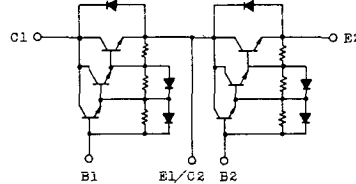


トランジスタ・モジュール (NPN, ダーリントン接続, 2個直列接続)

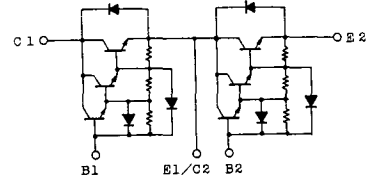
- ダーリントン・トランジスタを2個直列接続
- フリーホイール・ダイオード付
- 電極と金属ケース部が絶縁されている
- 直流電流増幅率は80以上(定格電流にて)

■等価回路

CK-1



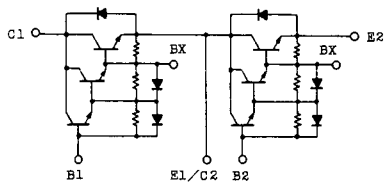
CK-2



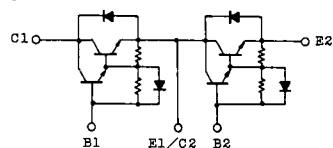
注1.  $T_c=25^{\circ}\text{C}$ . 注2. AC, 1分間。

型名	最大定格 ( $T_m=25^{\circ}\text{C}$ )											電気的特性									
	$V_{CBO}$	$V_{CEX(SUS)}$	$V_{EBO}$	$I_c$	$I_{CP}$	$I_B$	$I_F$	$I_{FM}$	$P_c$	$T_j$	$T_{Stg}$	$V_{150}$	$I_{CBO}$		$I_{EBO}$		$V_{CE0(SUS)}$		$h_{FE}$		
	(V)	(V)	(V)	(A)	(ms)	(A)	(A)	(ms)	(W)	( $^{\circ}\text{C}$ )	( $^{\circ}\text{C}$ )	(V)	最大 (mA)	$V_{CE}$ (V)	最大 (mA)	$V_{ER}$ (V)	最大 (V)	$I_c$ (A)	最小 (V)	$V_{CE}$ (V)	$I_c$ (A)
MG15N2CK1	1100	1100	7	15	30	1.5	15	30	150	150	-40~125	2500	1.0	1100	200	7	900	1.0	100	5	15
MG15N2YK1	1100	1100	7	15	30	1.5	15	30	150	150	-40~125	2500	1.0	1100	200	7	900	1.0	100	5	15
MG25M2CK2	1000	1000	7	25	50	2.5	25	50	300	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	25
MG25M2YK1	1000	1000	7	25	50	2.5	25	50	300	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	25
MG25M2YK9	1000	1000	7	25	50	2.5	25	50	300	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	25
MG25N2CK1	1100	1100	7	25	50	2.5	25	50	300	150	-40~125	2500	1.0	1100	200	7	900	0.5	100	5	25
MG25N2YK1	1100	1100	7	25	50	2.5	25	50	300	150	-40~125	2500	1.0	1100	200	7	900	0.5	100	5	25
MG30G2CL3	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
MG30G2YL1	600	600	6	30	60	3.0	30	60	200	150	-40~125	2500	1.0	600	200	6	450	0.5	100	5	30
MG40S2YK1	1400	1400	7	40	80	4.0	40	80	400	150	-40~125	2500	2.0	1400	150	7	1000	1.0	100	5	40
MG50G2CL3	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
MG50G2YL1A	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
MG50M2CK2	1000	1000	7	50	100	5.0	50	100	350	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	50
MG50M2YK1	1000	1000	7	50	100	5.0	50	100	350	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	50
MG50M2YK9	1000	1000	7	50	100	5.0	50	100	350	150	-40~125	2500	1.0	1000	200	7	880	1.0	100	5	50
MG50N2CK1	1100	1100	7	50	100	5.0	50	100	350	150	-40~125	2500	1.0	1100	200	7	900	1.0	100	5	50
MG50Q2YK1	1200	1200	7	50	100	5.0	50	100	350	150	-40~125	2500	1.0	1200	200	7	900	1.0	100	5	50
MG75G2CL1	600	600	6	75	150	10	75	150	350	150	-40~125	2500	1.0	600	200	6	450	0.5	80	5	75
MG75G2YL1A	600	600	6	75	150	10	75	150	350	150	-40~125	2500	1.0	600	200	6	450	0.5	80	5	75
MG75H2CL1	600	600	6	75	150	10	75	150	350	150	-40~125	2500	1.0	600	200	6	500	0.5	80	5	75
MG75H2YL1A	600	600	6	75	150	10	75	150	350	150	-40~125	2500	1.0	600	200	6	500	0.5	80	5	75

