)	(A)	(W)	( $^\circ\text{C}$ )	( $^\circ\text{C}$ )	(V)	最大	最大	最大	最小	最小	$V_{CE}$ (V)	$I_c$ (A)		
MG15G1AL3	600	600	6	15	30	1.5	15	30	120	150	-40~125	2500	1.0	600	100	6	450	0.5	100	5	15
MG15H1AL3	600	600	6	15	30	1.5	15	30	120	150	-40~125	2500	1.0	600	200	6	550	0.5	100	5	15
MG25M1BK1	1000	1000	7	25	50	2.5			300	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	25
MG30G1BL3	600	600	6	30	60	3.0			250	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	30
MG30G1BL4	600	600	6	30	60	3.0			250	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	30
MG30G1JL1	600	600	6	30	60	3.0	30	60	250	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	30
MG50G1BL3	600	600	6	50	100	5.0			300	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	50
MG50G1JL1	600	600	6	50	100	5.0	50	100	300	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	50
MG50M1BK1	1000	1000	7	50	100	5.0			350	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	50
MG60M1AL1	900	900	10	60	120	6.0	60	120	300	150	-55~150	-	1.0	900	300	10	450	0.5	100	5	60
MG75G1BL1	600	600	6	75	150	10			350	150	-40~125	2500	1.0	600	200	6	450	0.5	80	5	75
MG75M1AL1	900	900	10	75	150	7.5	75	150	350	150	-55~150	-	1.0	900	300	10	450	0.5	100	5	75
MG75M1BK1	1000	1000	7	75	150	5.0			400	150	-40~125	2500	1.0	1000	200	7	880	1.0	75	5	75
MG100G1AL3	600	600	6	100	200	10	100	200	600	150	-40~125	2500	2.0	600	400	6	450	0.5	100	5	100
MG100G1FL1	600	600	6	100	200	10	100	200	600	150	-40~125	2500	2.0	600	400	6	450	0.5	100	5	100
MG100G1JL1	600	600	6	100	200	10	100	200	400	150	-40~125	2500	2.0	600	200	6	450	0.5	100	5	100
MG150H1FL1	600	600	6	150	300	20	150	300	700	150	-40~125	2500	2.0	600	400	6	550	0.5	80	5	150
MG160S1UK1	1400	1400	7	160	320	16	160	320	1600	150	-40~125	2500	8.0	1400	600	7	1000	1.0	100	5	160
MG200H1AL2	600	600	6	200	400	25	200	400	800	150	-40~125	2500	2.0	600	400	6	550	0.5	80	5	200
MG200H1FL1A	600	600	6	200	400	25	200	400	800	150	-40~125	2500	2.0	600	400	6	550	0.5	80	5	200
MG200M1FK1	1000	1000	7	200	400	20	200	400	1400	150	-40~125	2500	8.0	1000	800	7	880	1.0	100	5	200

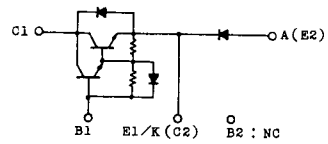
FK-1



FL-1



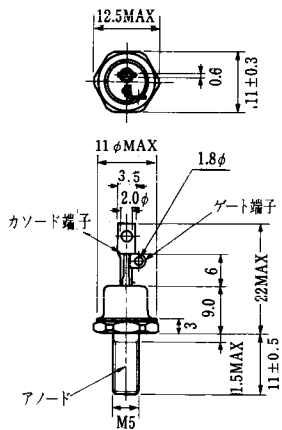
JL-1



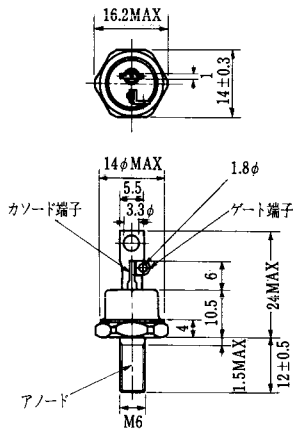
注3. スイッチング時間の\*印はtyp.値。

(T <sub>a</sub> = 25°C)											エミッタ・コレクタ間ダイオード					熱抵抗		等 価 回 路	外形図	記 事	型 名	
飽和電圧 (V)		スイッチング時間 (μs)			V <sub>F</sub>					t <sub>rr</sub>		R <sub>th(j-c)</sub> (°C/W)										
V <sub>CE</sub>	V <sub>BE</sub>	I <sub>c</sub>	I <sub>B</sub>	t <sub>on</sub>	t <sub>off</sub>	t <sub>r</sub>	I <sub>B1</sub>	I <sub>B2</sub>	V <sub>CC</sub>	R <sub>c</sub>	V <sub>F</sub>	I <sub>F</sub>	t <sub>rr</sub>	I <sub>F</sub>	V <sub>BE</sub>	di/dt	トランジスタ部					ダイオード部
最大	最大	(A)	(A)	最大	最大	最大	(A)	(A)	(V)	(Ω)	最大	(A)	最大	(A)	(V)	(A/μs)	最大	最大				
2.0	2.5	15	0.4	1	12	2	0.4	-0.4	300	20	1.5	15	2.0	15	-3	60	1.0	3.5	AL-1	2-22B1A		MG15G1AL3
2.0	2.5	15	0.4	1	12	2	0.4	-0.4	300	20	1.6	15	0.7	15	-3	60	1.04	3.5	AL-1	2-33F1A		MG15H1AL1
2.5	3.5	25	0.5	2	20	5	0.5	-1.5	600	24							0.41		BK-1	2-33D1A	F Dなし	MG25M1BK1
2.0	2.5	30	0.6	1	12	2	0.6	-0.6	300	10							0.5		BL-1	2-33C1A	F Dなし	MG30C1BL3
2.0	2.5	30	0.6	1	12	2	0.6	-0.6	300	10							0.5		BL-1	2-33F1A	F Dなし	MG30G1BL4
2.0	2.5	30	0.6	1	12	2	0.6	-0.6	300	10	1.6	30	1.0	30	-3	100	0.5	1.8	JL-1	2-68A2A	直列ダイオード V <sub>BE</sub> = 600V	MG30G1JL1
2.0	2.5	50	1.0	1	12	2	1.0	-1.0	300	6							0.41		BL-1	2-33C1A	F Dなし	MG50C1BL3
2.0	2.5	50	1.0	1	12	2	1.0	-1.0	300	6	1.7	50	1.0	50	-3	100	0.41	1.3	JL-1	2-68A2A	直列ダイオード V <sub>BE</sub> = 600V	MG50G1JL1
2.5	3.5	50	1.0	2	20	5	1.0	-3.0	600	12							0.36		BK-1	2-33D1A	F Dなし	MG50M1BK1
2.0	2.5	60	1.2	3.5	5	1	1.2	-10	120	2	1.5	60	3.0	60	-5	10	0.42	0.75	AL-1	2-37A1A	非絶縁タイプ	MG60M1AL1
2.0	2.5	75	1.5	2	12	2	1.5	-1.5	300	4							0.36		BL-1	2-33C1A	F Dなし	MG75G1BL1
2.0	2.5	75	1.5	3.5	5	1	1.5	-12	150	2	1.6	75	4.0	75	-5	10	0.35	0.65	AL-1	2-37A1A	非絶縁タイプ	MG75M1AL1
2.5	3.5	75	2.0	1.5	20	5	1.5	-4.5	600	8							0.31		BK-1	2-80B1A	F Dなし	MG75M1BK1
2.0	2.5	100	2.0	1	12	2	2.0	-2.0	300	3	1.5	100	2.0	100	-3	100	0.208	0.65	AL-1	2-68D2A		MG100G1AL3
2.0	2.5	100	2.0	1	12	2	2.0	-2.0	300	3	1.5	100	2.0	100	-3	100	0.208	0.65	FL-1	2-68C1A		MG100G1FL1
2.0	2.7	100	2.0	2	12	2	2.0	-2.0	300	3	1.7	100	1.0	100	-3	100	0.31	1.3	JL-1	2-68A2A	直列ダイオード V <sub>BE</sub> = 600V	MG100G1JL1
2.0	2.7	150	4.0	2	12	5	4.0	-4.0	300	2	1.5	150	2.0	150	-3	100	0.178	0.65	FL-1	2-68C1A		MG150H1FL1
2.5	3.5	160	3.2	2	16	3	3.2	-9.6	600	3.75	1.8	160	1.2	160	-3	100	0.078	0.325	UK-1	2-109A3A		MG160S1UK1
2.0	2.7	200	6.0	2	12	4	6.0	-6.0	300	1.5	1.5	200	2.0	200	-3	100	0.156	0.65	AL-1	2-68D2A		MG200H1AL2
2.0	2.7	200	6.0	2	12	4	6.0	-6.0	300	1.5	1.5	200	2.0	200	-3	100	0.156	0.65	FL-1	2-98B1A		MG200H1FL1A
2.5	3.5	200	4.0	2	15	5	4.0	-4.0	600	3	1.8	200	1.0	200	-3	100	0.089	0.325	FK-1	2-80D2A		MG200M1FK1

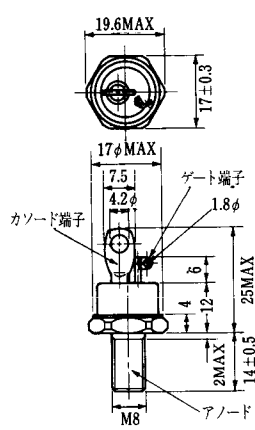
FD-1



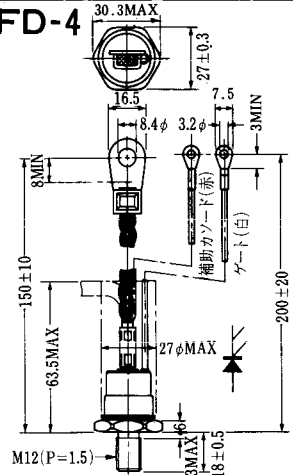
FD-2



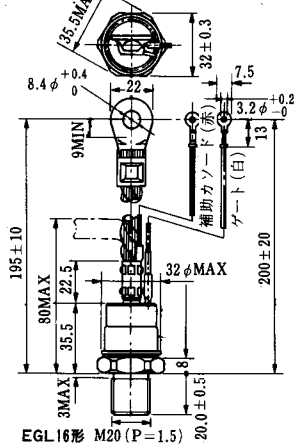
FD-3



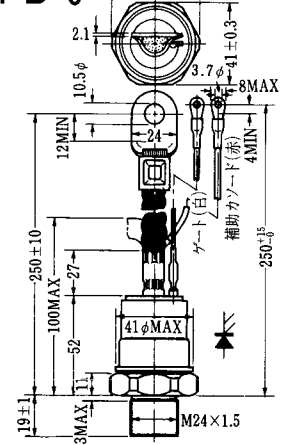
FD-4



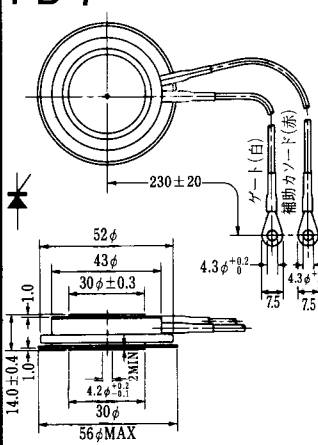
FD-5



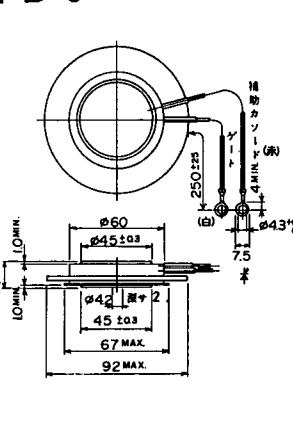
FD-6



FD-7



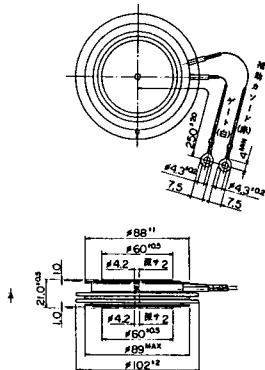
FD-8



FD-9

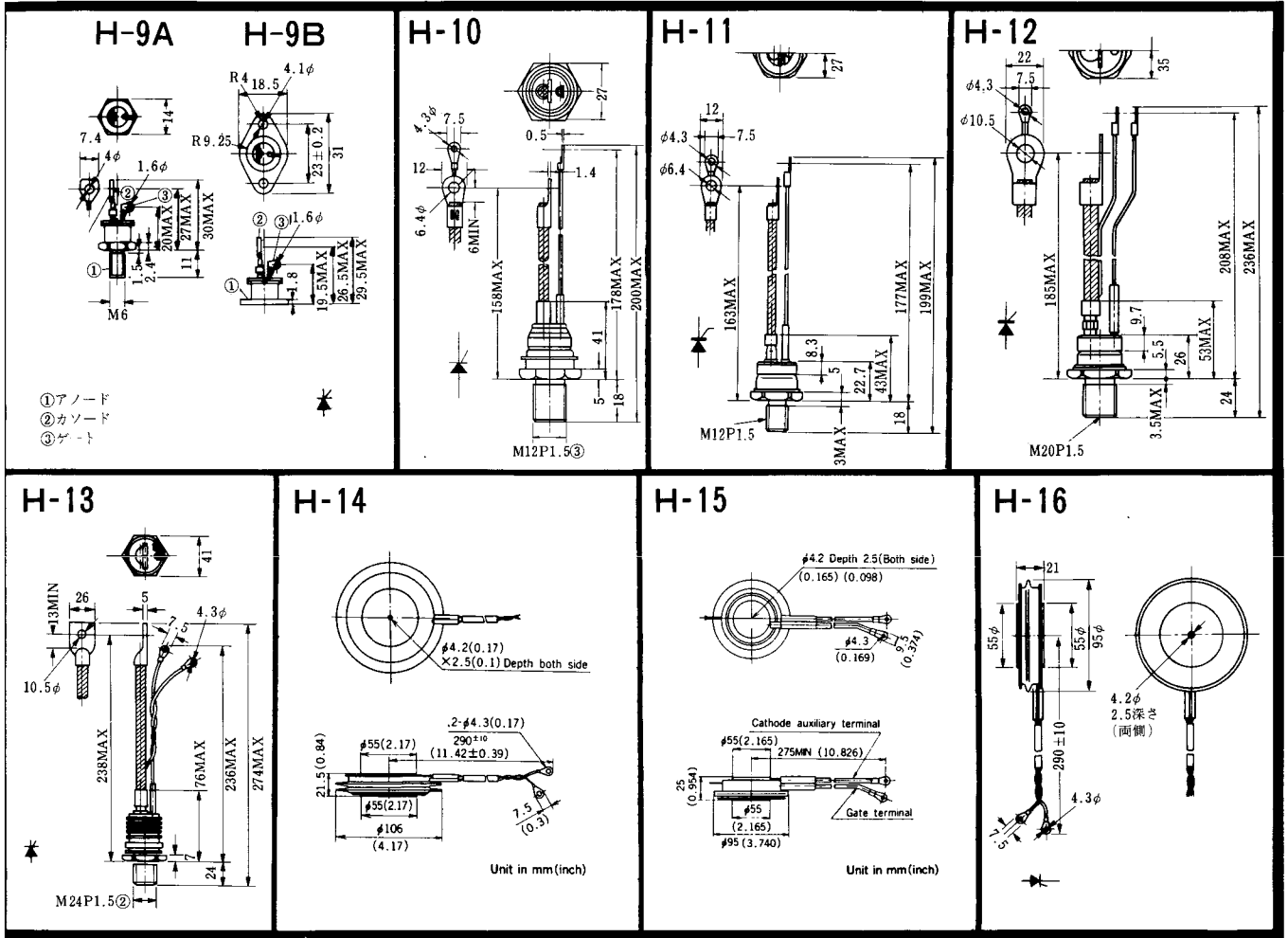


FD-10



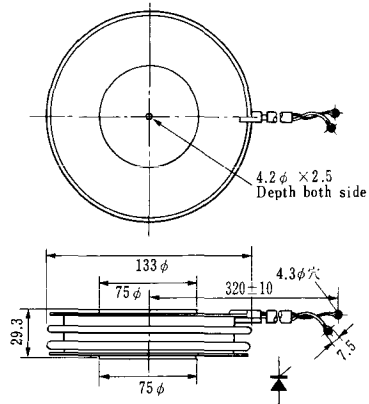
FD-12



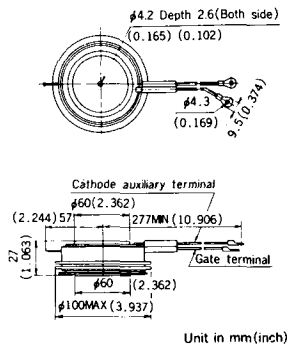


《寸法図単位：mm》

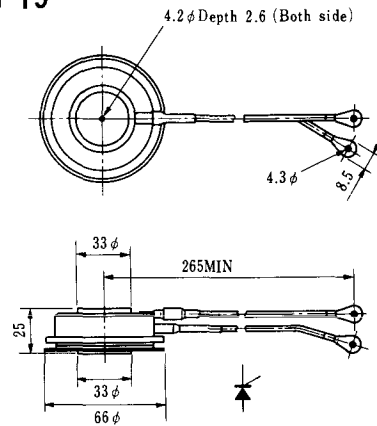
### H-17



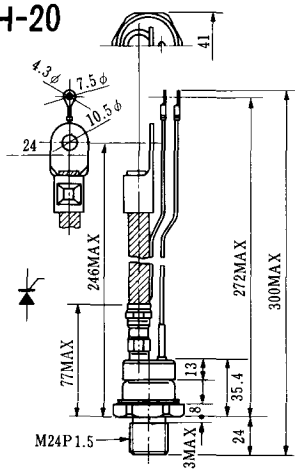
### H-18



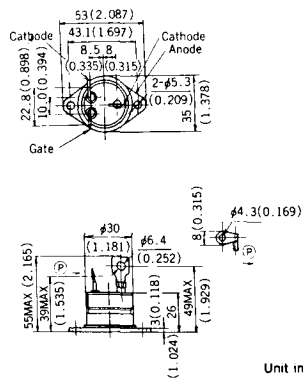
### H-19



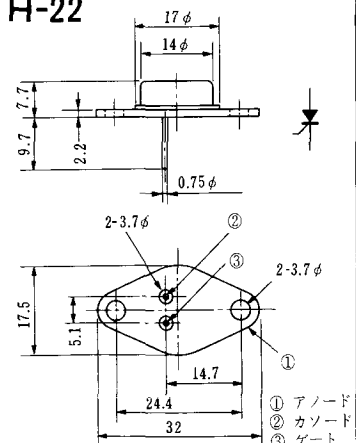
### H-20



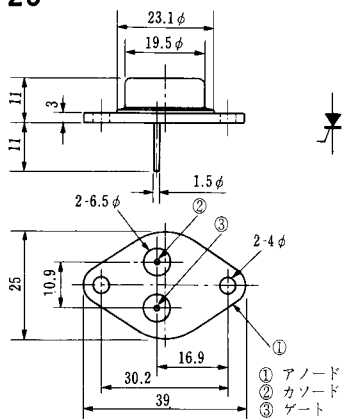
### H-21



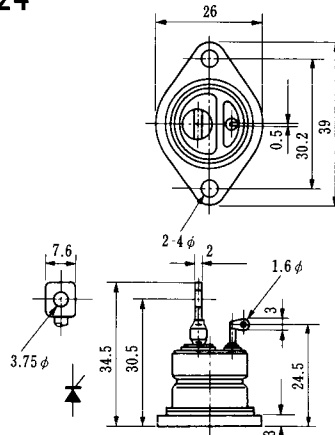
### H-22



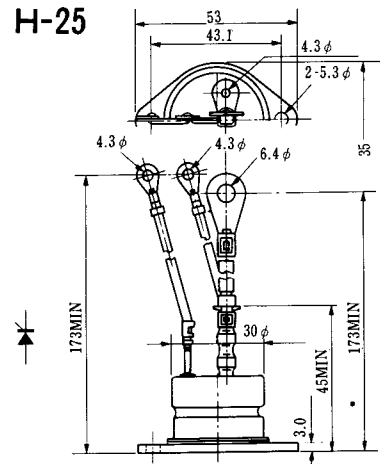
### H-23



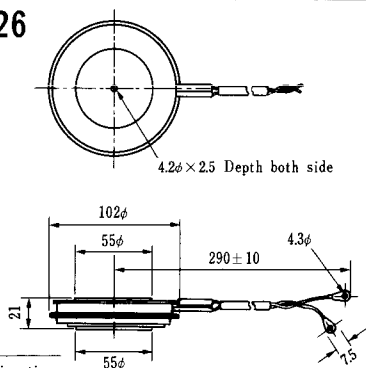
### H-24



### H-25



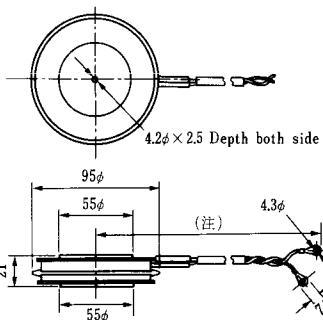
### H-26



Type	Direction of polarity
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CA12	
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### H-27

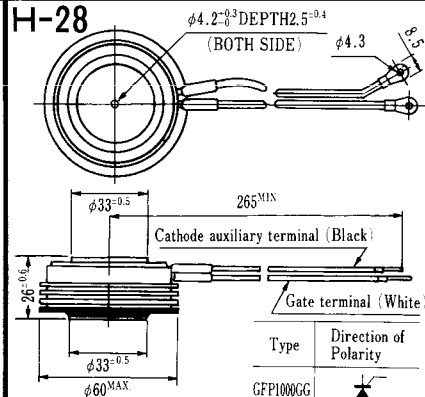


Type	Direction of polarity
------	-----------------------

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

### H-28



Type	Direction of Polarity
------	-----------------------

GFP100GG	
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Weight: 360(g)

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



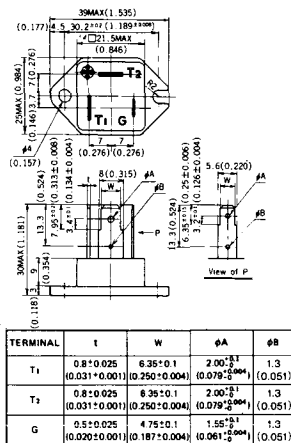


Note: The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



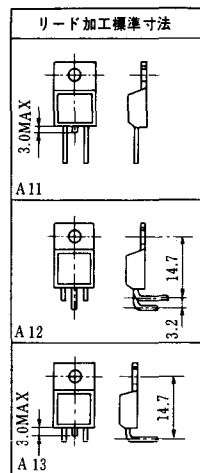
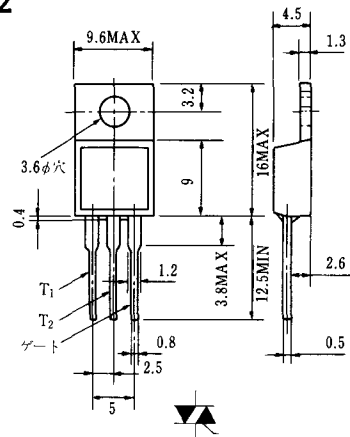
Note: The thickness is a dimension in press at the rated mounting force. Weight: 1,460(g)

# HT-1

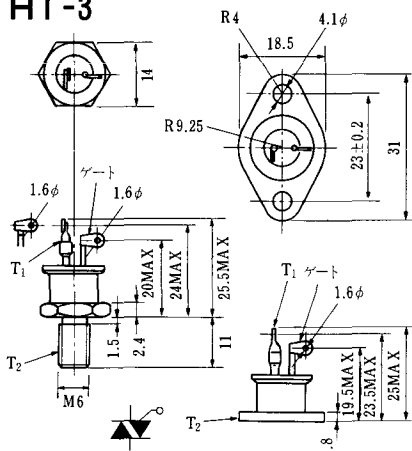


Unit in mm (inch)