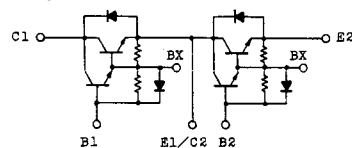
CK-3



CL-1



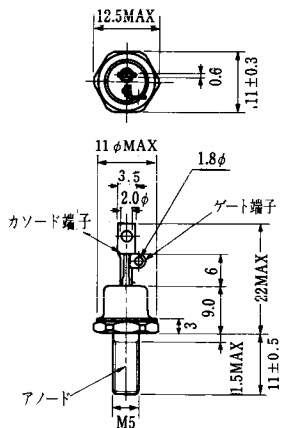
CL-2



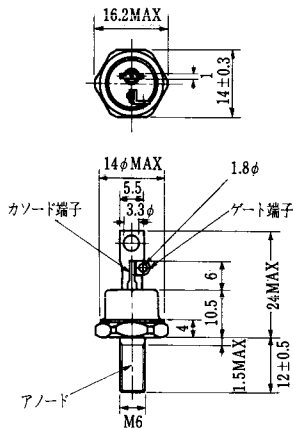
注3. スイッチング時間の \* 印は typ. 値。

(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)		I <sub>c</sub> (A)	I <sub>B</sub> (A)	スイッチング時間 (μs)			I <sub>B1</sub> (A)	I <sub>B2</sub> (A)	V <sub>CC</sub> (V)	R <sub>L</sub> (Ω)	V <sub>F</sub> (V)	I <sub>F</sub> (A)	t <sub>rr</sub> (μs)	I <sub>F</sub> (A)	V <sub>BE</sub> (V)	di/dt (A/μs)					R <sub>th(j-c)</sub> (°C/W)		
V <sub>CE</sub>	V <sub>BE</sub>			t <sub>on</sub>	t <sub>stg</sub>	t <sub>f</sub>															トランジスタ部	ダイオード部	
最大	最大			最大	最大	最大				最大	最大	最大	最大	最大	最大	最大	最大	最大					
2.5	3.5	15	0.3	2	11	6	0.3	-0.9	600	40	1.5	15	1.0	15	-3	60	0.83	1.3	CK-2	2-68B2A			MG15N2CK1
2.5	3.5	15	0.3	2	11	6	0.3	-0.9	600	40	1.5	15	1.0	15	-3	60	0.83	1.3	YK-1	2-94C3A			MG15N2YK1
2.5	3.5	25	0.5	2	15	5	0.5	-0.5	600	24	1.7	25	1.0	25	-3	100	0.41	1.3	CK-2	2-68B2A			MG25N2CK2
2.5	3.5	25	0.5	2	15	5	0.5	-0.5	600	24	1.7	25	1.0	25	-3	100	0.41	1.3	YK-1	2-94C3A			MG25N2YK1
2.5	3.5	25	0.5	2	15	5	0.5	-0.5	600	24	1.7	25	1.0	25	-3	100	0.41	1.3	YK-1	2-94D1A			MG25N2YK9
2.5	3.5	25	0.5	2	14	6	0.5	-1.5	600	24	1.7	25	1.0	25	-3	100	0.41	1.3	CK-2	2-68B2A			MG25N2CK1
2.5	3.5	25	0.5	2	14	6	0.5	-1.5	600	24	1.7	25	1.0	25	-3	100	0.41	1.3	YK-1	2-94C3A			MG25N2YK1
2.0	2.5	30	0.6	1	12	2	0.6	-0.6	300	10	1.5	30	1.0	30	-3	100	0.5	1.8	CL-1	2-68A2A			MG30G2CL3
2.0	2.5	30	1.0	1	12	3	0.6	-0.6	300	10	1.6	30	1.0	30	-2	60	0.625	1.8	YL-1	2-94C3A			MG30G2YL1
2.5	3.5	40	0.8	2	17	3	0.8	-2.4	600	15	1.8	40	1.2	40	-3	100	0.31	1.3	YK-1	2-108A2A			MG40S2YK1
2.0	2.5	50	1.0	1	12	2	1.0	-1.0	300	6	1.5	50	1.0	50	-3	100	0.41	1.3	CL-1	2-68A2A			MG50G2CL3
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	YL-1	2-94C3A			MG50G2YL1A
2.5	3.5	50	1.0	2	15	5	1.0	-1.0	600	12	1.7	50	1.0	50	-3	100	0.36	1.3	CK-2	2-68B2A			MG50M2CK2
2.5	3.5	50	1.0	2	15	5	1.0	-1.0	600	12	1.7	50	1.0	50	-3	100	0.36	1.3	YK-1	2-94C3A			MG50M2YK1
2.5	3.5	50	1.0	2	15	5	1.0	-1.0	600	12	1.7	50	1.0	50	-3	100	0.36	1.3	YK-1	2-94D1A			MG50M2YK9
2.5	3.5	50	1.0	2	15	5	1.0	-3.0	600	12	1.8	50	2.0	50	-3	100	0.35	1.3	CK-2	2-68B2A			MG50N2CK1
2.5	3.2	50	1.0	2	13	4	1.0	-3.0	600	12	1.8	50	1.0	50	-3	100	0.35	1.3	YK-1	2-94C3A			MG50N2YK1
2.0	2.5	75	1.5	2	12	2	1.5	-1.5	300	4	1.5	75	2.0	75	-3	100	0.35	1.3	CL-1	2-68A2A			MG75G2CL1
2.0	2.5	75	1.5	2	12	2	1.5	-1.5	300	4	1.7	75	1.0	75	-3	100	0.36	1.3	YL-1	2-94C3A			MG75G2YL1A
2.0	2.5	75	2.0	2	12	4	2.0	-2.0	300	4	1.5	75	2.0	75	-3	100	0.35	1.3	CL-1	2-68A2A			MG75H2CL1
2.0	2.5	75	2.0	2	12	4	2.0	-2.0	300	4	1.7	75	1.0	75	-3	100	0.35	1.3	YL-1	2-94C3A			MG75H2YL1A