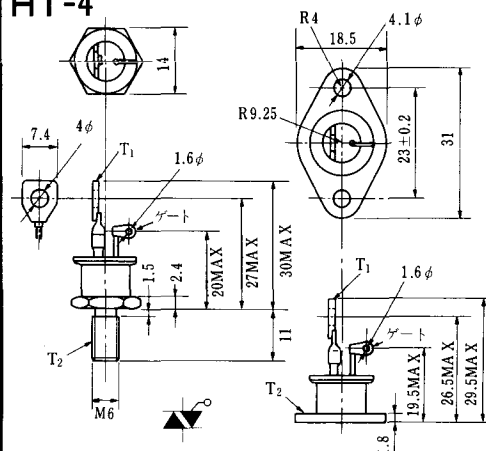
# HT-2



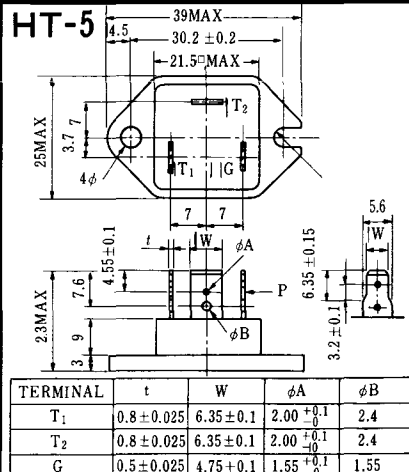
# HT-3



# HT-4



# HT-5



### M-1



### M-2



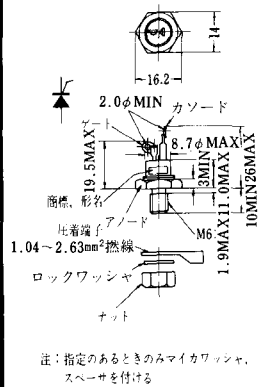
### M-3



### M-4



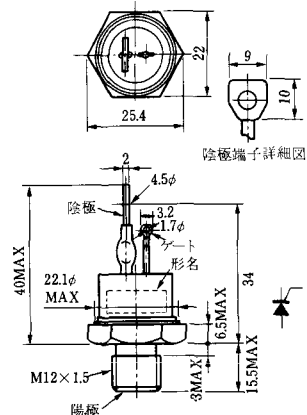
### M-5



### M-6



### M-7



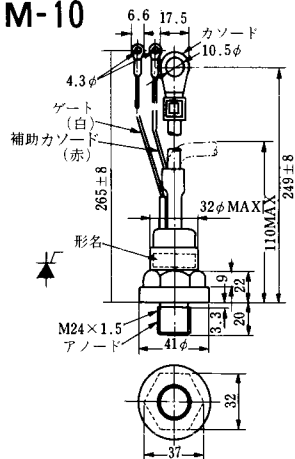
### M-8



M-9



M-10



M-11



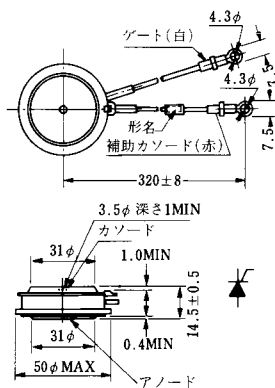
M-12



M-13



M-14



M-15

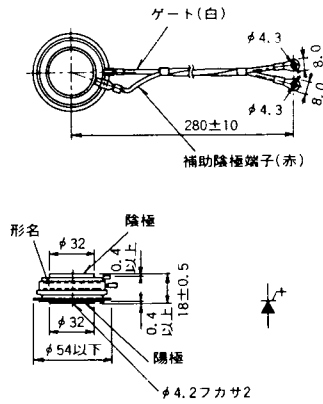


M-16

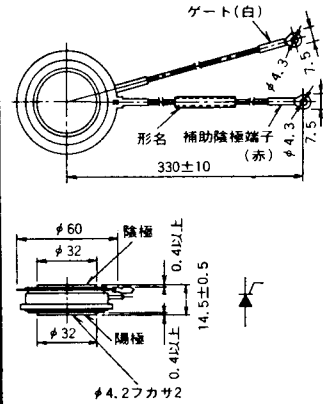




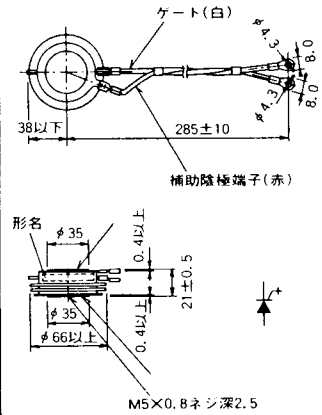
M-25



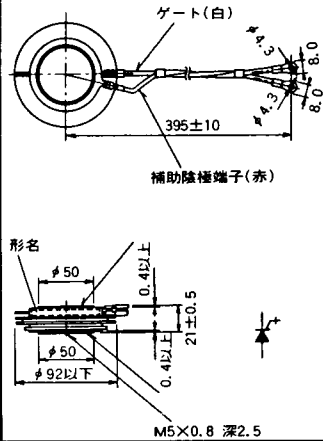
M-26



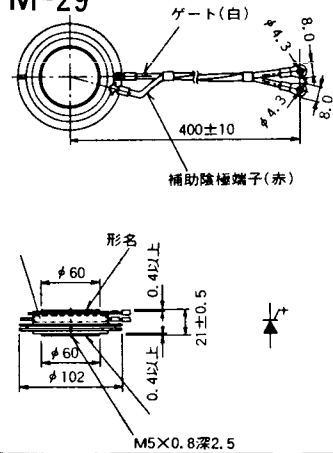
M-27



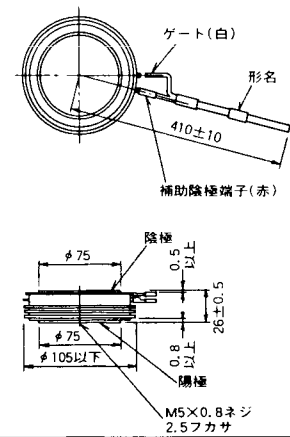
M-28



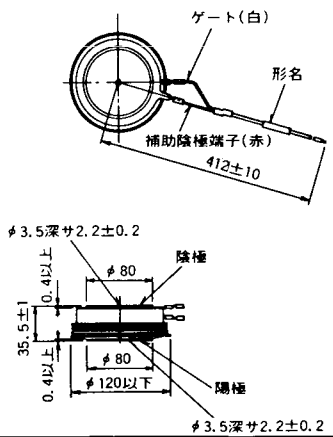
M-29



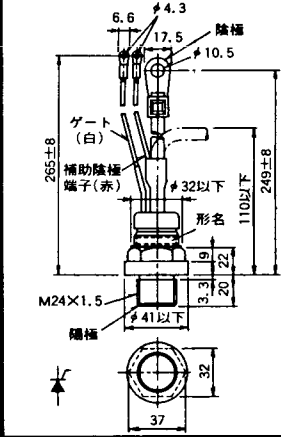
M-30



M-31



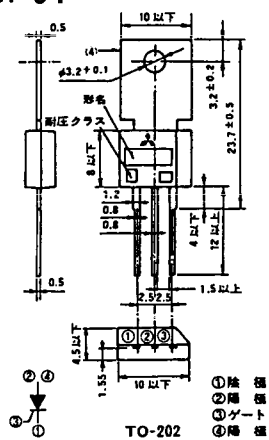
M-32



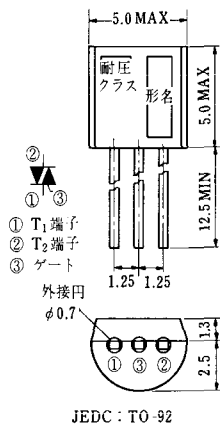
### M-33



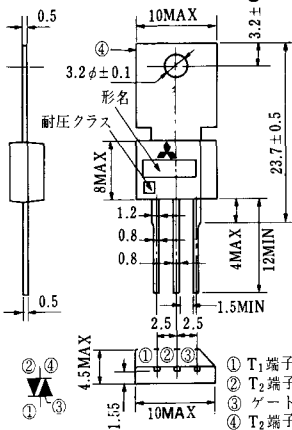
### M-34



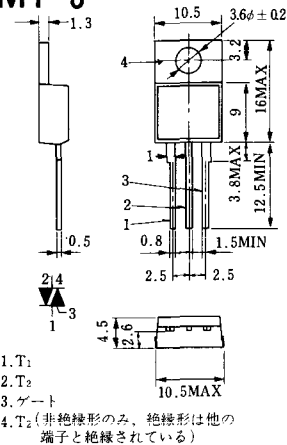
### MT-1



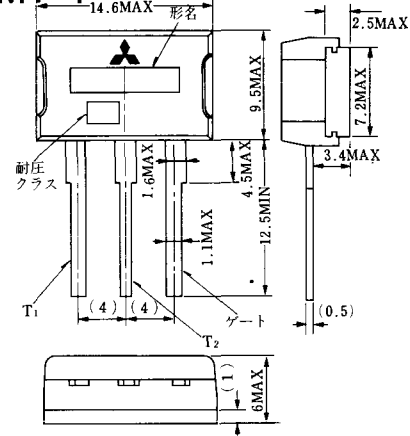
### MT-2



### MT-3



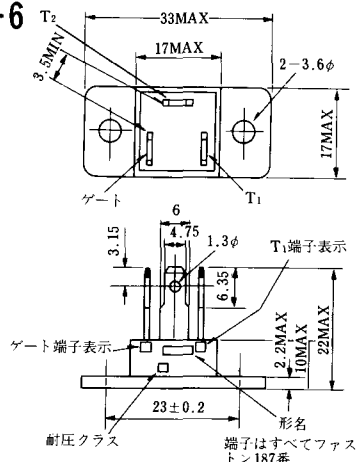
### MT-4



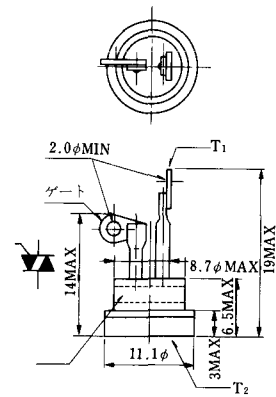
### MT-5



### MT-6



### MT-7

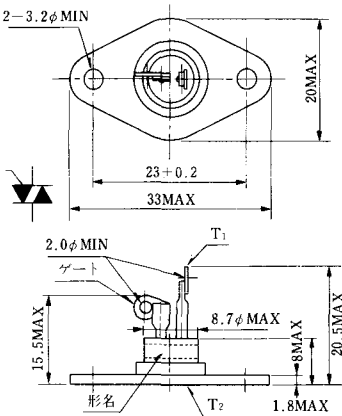




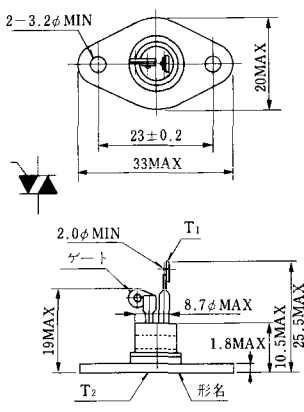
MT-8



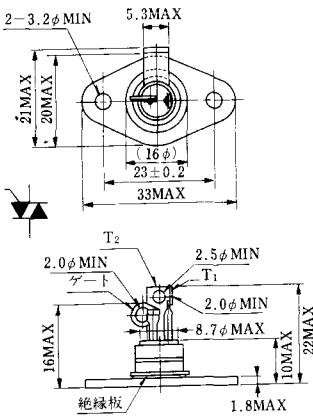
MT-9



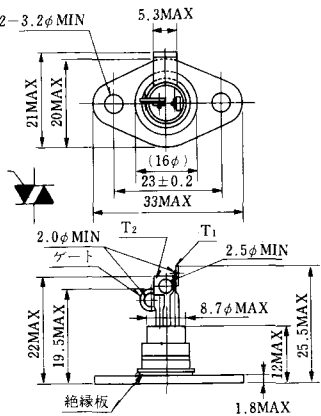
MT-10



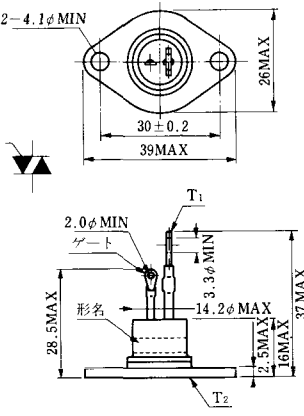
MT-11



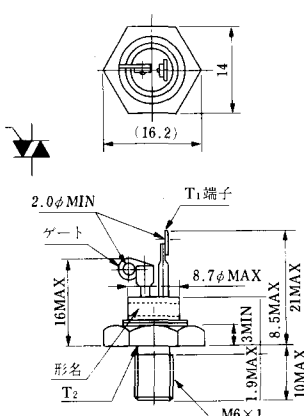
MT-12



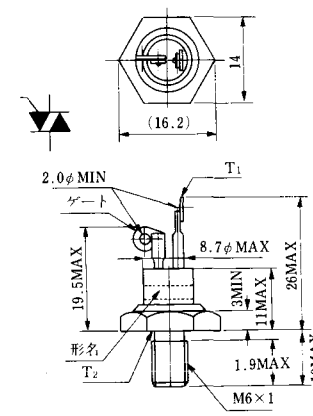
MT-13



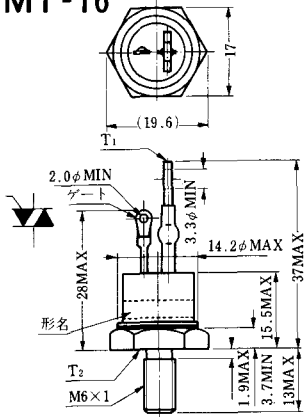
MT-14



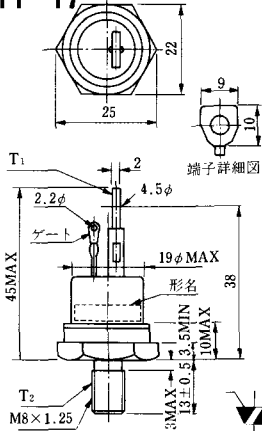
MT-15



MT-16

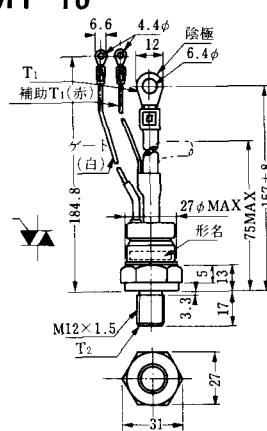


MT-17

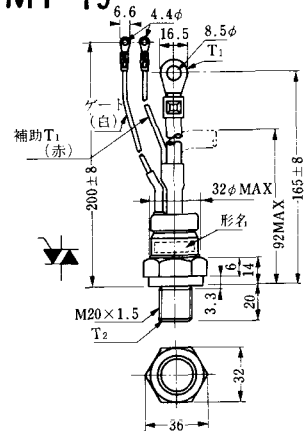


端子詳細図

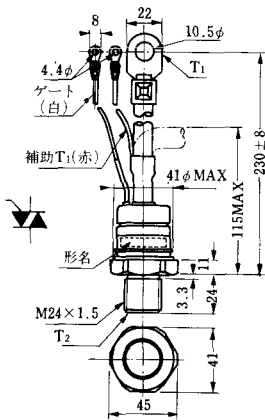
MT-18



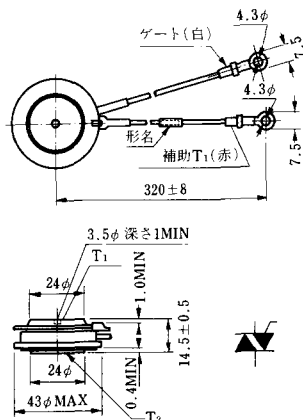
MT-19



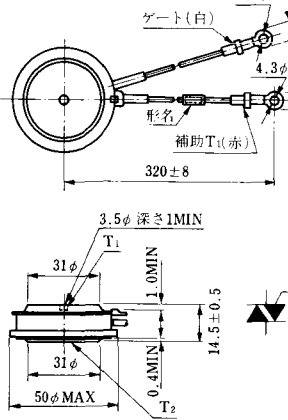
MT-20



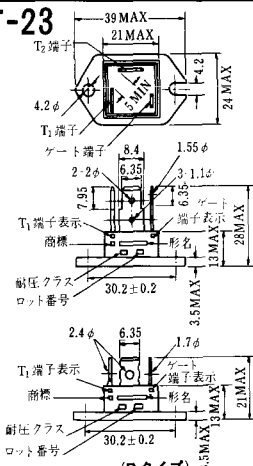
MT-21



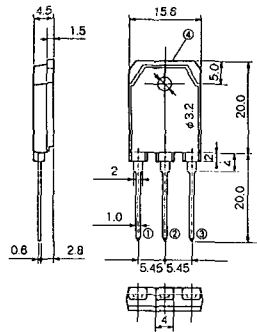
MT-22



MT-23

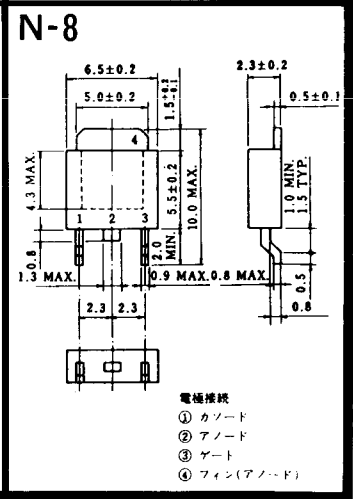
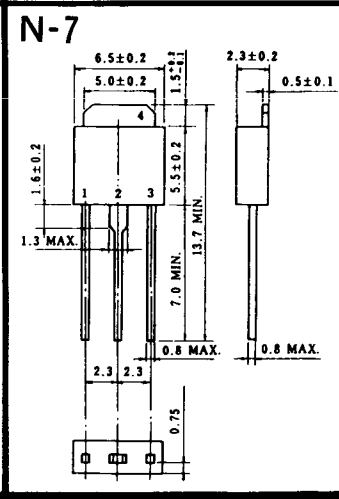
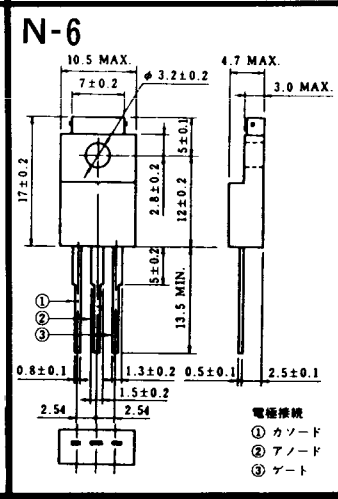
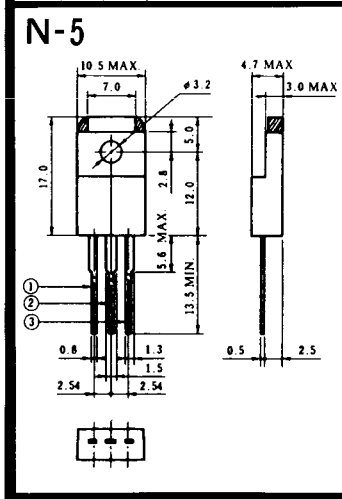
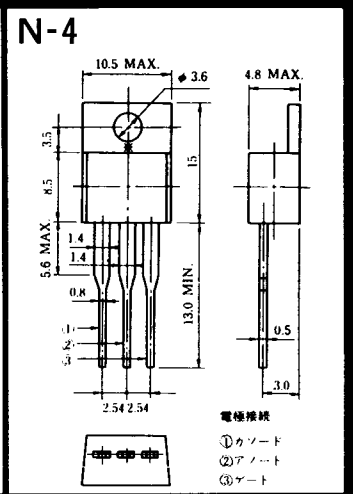
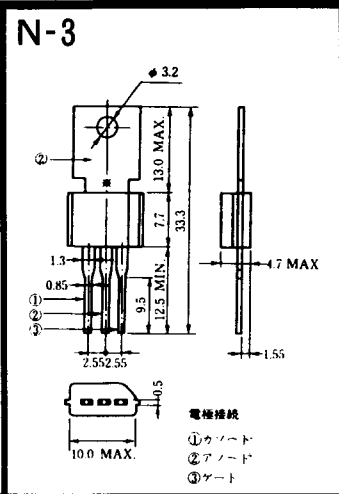
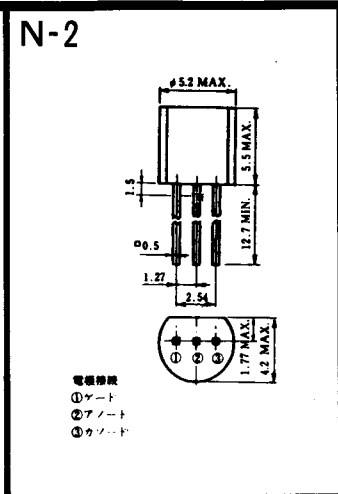
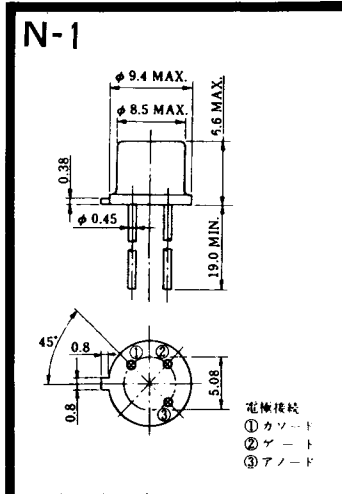


# MT-24

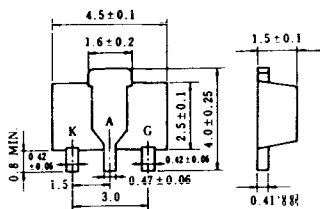


TO - 3P

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



# N-9



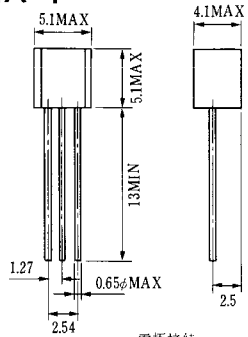
## 電極形状

K : カソード

A : アノード

G : ガート

### NA-1

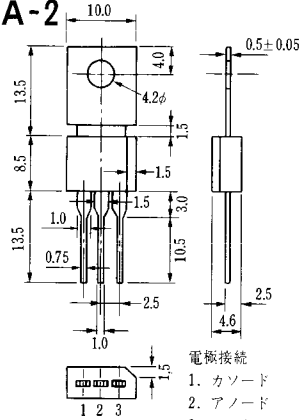


電極接続

1. ゲート
2. アノード
3. カソード

JEDEC: TO-92

### NA-2

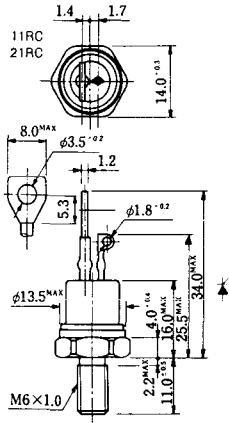


電極接続

1. カソード
2. アノード
3. ゲート

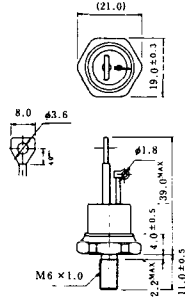
JEDEC: TO-202AA

### NI-1



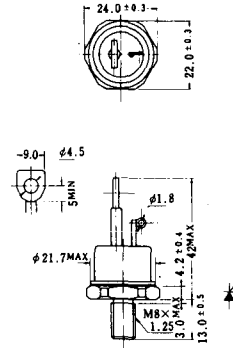
### NI-2

29RD



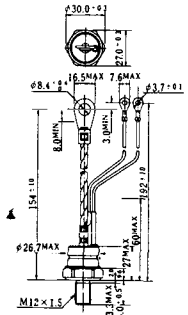
### NI-3

39RC  
59RC  
39RF  
59RF



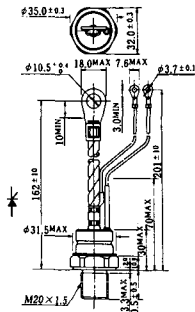
### NI-4

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



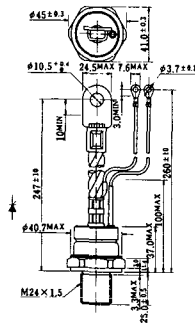
### NI-5

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



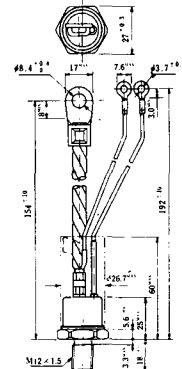
### NI-6

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



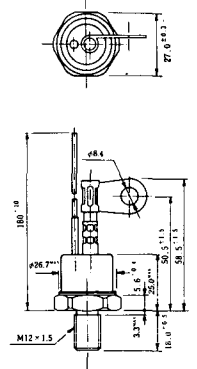
### NI-7

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



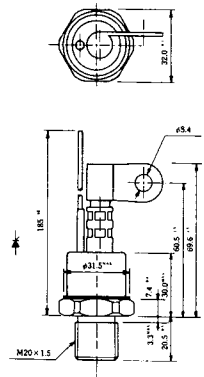
### NI-8

89RW  
129RW



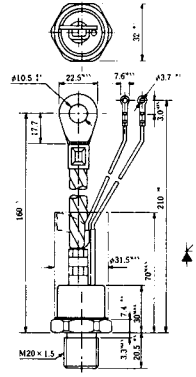
### NI-9

259RW  
309RW



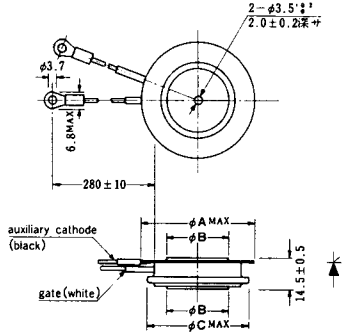
### NI-10

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



### NI-11

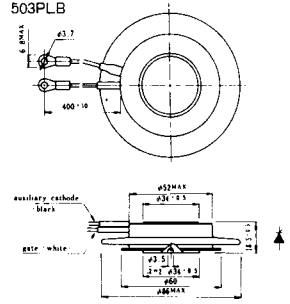
103PA  
253PA  
503PA  
553PA  
803PA  
103PLE  
103PLG  
103PLH  
203PLG  
253PLE  
253PLH  
353PLG  
403PLE  
403PLH



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

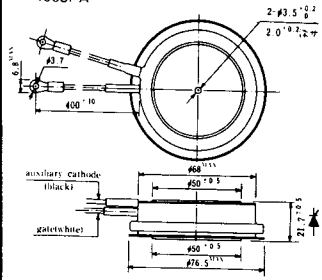
### NI-12

403PAB  
503PAB  
503PLB



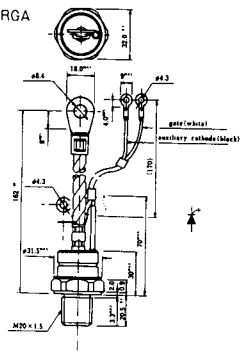
### NI-13

1003PA  
1003PAB  
1003PLF  
1003PLH  
1503PA



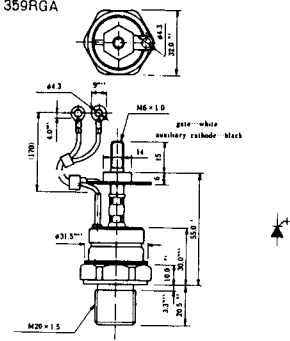
### NI-14

358RGA

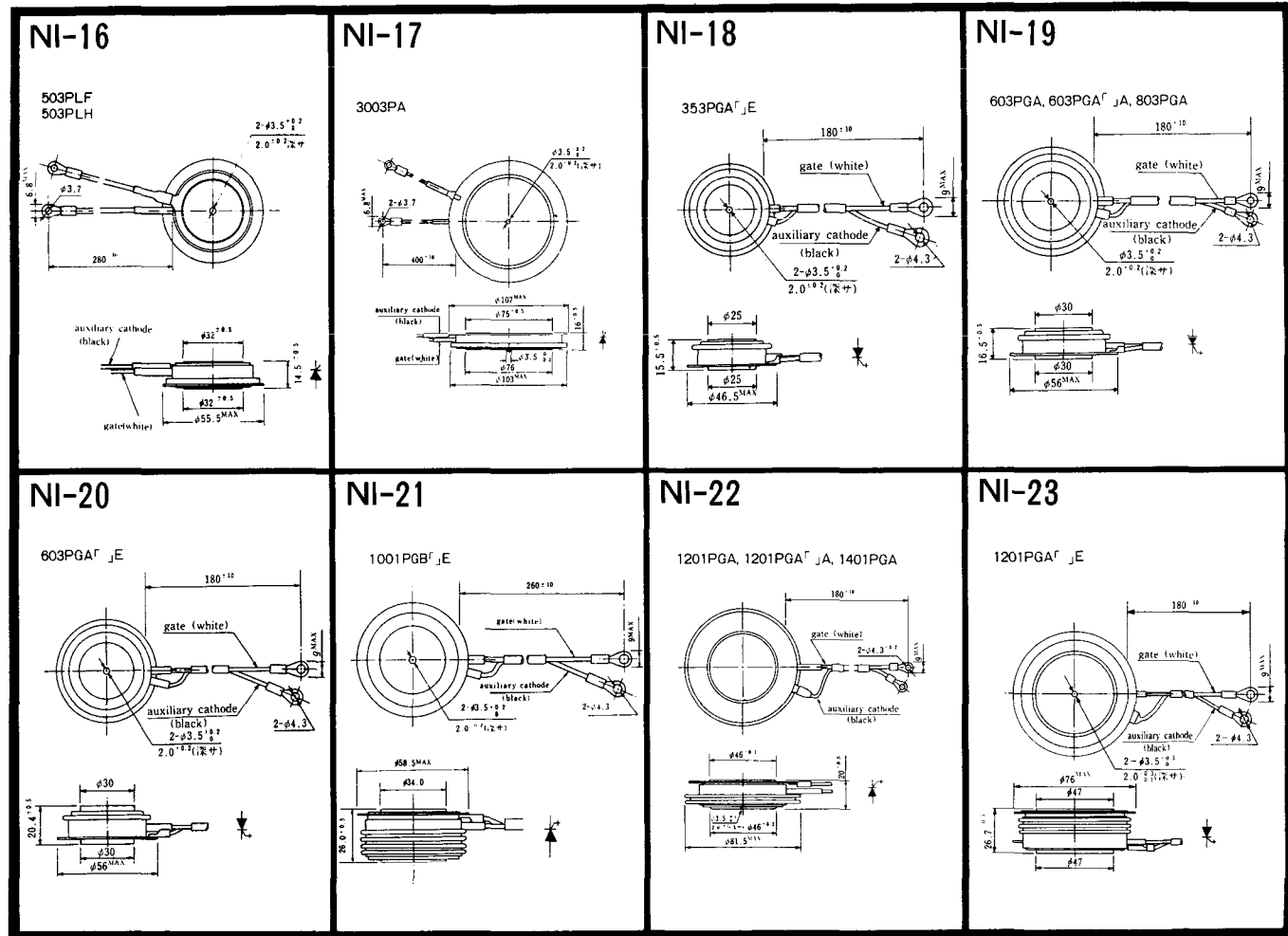


### NI-15

359RGA







NI-24

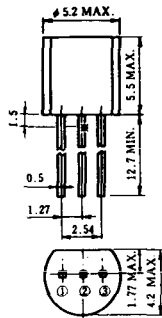
2001PGB<sup>r</sup> JE



NI-25

NI-26

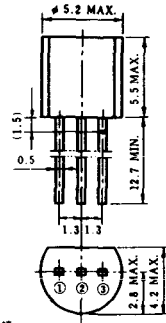
### NT-1



電極接続

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

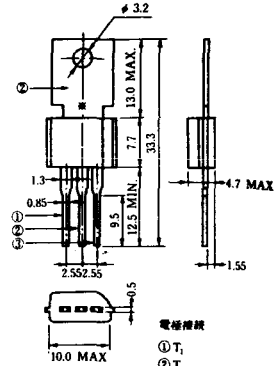
### NT-2



電極接続

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

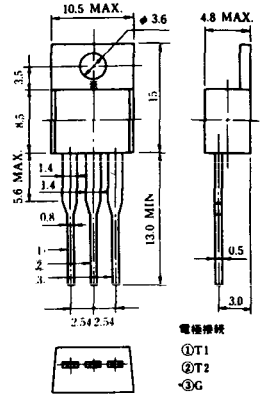
### NT-3



電極接続

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

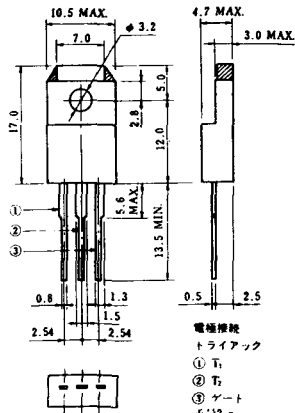
### NT-4



電極接続

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

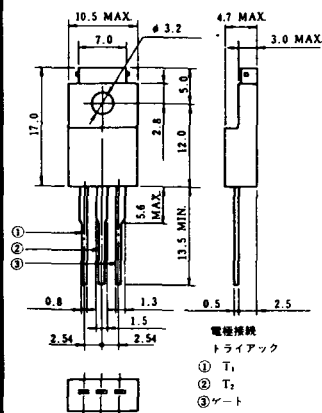
### NT-5



電極接続  
トライアック

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

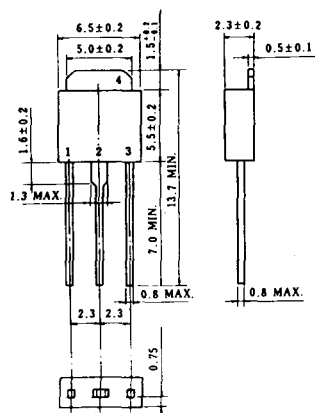
### NT-6



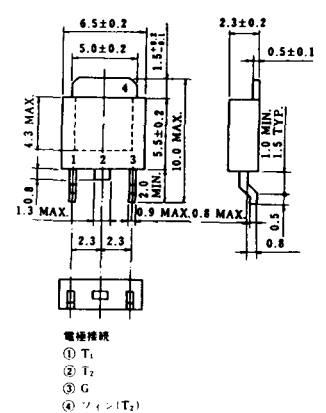
電極接続  
トライアック

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

### NT-7



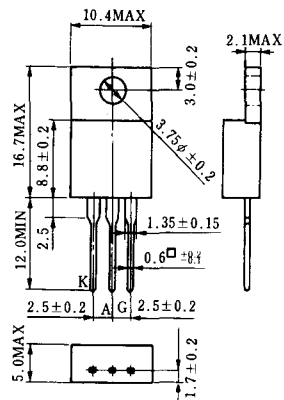
### NT-8



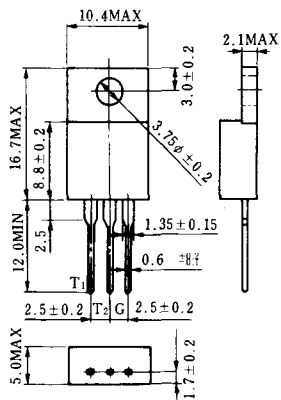
電極接続

- ① T<sub>1</sub>
- ② T<sub>2</sub>
- ③ G
- ④ シフト(T<sub>2</sub>)

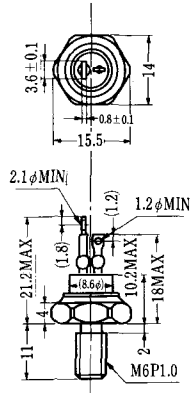
### S-1



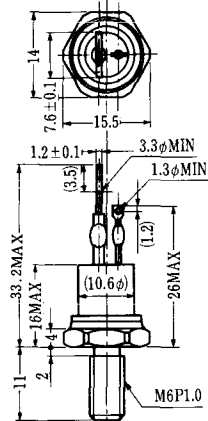
### ST-1



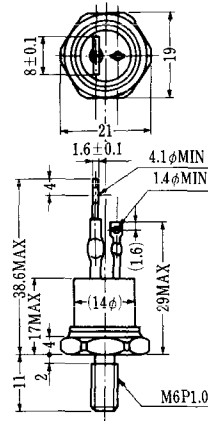
SA-1



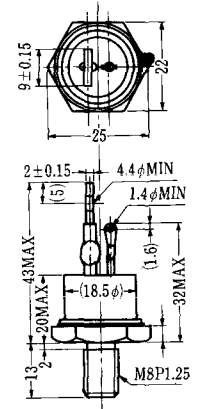
SA-2



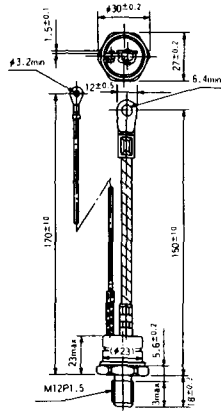
SA-3



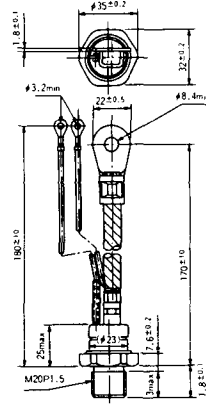
SA-4



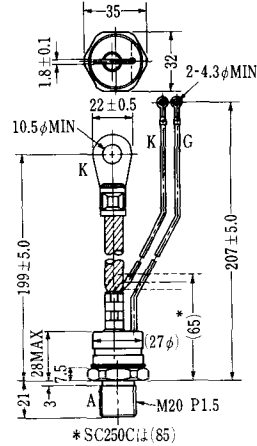
SA-5



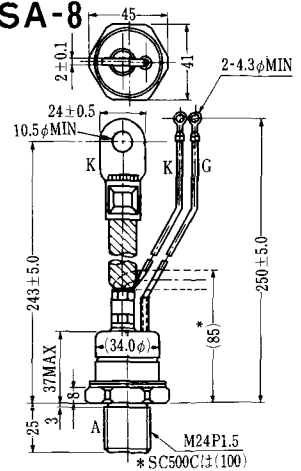
SA-6

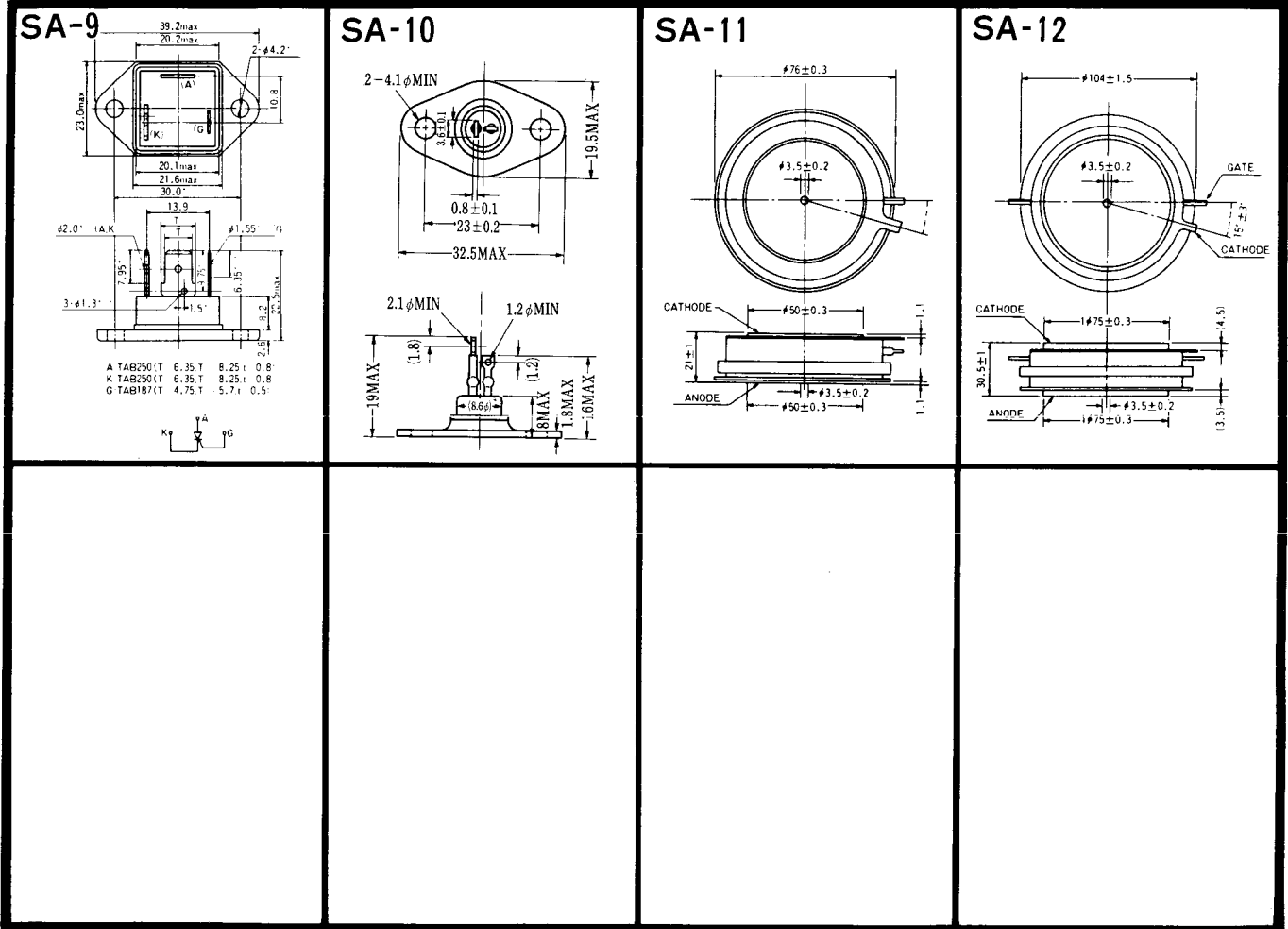


SA-7

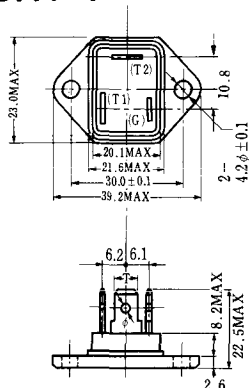


SA-8



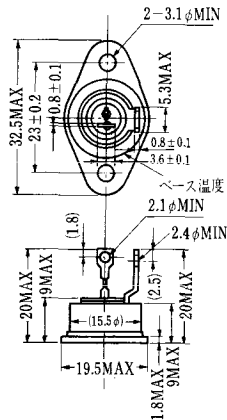


SAT-1



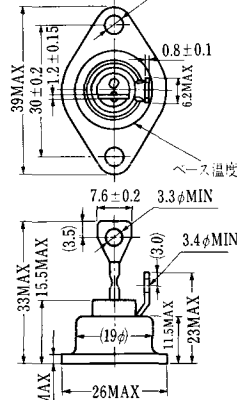
T1 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 T2 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 C 端子: フラスト > 187 (T=4.75, t=0.5, φ=1.3)

SAT-2



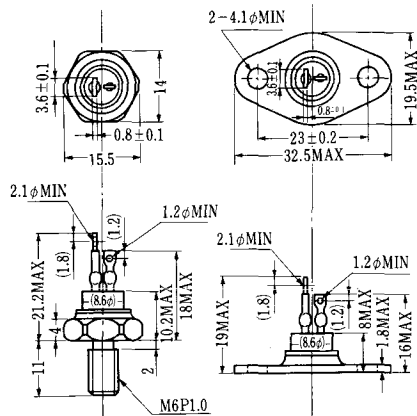
へス 温度

SAT-3

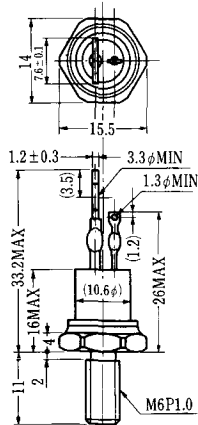


又 温度

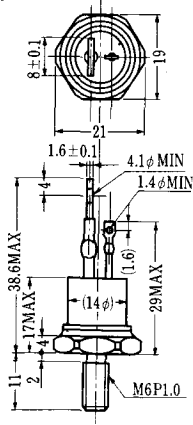
SAT-4



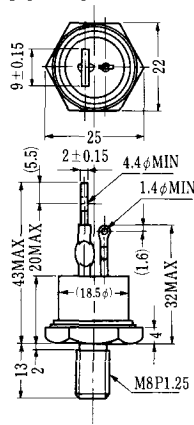
SAT-5



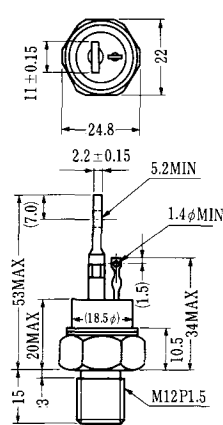
SAT-6



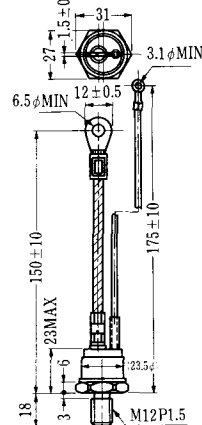
SAT-7



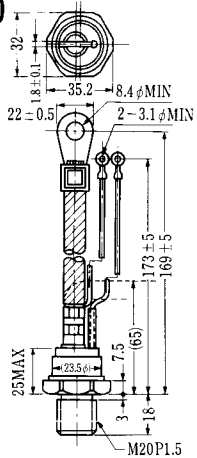
SAT-8



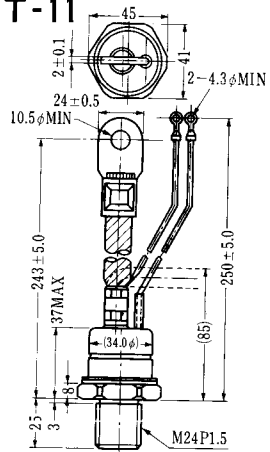
SAT-9



SAT-10



SAT-11



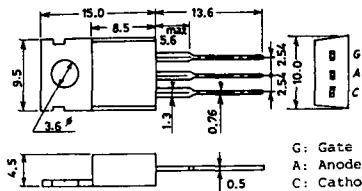


### SY-1 (1096A)



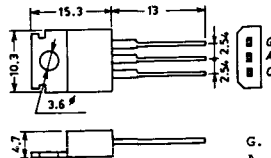
C: Cathode  
A: Anode  
G: Gate

### SY-2 (1151)



G: Gate  
A: Anode  
C: Cathode

### SY-3 (1104)



G: Gate  
A: Anode  
C: Cathode

### SY-4 (1150)



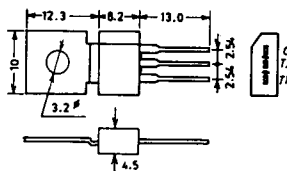
G: Gate  
A: Anode  
C: Cathode

1097A



G: Gate

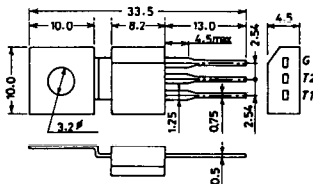
1102



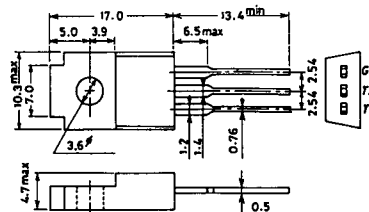
1141



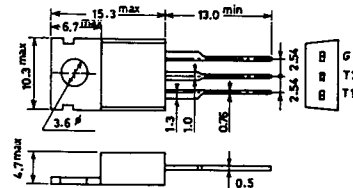
1142



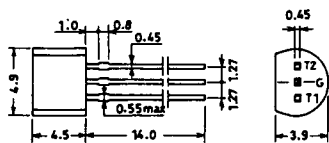
1144



1155

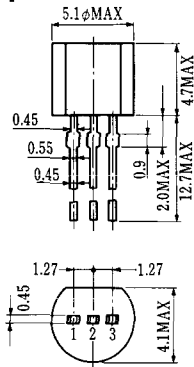


1192A



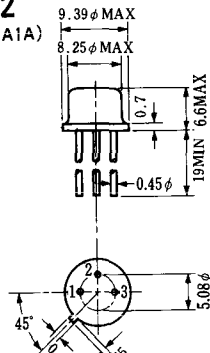
G: Gate

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



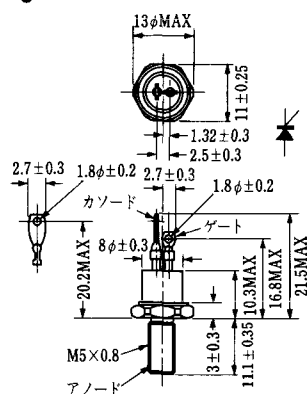
- 1 ゲート
- 2 アノード
- 3 カソード

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



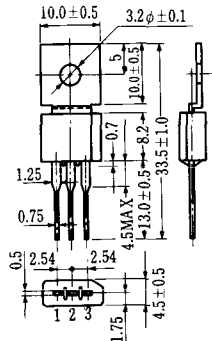
1. カソード
2. ゲート
3. アノード(ケース)