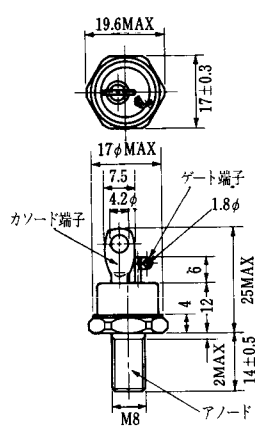
FD-1



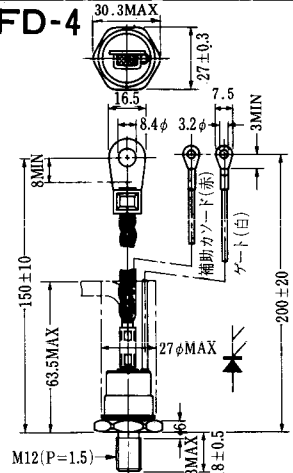
FD-2



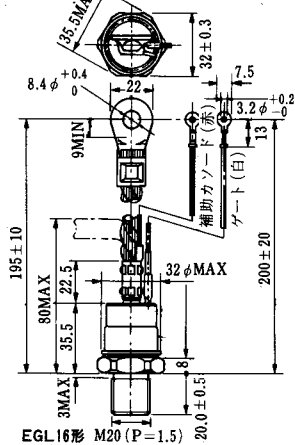
FD-3



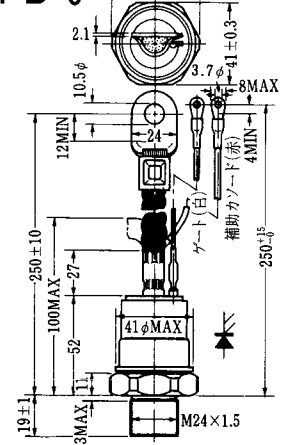
FD-4



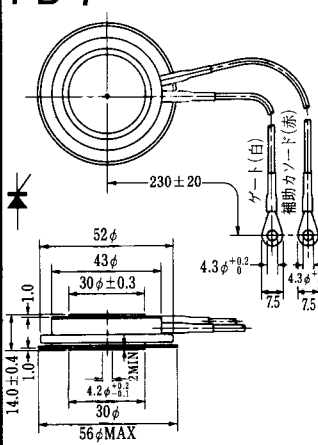
FD-5



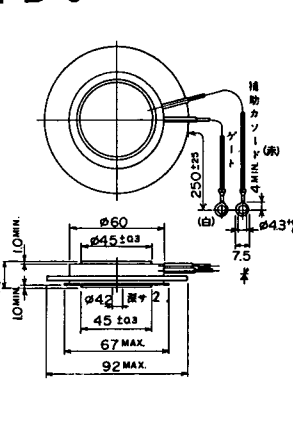
FD-6



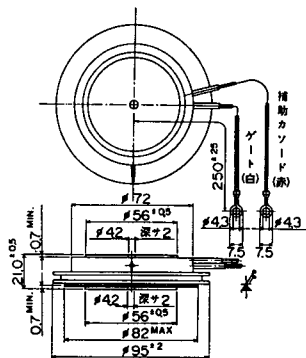
FD-7



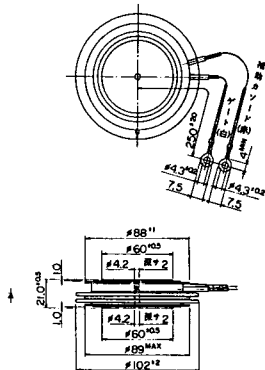
FD-8



FD-9

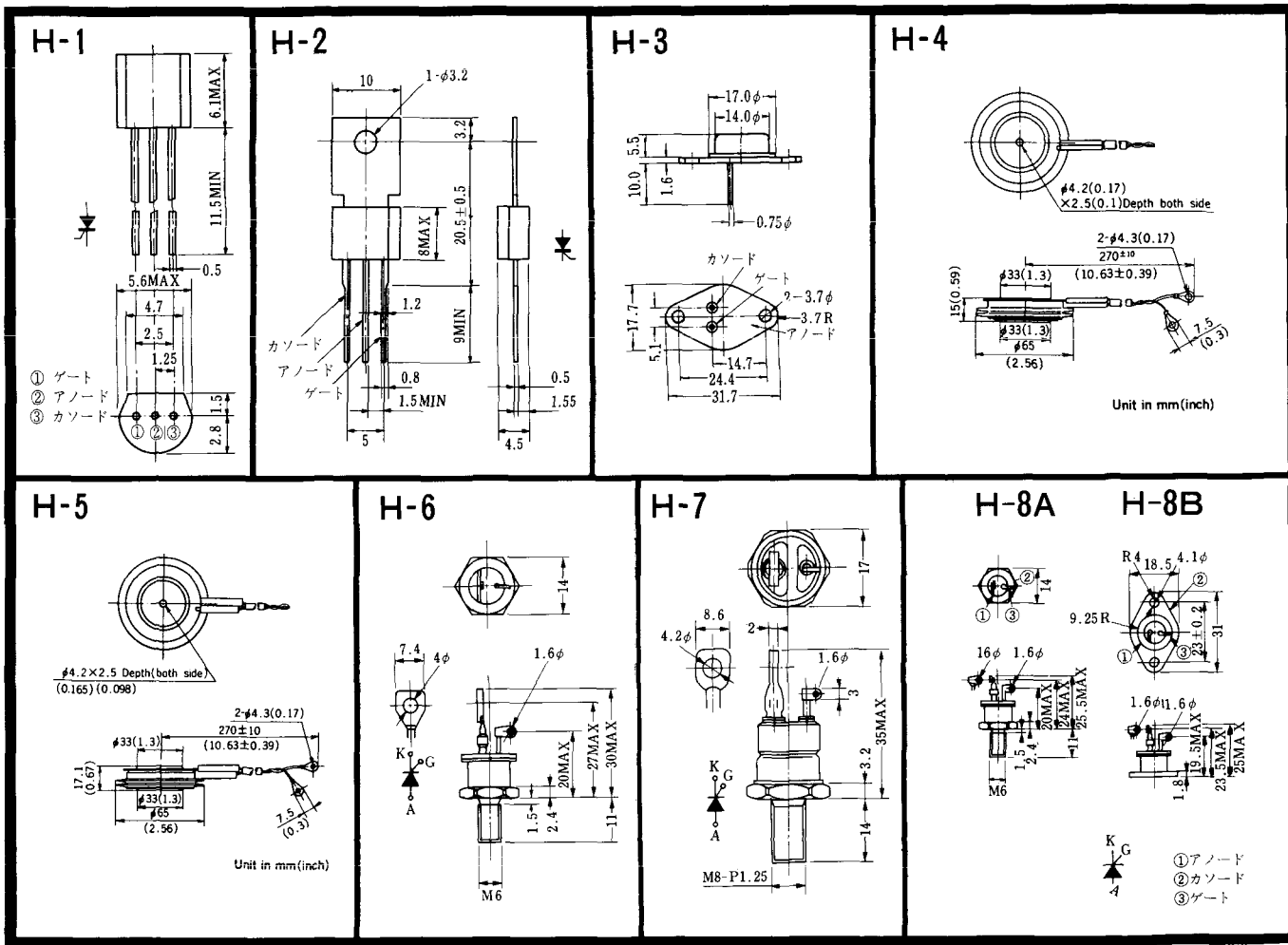