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

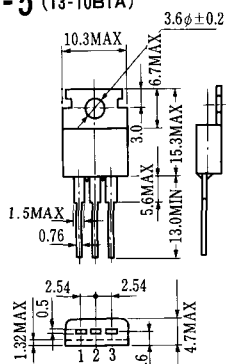


- 1 カソード
- 2 アノード
- 3 ゲート

**T-4 (13-10A1A)**

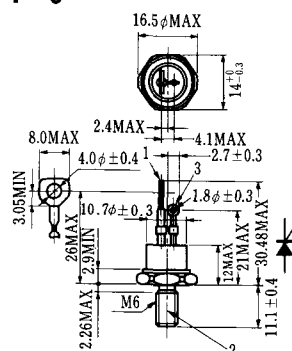


**T-5 (13-10B1A)**



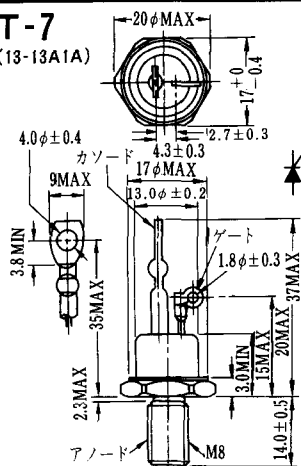
- 1 カソード
- 2 アノード
- 3 ゲート

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



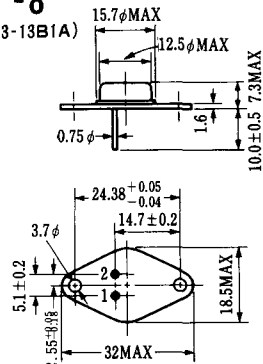
- 1 カソード
- 2 アノード
- 3 ゲート

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

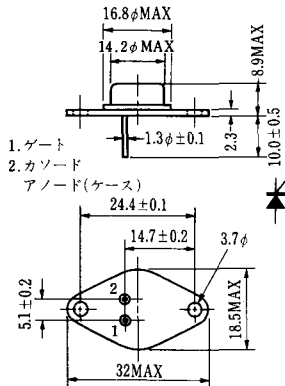


1. ゲート
2. カソード
3. アノード(ケース)

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

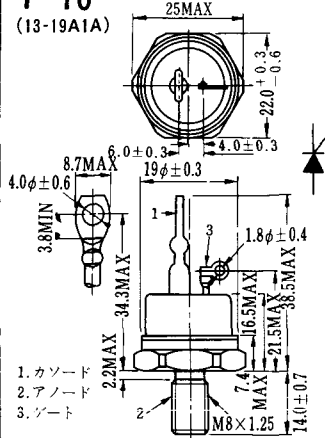


**T-9 (13-14A1A)**



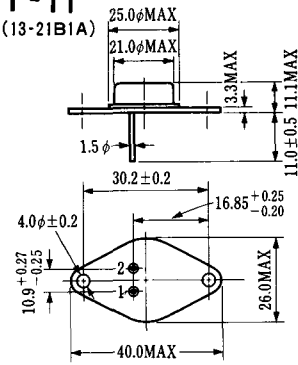
- 1. ゲート
- 2. カソード
- アノード(ケース)

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



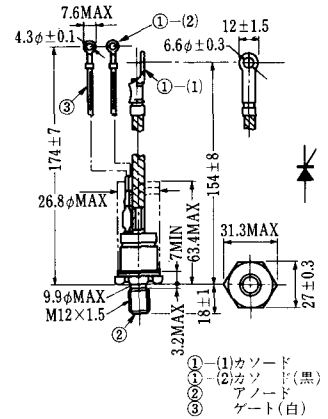
- 1. カソード
- 2. アノード
- 3. ゲート

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



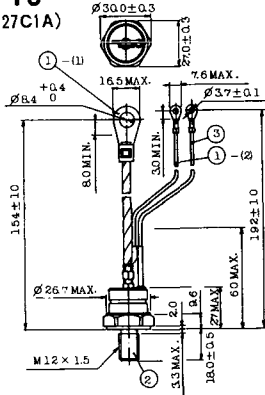
- 1. ゲート
- 2. カソード
- アノード(ケース)

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



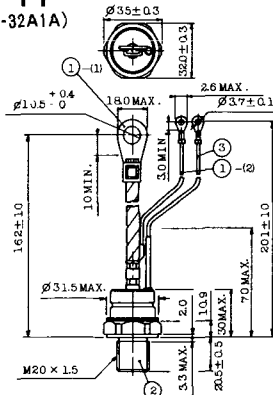
- ①(1) カソード
- ②(1) カソード(黒)
- ③(1) アノード
- ④(1) ゲート(白)

**T-13 (13-27C1A)**



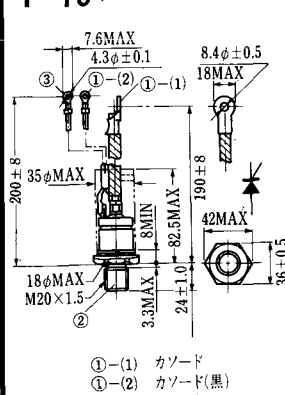
- 1-① カソード
- 2-② カソード(黒)
- P アノード
- B ゲート(白)

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



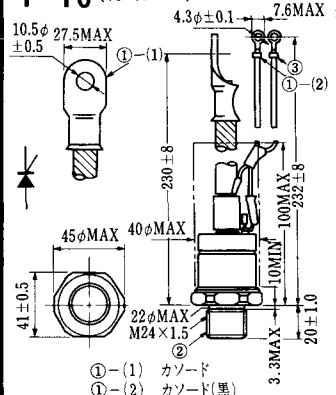
- 1-① カソード
- 1-② カソード(黒)
- P アノード
- B ゲート(白)

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



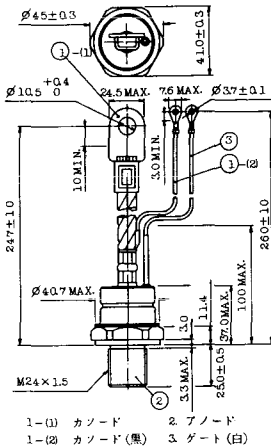
- ①(1) カソード
- ②(2) カソード(黒)
- ③ アノード
- ④ ゲート(白)

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

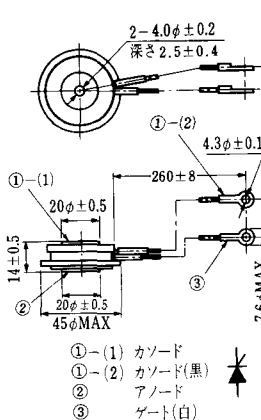


- ①(1) カソード
- ②(2) カソード(黒)
- ③ アノード
- ④ ゲート(白)

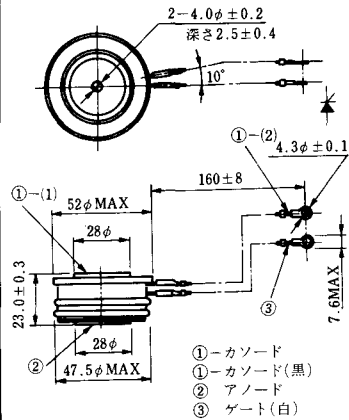
T-17 (13-42A1A)



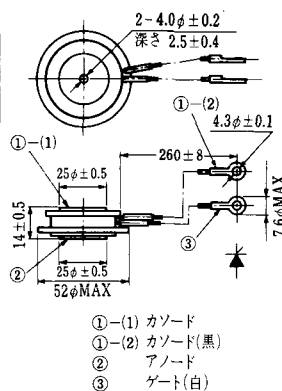
T-18 (13-45D1A)



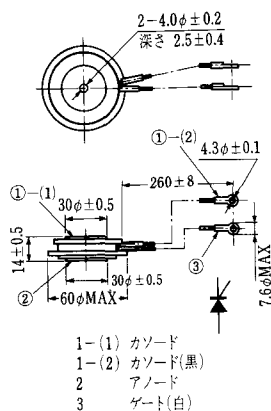
T-19 (13-52B1A)



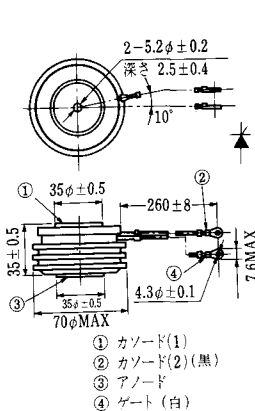
T-20 (13-52C1A)



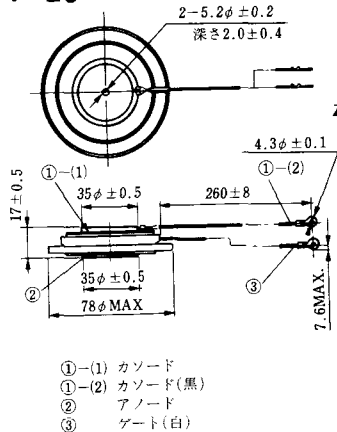
T-21 (13-60A1A)



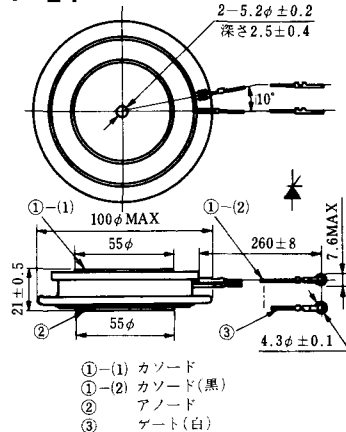
T-22 (13-70C1A)



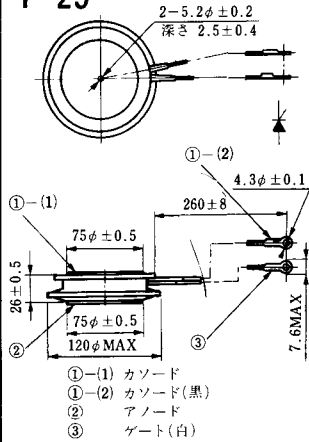
T-23 (13-78A1A)



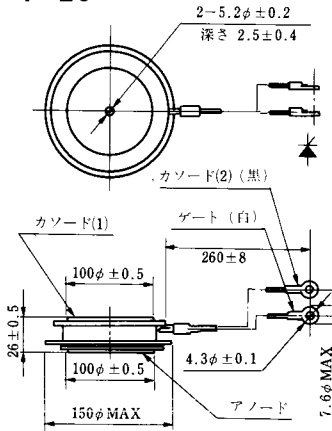
T-24 (13-100C1A)



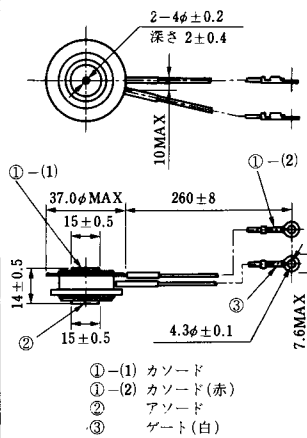
**T-25** (13-120A2A)



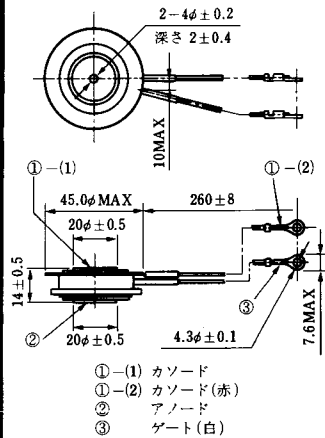
**T-26** (13-150A1A)



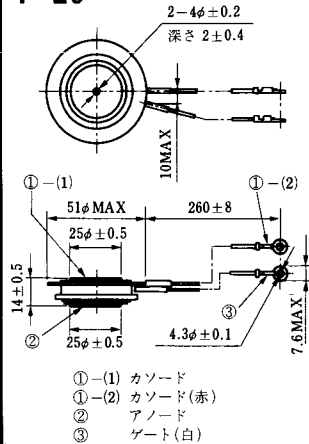
**T-27** (13-37A1A)



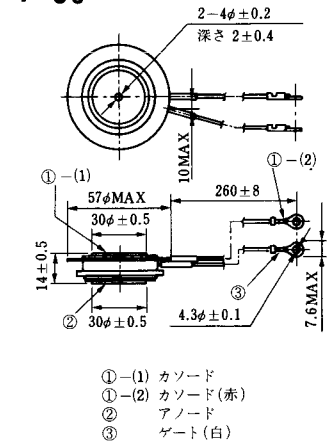
**T-28** (13-45E1A)



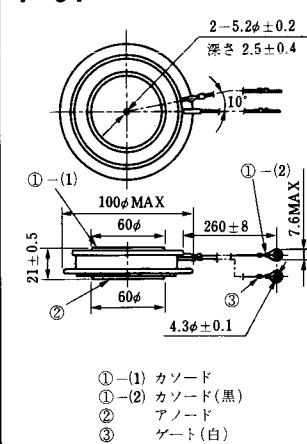
**T-29** (13-51A1A)



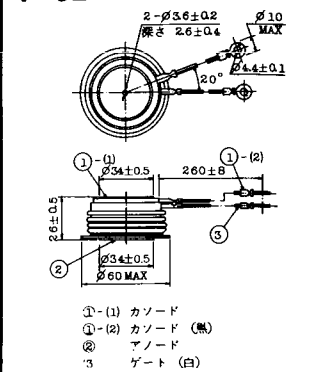
**T-30** (13-57A1A)



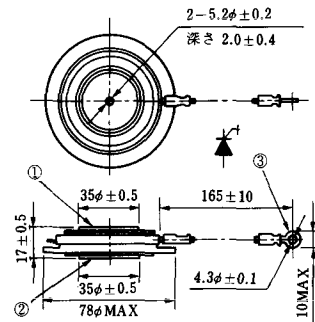
**T-31** (13-100E1A)



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

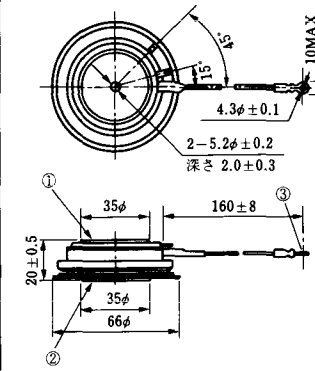


**T-33** (13-78B1A)



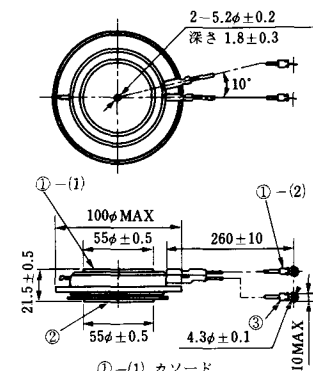
- ① カソード
- ② アノード
- ③ ゲート

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



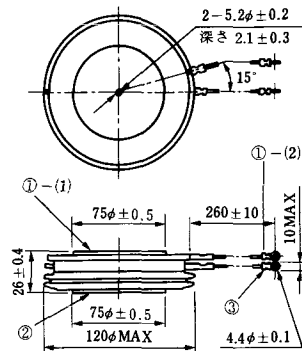
- ① カソード
- ② アノード
- ③ ゲート

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



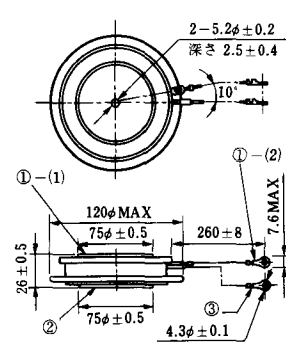
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



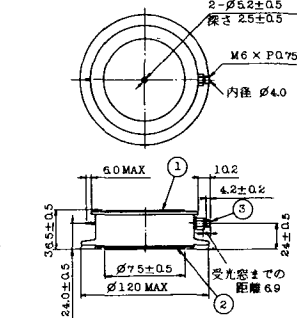
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



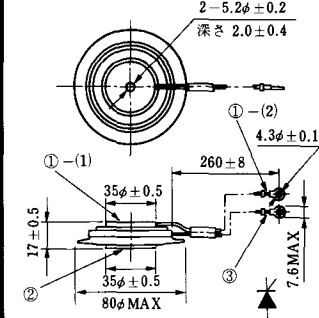
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