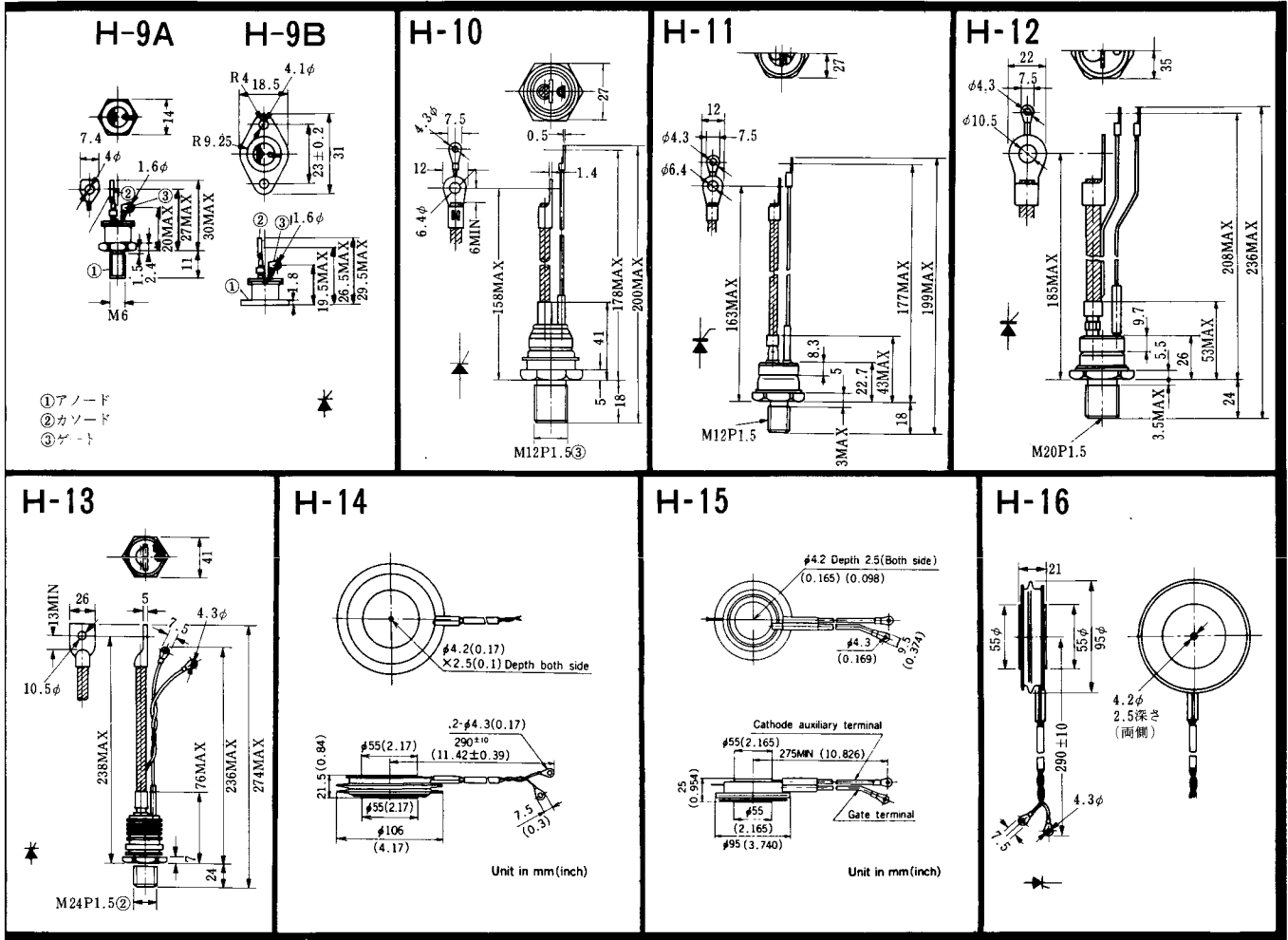
FD-10



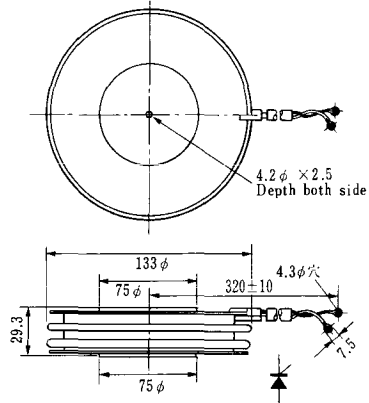
FD-11

FD-12

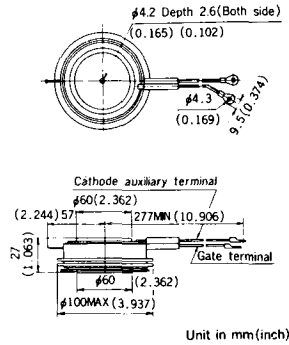




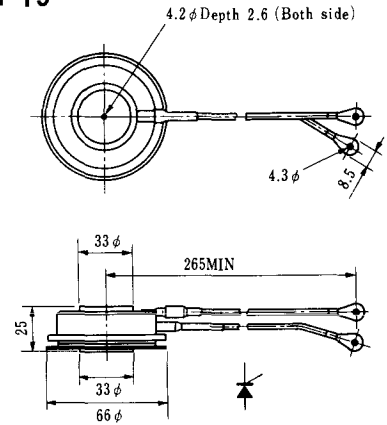
### H-17



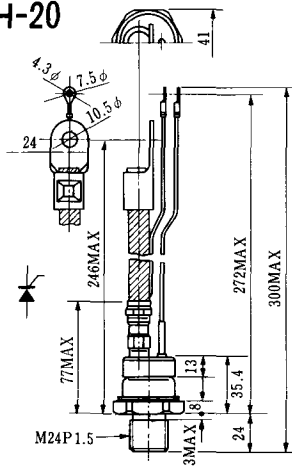
### H-18



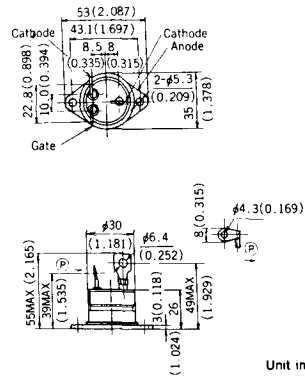
### H-19



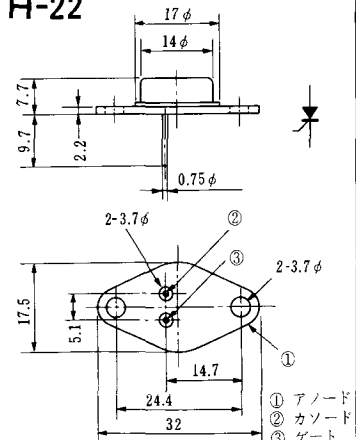
### H-20



### H-21

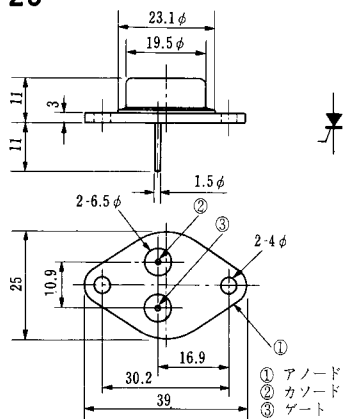


### H-22

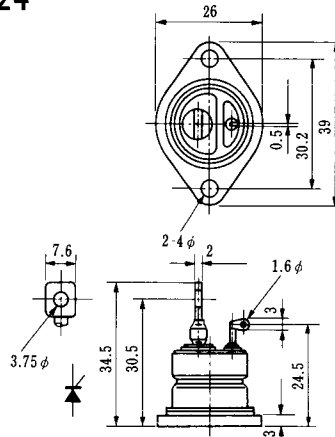


- ① アノード
- ② カソード
- ③ ゲート

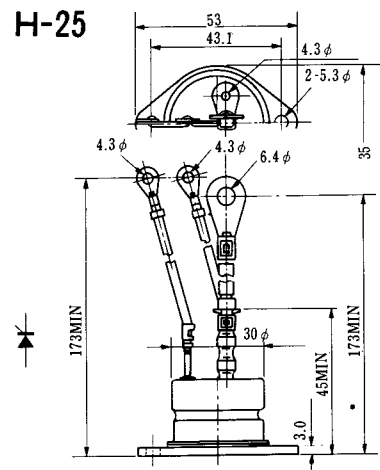
### H-23



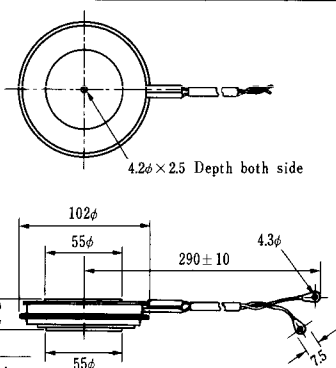
### H-24



### H-25



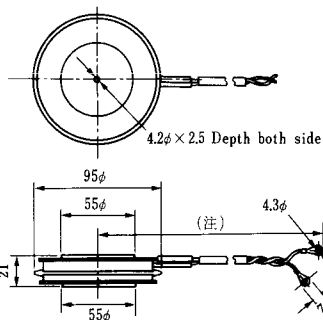
### H-26



Type	Direction of polarity
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CA12	
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### H-27

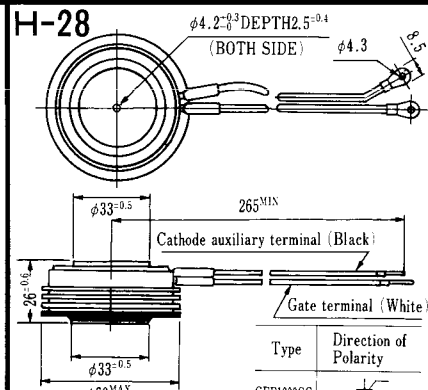