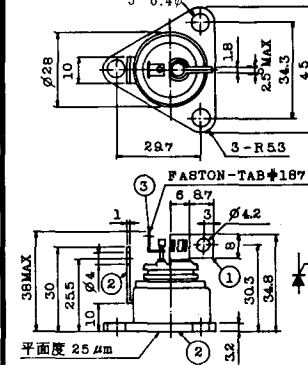
- ① カソード
- ② アノード
- ③ ゲート

**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)

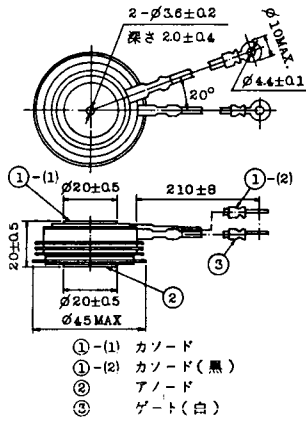


- 1. カソード
- 2. アノード
- 3. ゲート

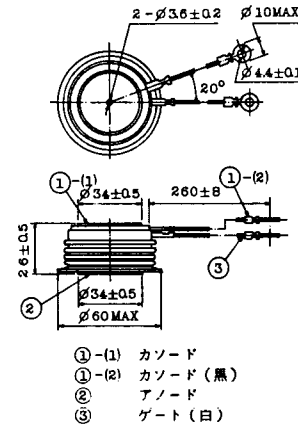
### T-41 (13-28A2A)



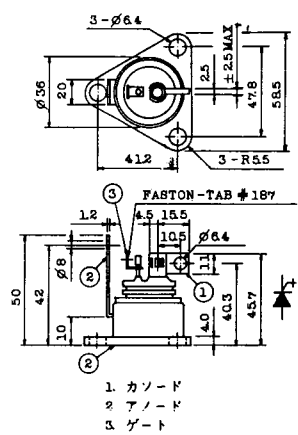
### T-42 (13-45F1A)



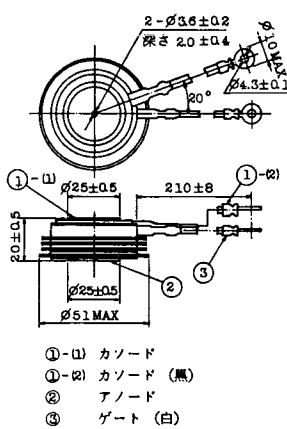
### T-43 (13-60E2A)



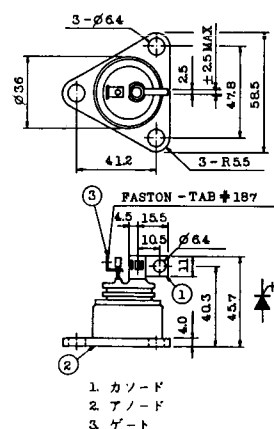
### T-44 (13-36A1A)



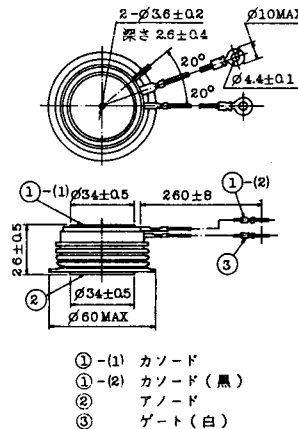
### T-45 (13-51B1A)



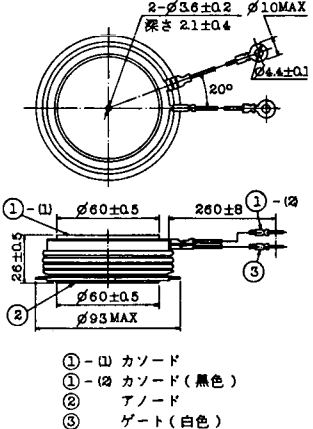
### T-46 (13-36B1A)



### T-47 (13-60E1A)

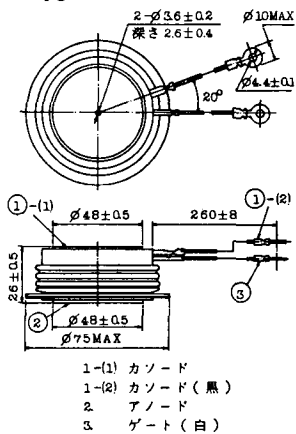


### T-48 (13-93C1A)

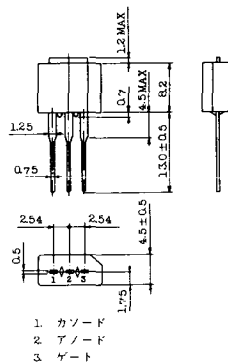




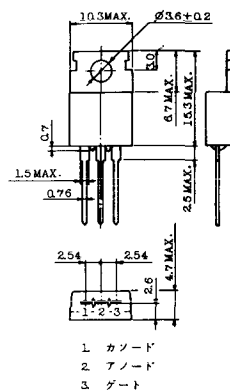
T-49 (13-75A1A)



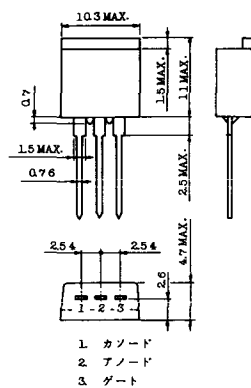
T-50 (13-10A3A)



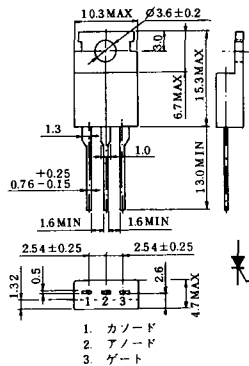
T-51 (13-10D1A)



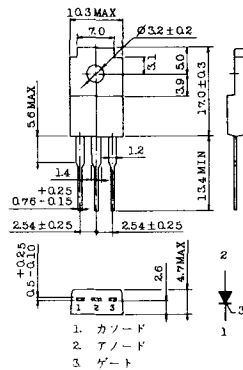
T-52 (13-10D2A)



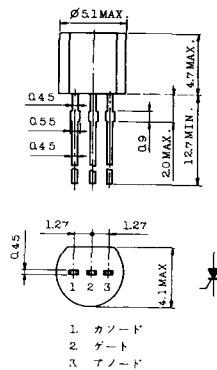
T-53 (13-10E1B)



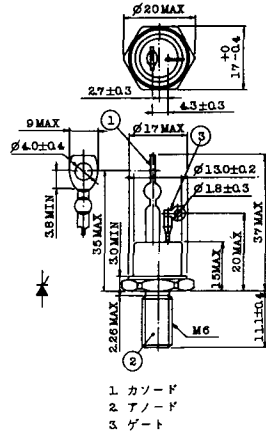
T-54 (13-10F1B)



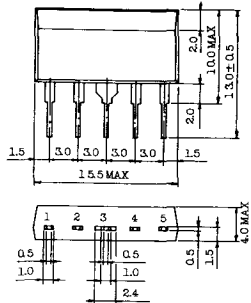
T-55 (13-5A1D)



T-56 (13-13C1A)

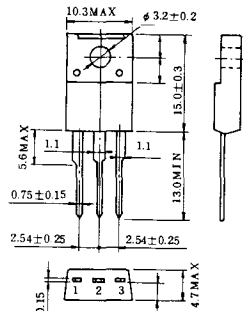


T-57 (12-16C1A)



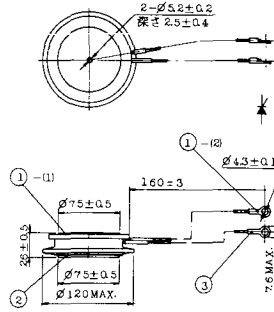
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



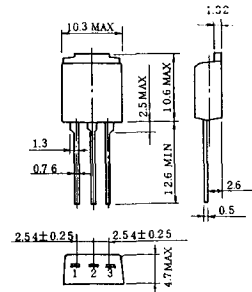
1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



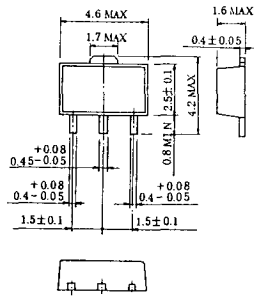
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



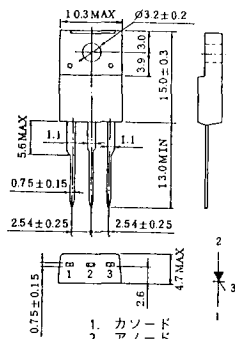
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



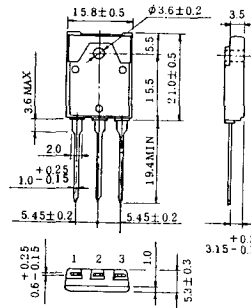
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



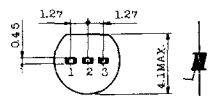
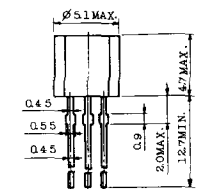
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



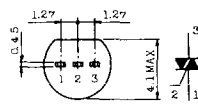
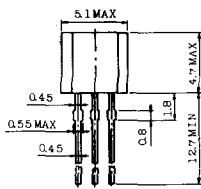
1. カソード
2. アノード
3. ゲート

TT-1



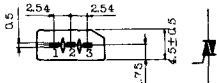
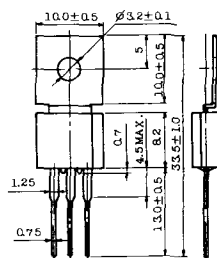
- 1 ゲート
- 2 T<sub>2</sub>
- 3 T<sub>1</sub>

TT-2



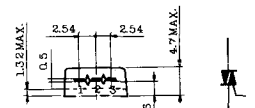
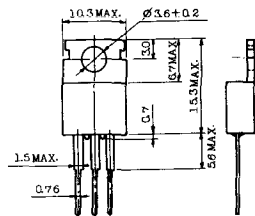
- 1 T<sub>1</sub>
- 2 ゲート
- 3 T<sub>2</sub>

TT-3



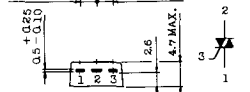
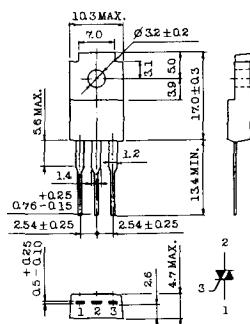
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-4



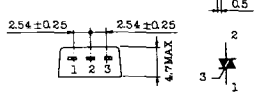
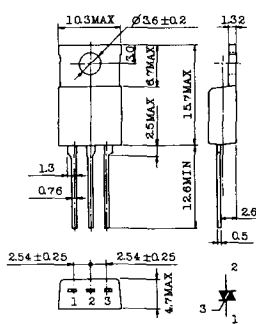
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-5



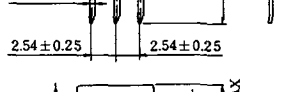
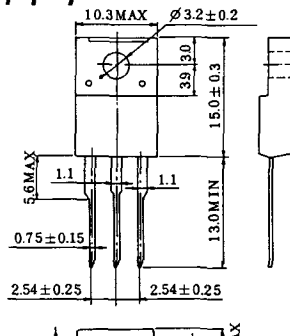
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-6



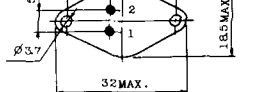
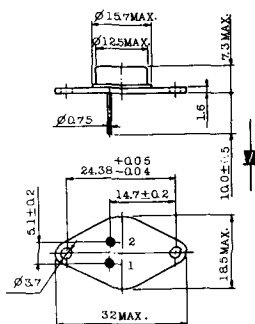
- 1 T<sub>1</sub>
- 2 T<sub>2</sub> (放熱板)
- 3 ゲート

TT-7



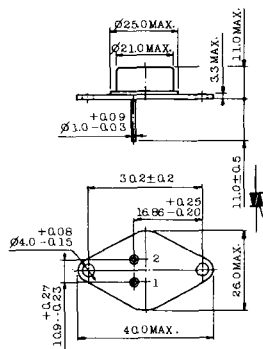
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-8



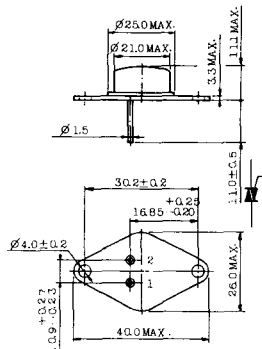
- 1 ゲート
- 2 T<sub>1</sub>
- T<sub>2</sub> (ケース)

TT-9



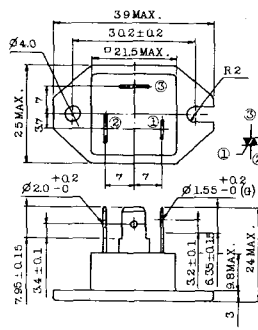
1. ゲート  
2. T<sub>1</sub>  
3. T<sub>2</sub> (ケース)

TT-10



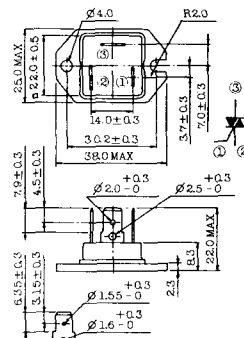
1. ゲート  
2. T<sub>1</sub>  
3. T<sub>2</sub> (ケース)

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)

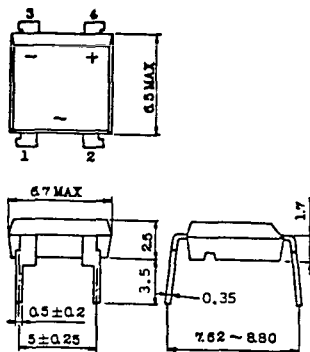
TT-12



ゲート端子詳細

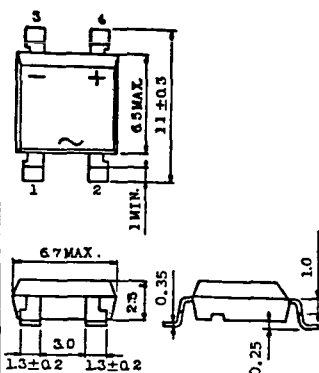
- ① ゲート (フーストン端子 # 187)  
② T<sub>1</sub> ( " # 250)  
③ T<sub>2</sub> ( " # 250)

TT-13



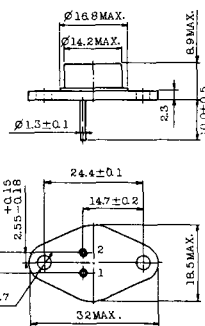
- 1, 2: T<sub>2</sub>  
3: GATE  
4: T<sub>1</sub>

TT-14



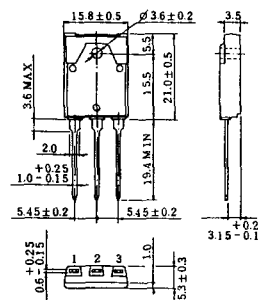
- 1, 2: T<sub>2</sub>  
3: GATE  
4: T<sub>1</sub>

TT-15 (13-14A1B)



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

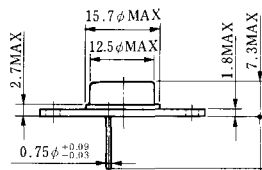
TT-16 (13-16A1A)



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



# TS-8



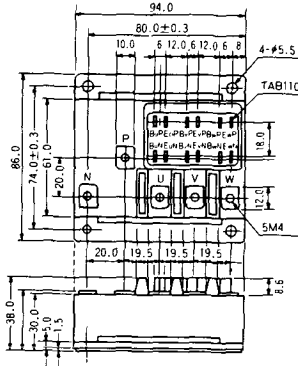
- 1. ベース
- 2. エミッタ  
コレクタ  
(ケース)