Type	Direction of polarity
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CF11V	
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(注) CC11V: 400 ± 10  
CF11V: 250 ± 10

### H-28



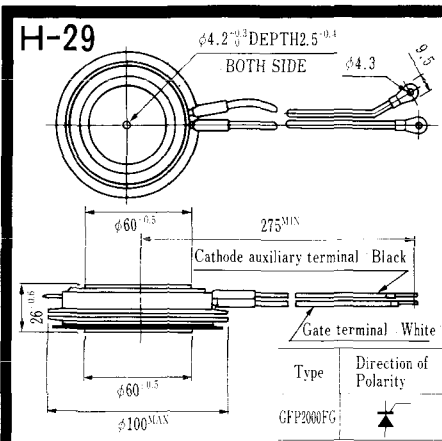
Type	Direction of Polarity
------	-----------------------

GFP100GG	
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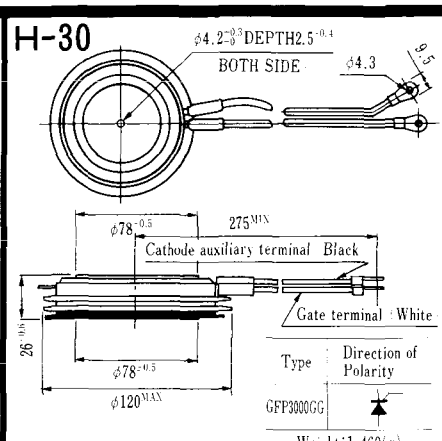
Weight: 360(g)