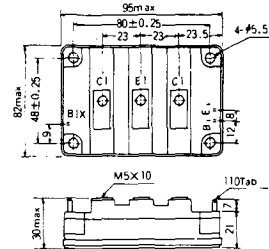
**S-94B2A**



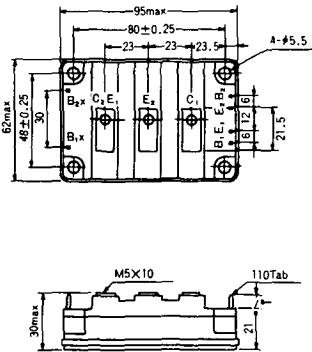
**S-94D1A**



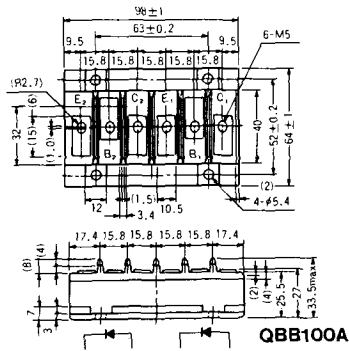
**S-95A1A**



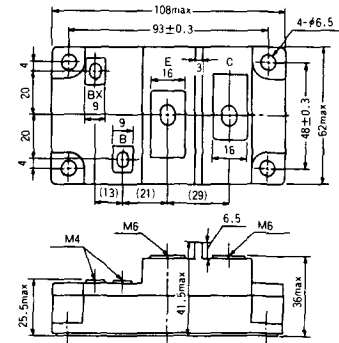
**S-95B1A**



**S-98B1B**

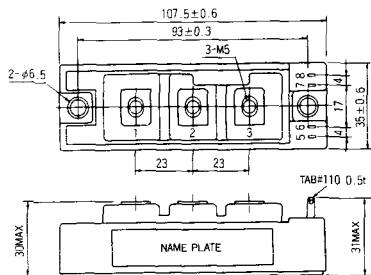


**S-108A2A**

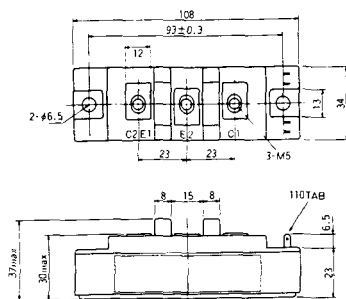




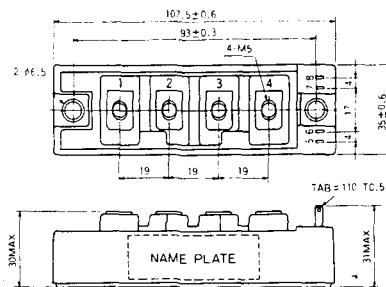
S-108B1A



S-108B1B



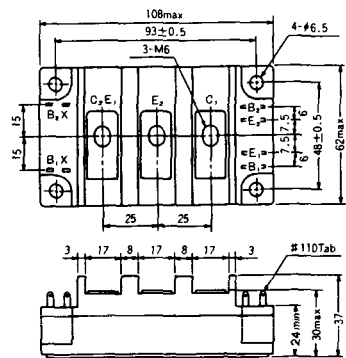
S-108B1C



S-108B2A



S-108B2B



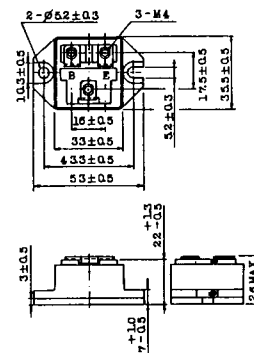
### 2-22B1A



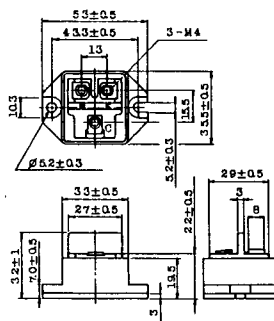
### 2-27A4A



### 2-33C1A



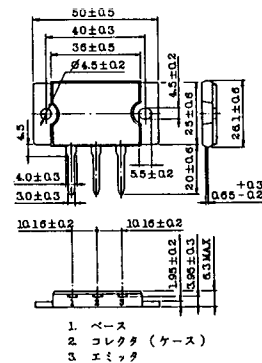
### 2-33D1A



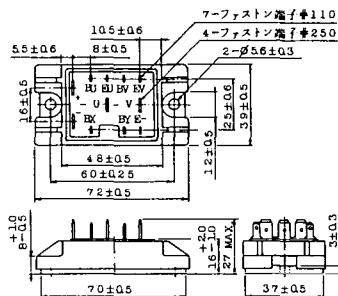
### 2-33F1A



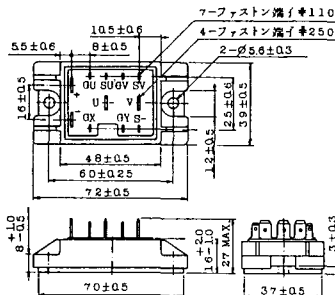
### 2-37A1A



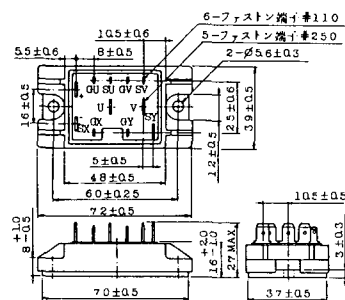
2-48A3A



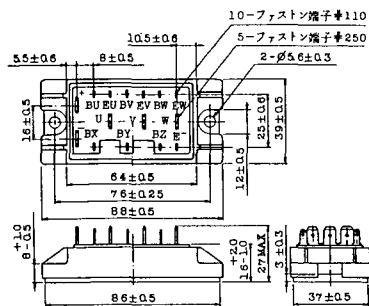
2-48A3B



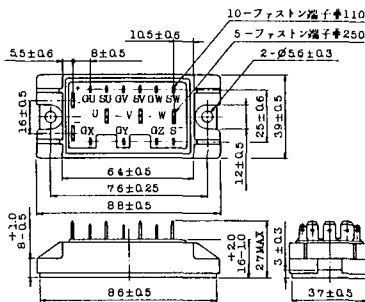
2-48A4A



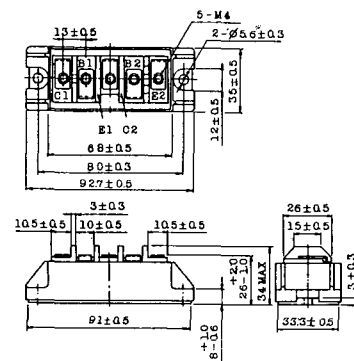
2-64A2A



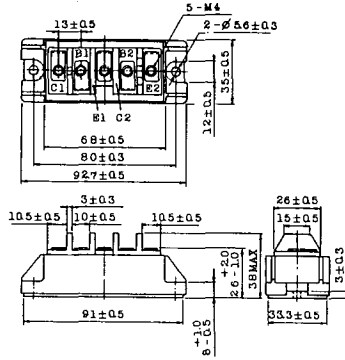
2-64A2B



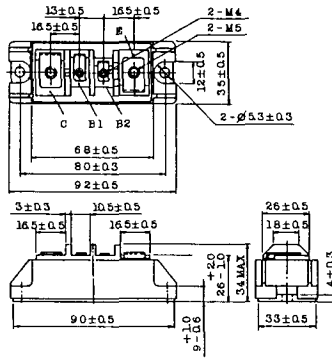
2-68A2A



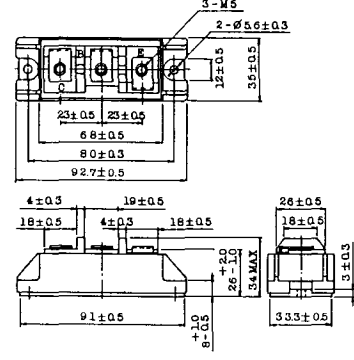
2-68B2A



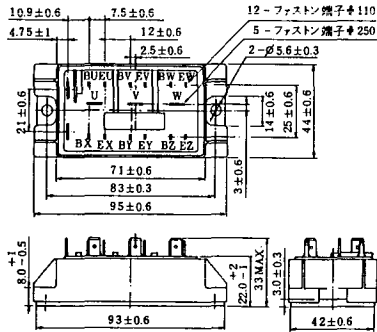
2-68C1A



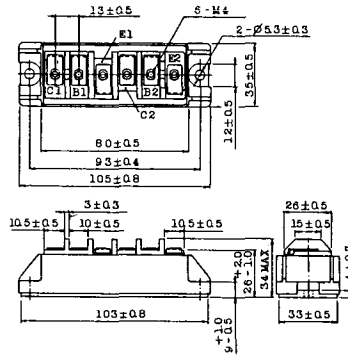
2-68D2A



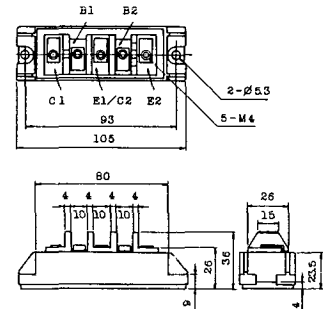
2-72A3A



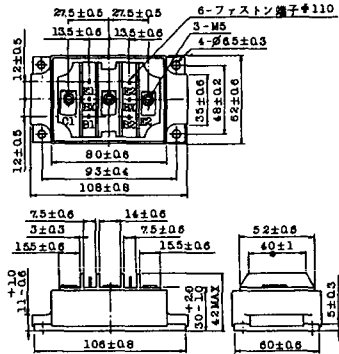
2-80A1A



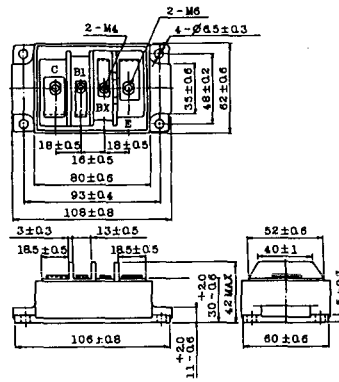
2-80B1A



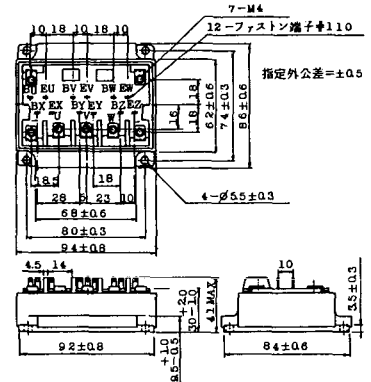
### 2-80C1A



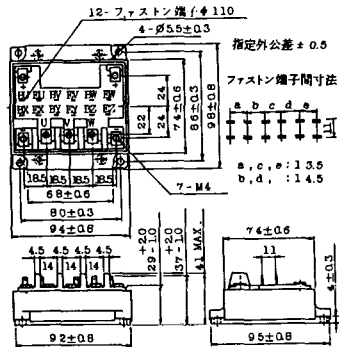
### 2-80D2A



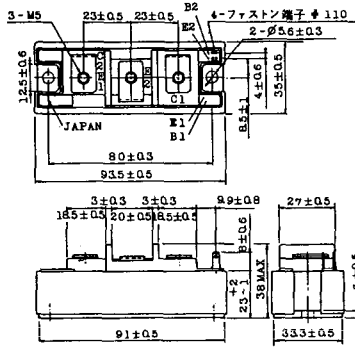
### 2-94A2A



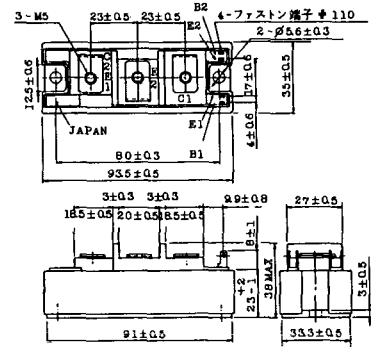
### 2-94B1A



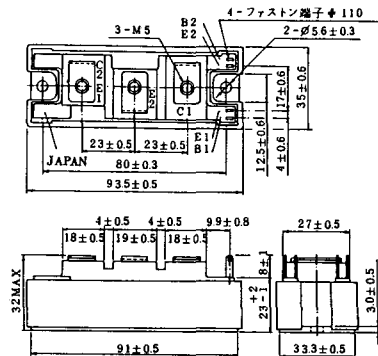
### 2-94C2A



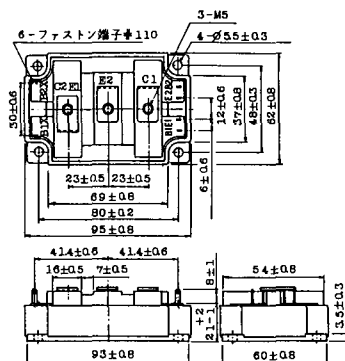
### 2-94C3A



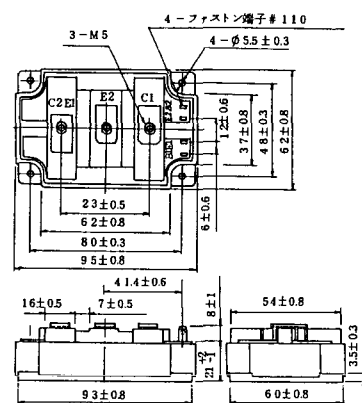
### 2-94D1A



### 2-96A3A



### 2-96A4A



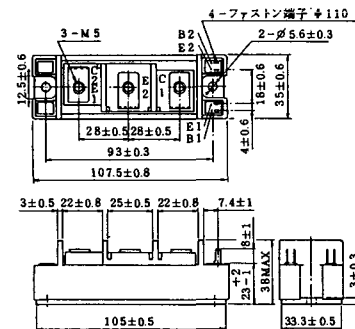
### 2-98B1A



### 2-98C2A



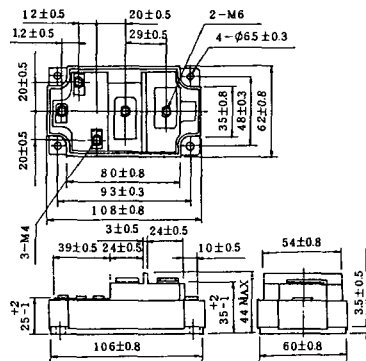
### 2-108A2A



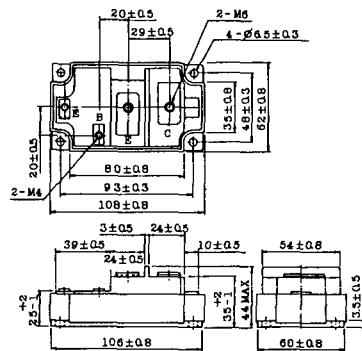
### 2-108B1A



### 2-109A3A



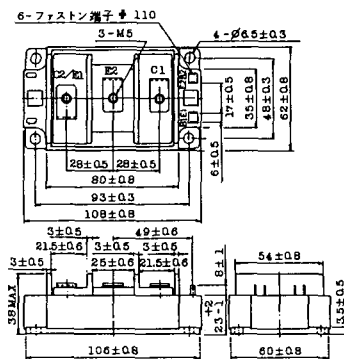
### 2-109A4A



### 2-109B3A

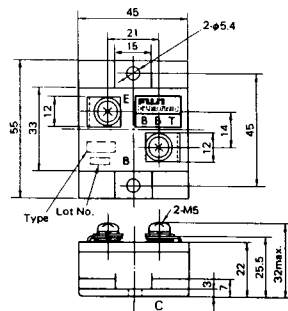


### 2-109B4A



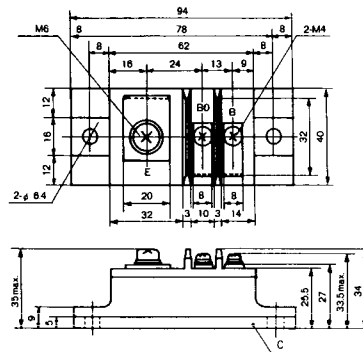
### BBT-II

BBTII  
1D200A-020



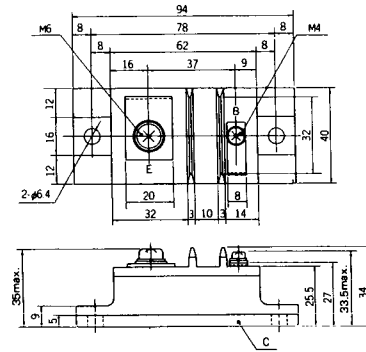
### BBT-III

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



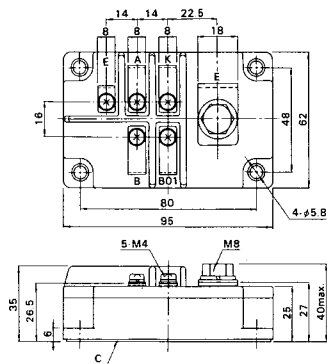
### BBT-III

BBTIII  
ETN01-055  
ET1257



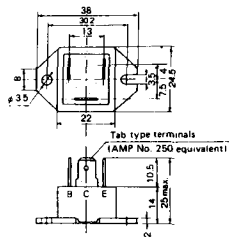
### BBT-IV

BBTIV  
1D500A-030

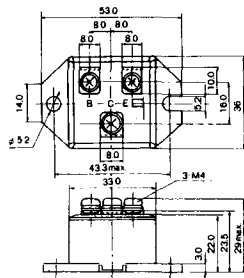




M-101



M-102



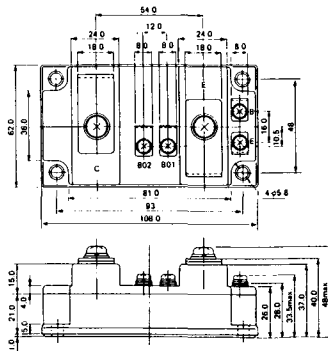
M-103



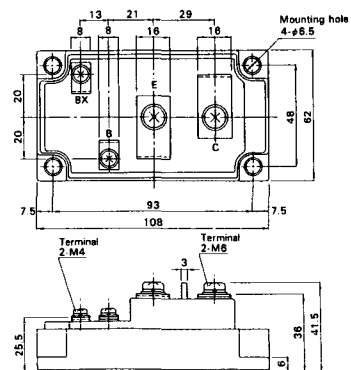
M-104



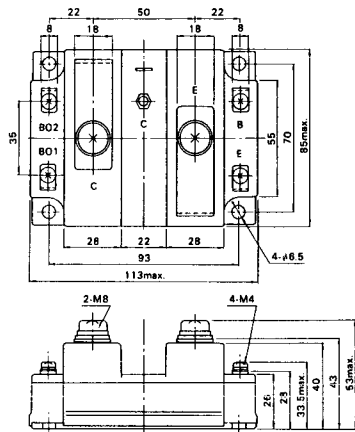
M-105



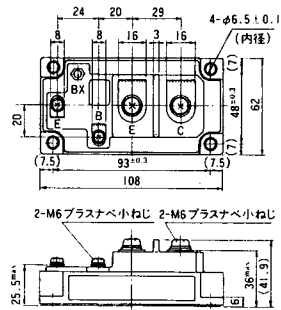
M-106



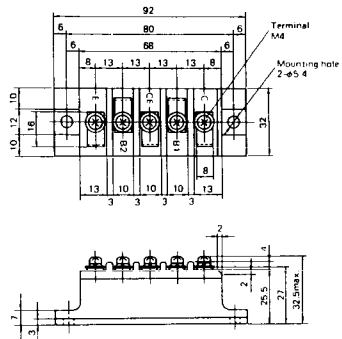
### M-107



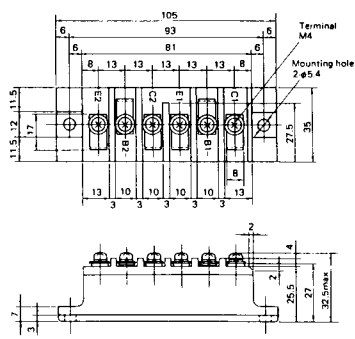
### M-116



M-201



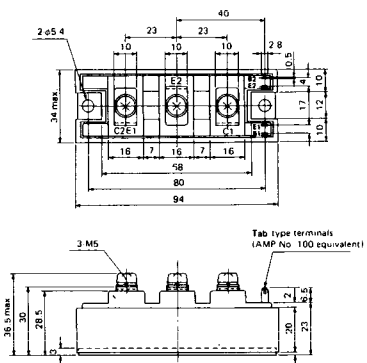
M-202



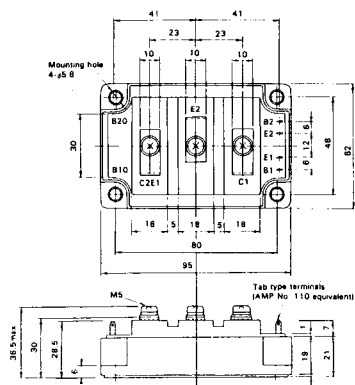
M-203



M-204



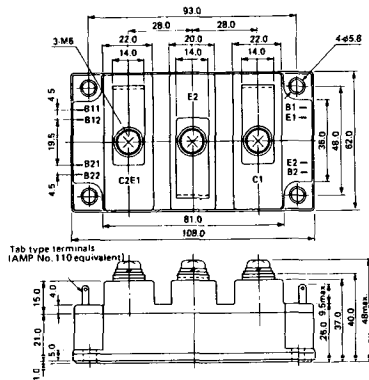