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



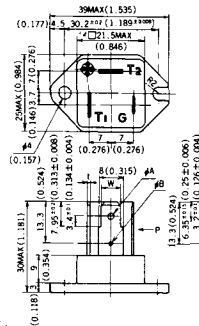


Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



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

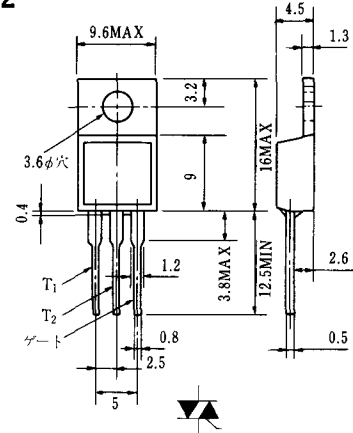
### HT-1



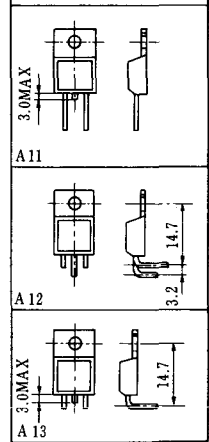
TERMINAL	t	W	φA	φB
T <sub>1</sub>	0.8 ± 0.025 (0.031 ± 0.001)	6.35 ± 0.1 (0.250 ± 0.004)	2.00 ± 0.1 (0.079 ± 0.004)	1.3 (0.051)
T <sub>2</sub>	0.8 ± 0.025 (0.031 ± 0.001)	6.35 ± 0.1 (0.250 ± 0.004)	2.00 ± 0.1 (0.079 ± 0.004)	1.3 (0.051)
G	0.5 ± 0.025 (0.020 ± 0.001)	4.75 ± 0.1 (0.187 ± 0.004)	1.55 ±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

Unit in mm (inch)

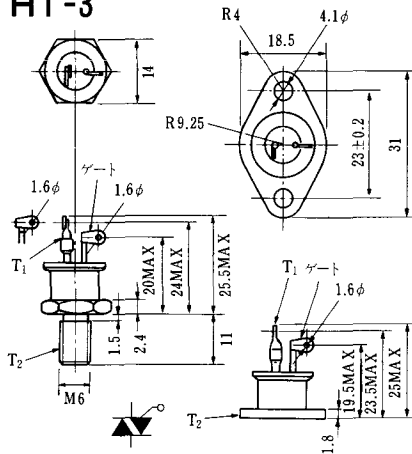
### HT-2



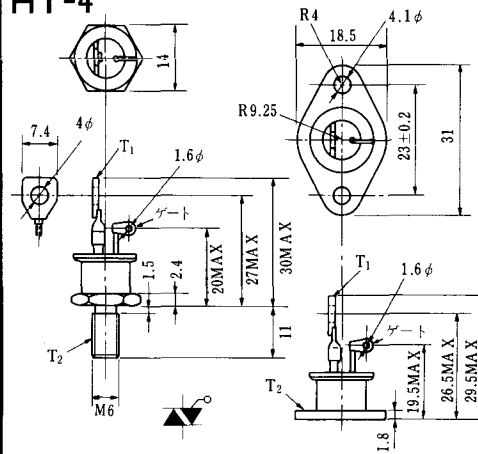
#### リード加工標準寸法



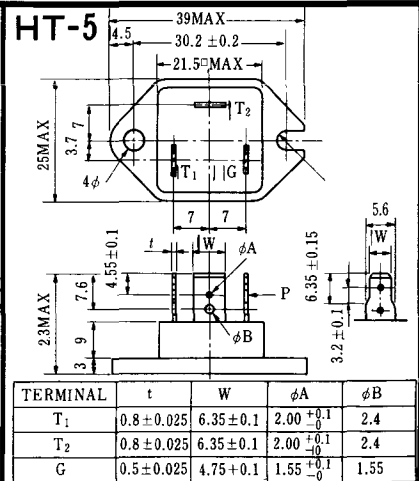
### HT-3



### HT-4

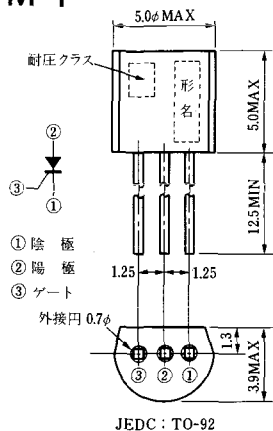


### HT-5

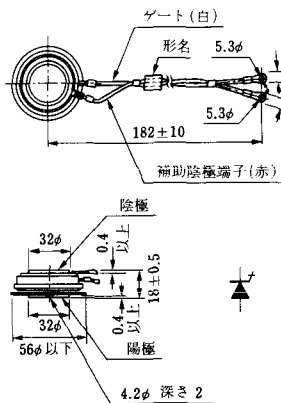


TERMINAL	t	W	φA	φB
T <sub>1</sub>	0.8 ± 0.025	6.35 ± 0.1	2.00 ± 0.1	2.4
T <sub>2</sub>	0.8 ± 0.025	6.35 ± 0.1	2.00 ± 0.1	2.4
G	0.5 ± 0.025	4.75 ± 0.1	1.55 ± 0.1	1.55