M-205



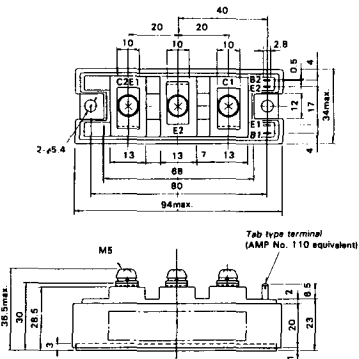
M-206



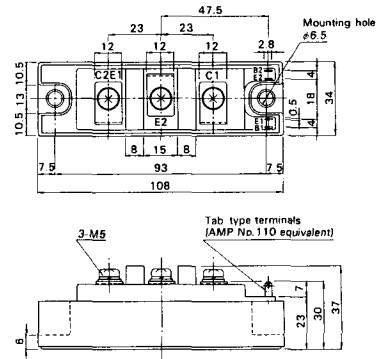
M-207



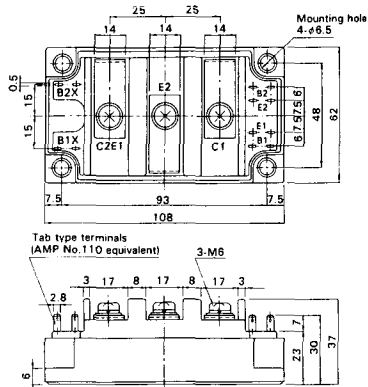
M-208



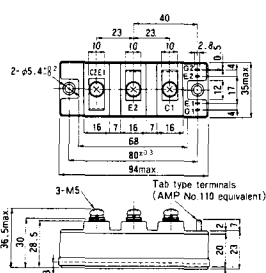
M-209



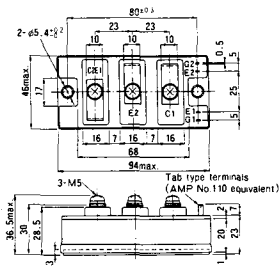
M-210



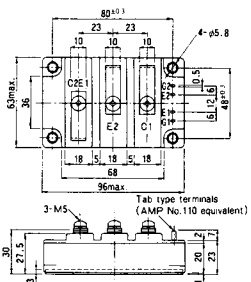
M-211



M-212

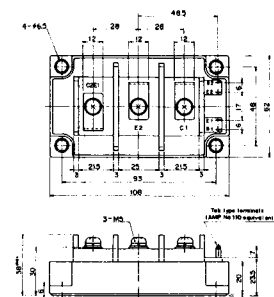


M-213

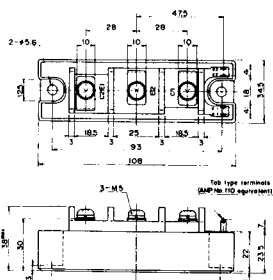


M-214

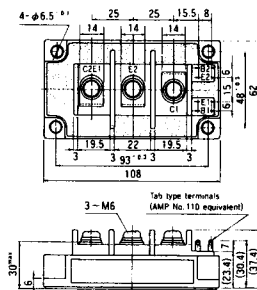
M-215



M-216



M-217



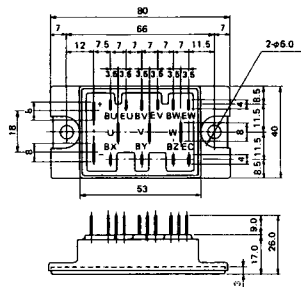
M-218



M-219



M-601



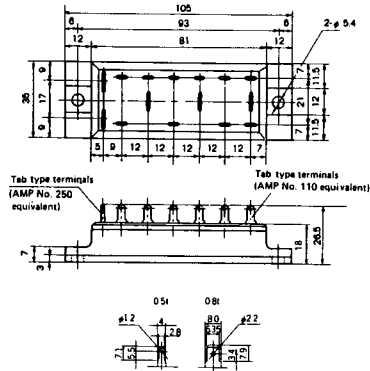
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



M-602



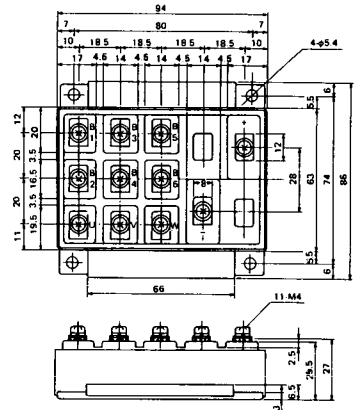
Tab type terminals  
(AMP No. 250 equivalent)



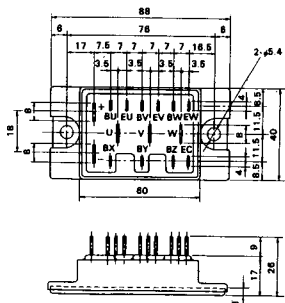
Tab type terminals  
(AMP No. 110 equivalent)



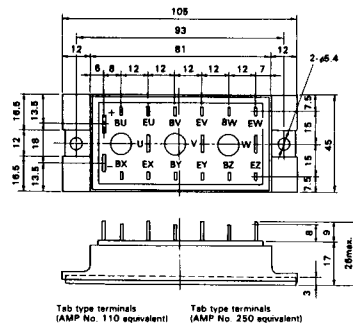
M-603



M-604



M-605



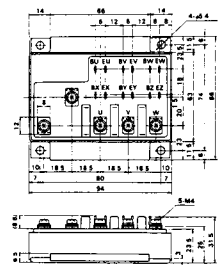
Tab type terminals  
(AMP No. 110 equivalent)



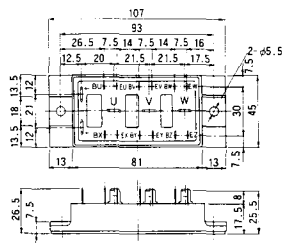
Tab type terminals  
(AMP No. 250 equivalent)



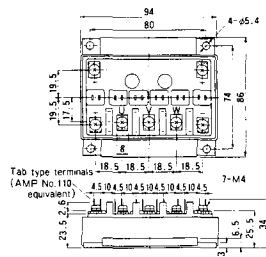
M-606



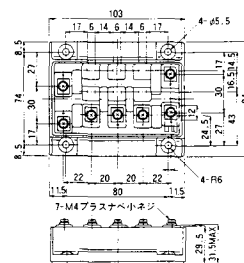
M-607



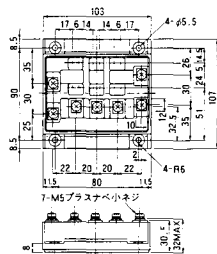
M-608



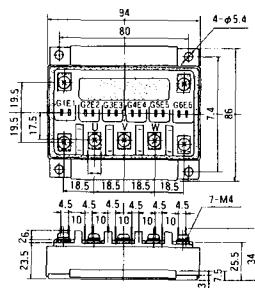
M-609



M-610

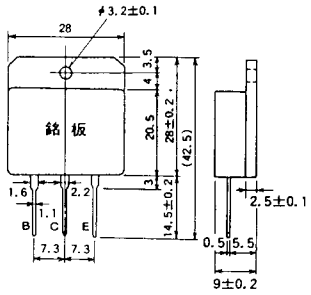


M-616

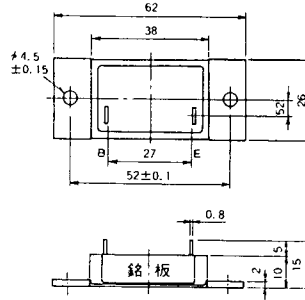




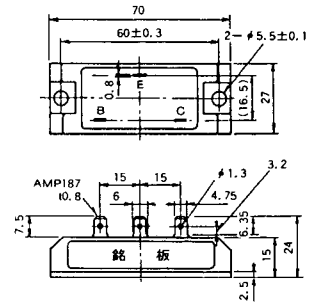
M-1A1A



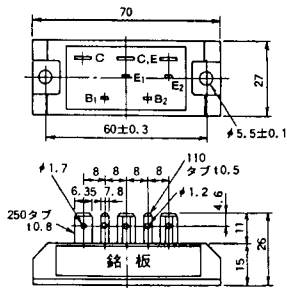
M-2A1A



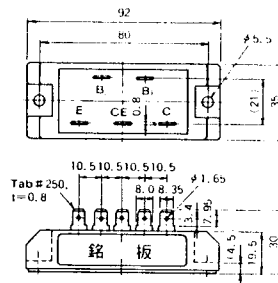
M-2B1A



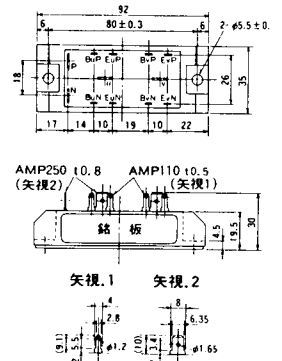
M-2B2A



M-2C2A



M-2D4A





M-3C1A



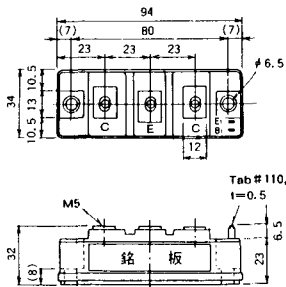
M-3D6A



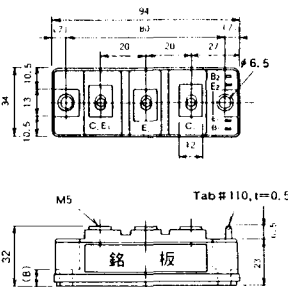
M-3E6A



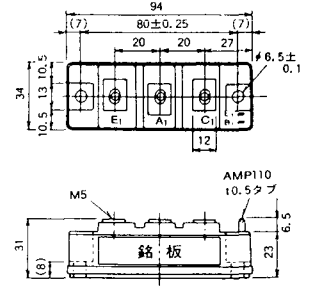
M-4A1A



M-4A2A



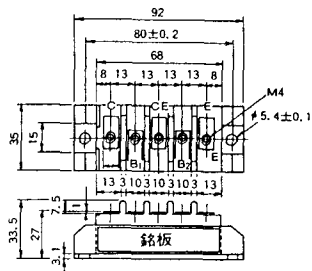
M-4A1B



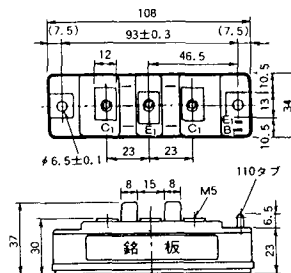
M-4A2B



M-4B2A



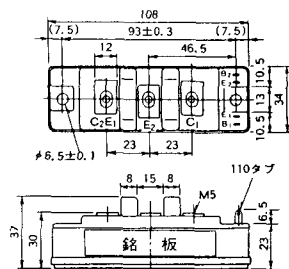
M-5A1A



M-5A1B



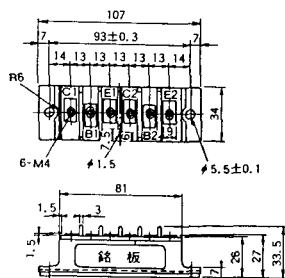
M-5A2A



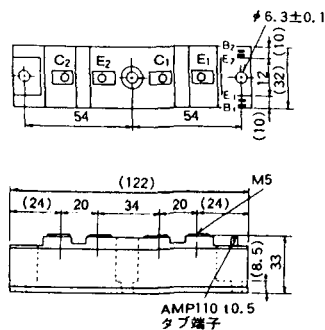
M-5B2A



M-5C2A



M-5D2A



M-6A1A



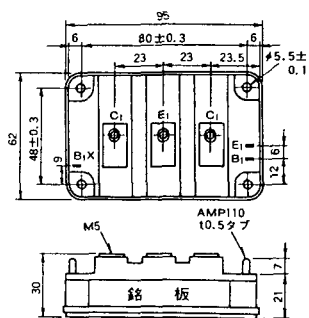
M-7A1A



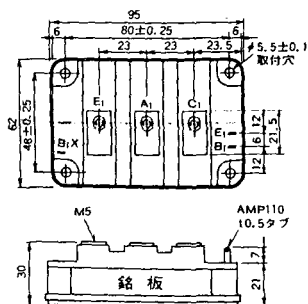
M-7B1A



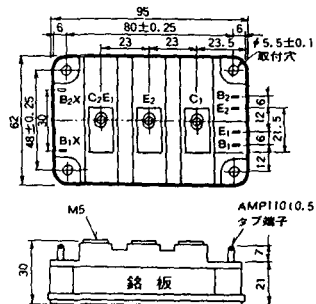
M-8A1A



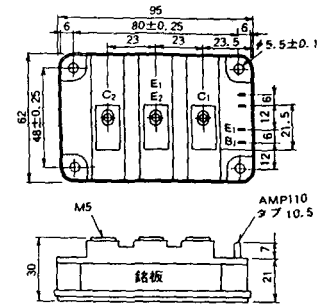
M-8A1B



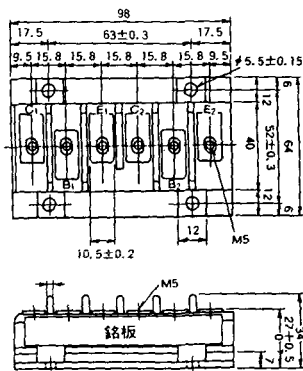
M-8A2A



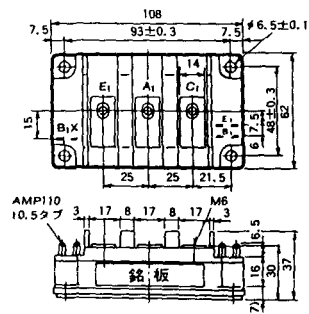
M-8A2B



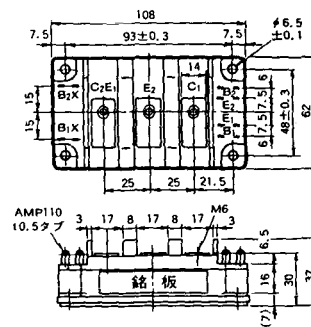
M-8B2A



M-9A1A



M-9A2A





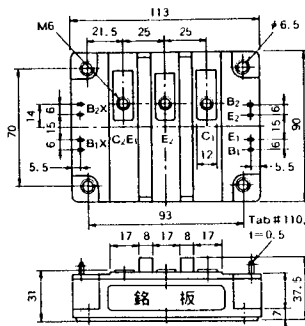




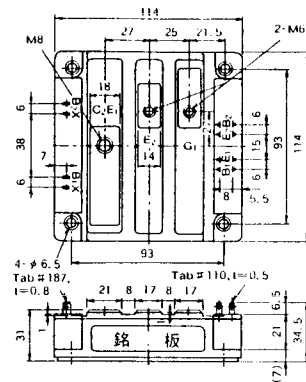
M-10A2A



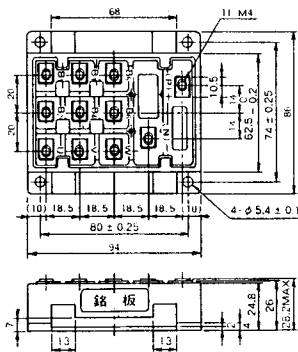
M-10A2B



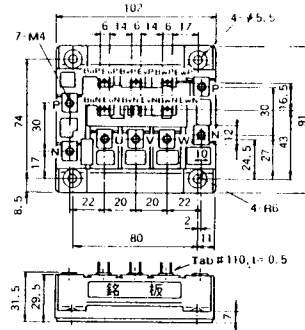
M-11A2A



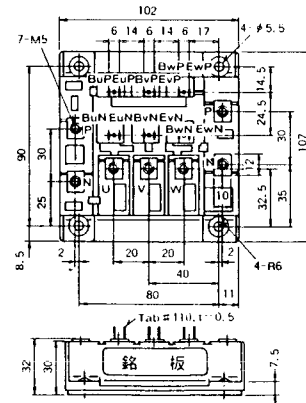
M-12A6A



M-12B6A

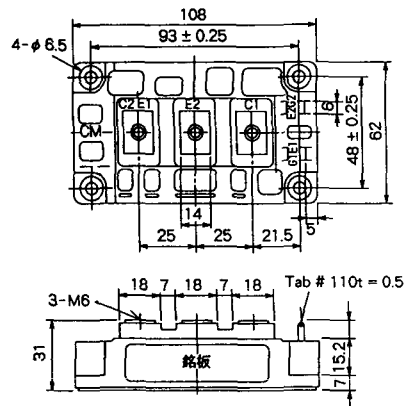


M-12B6B





M-9D2B



M-10A2C

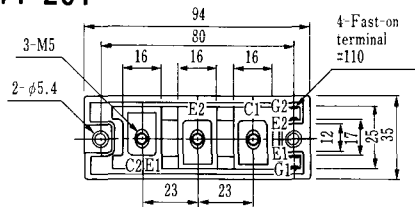


H-101



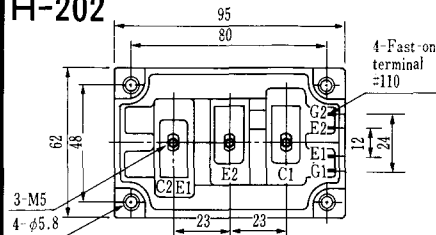
Weight :480g

### H-201



Weight: 200g

### H-202



Weight: 360g

### LF-J



### LF-K