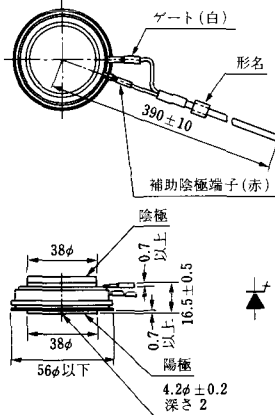
### M-1



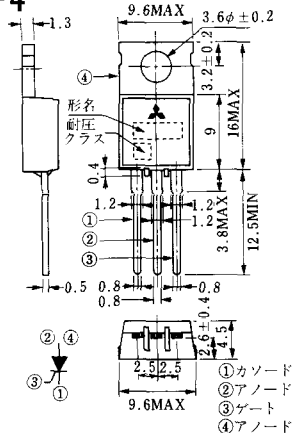
### M-2



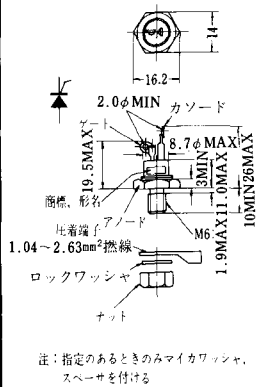
### M-3



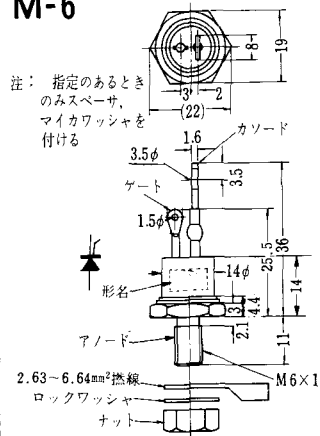
### M-4



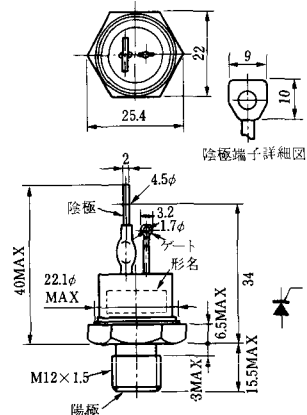
### M-5



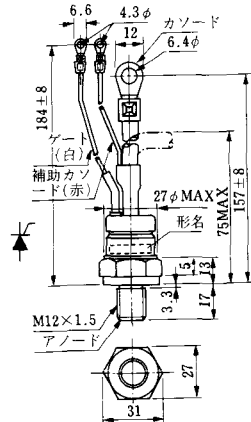
### M-6



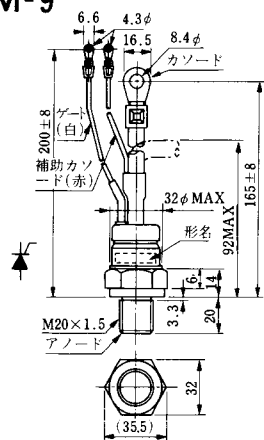
### M-7



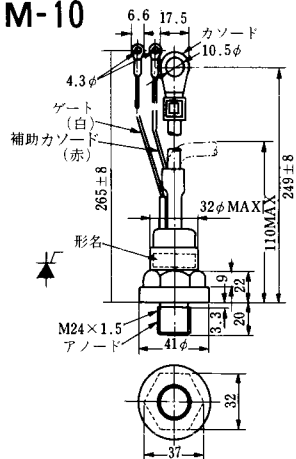
### M-8



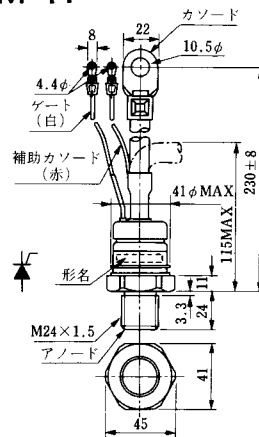
M-9



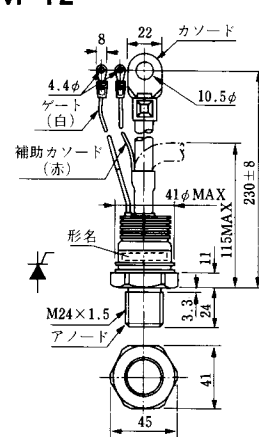
M-10



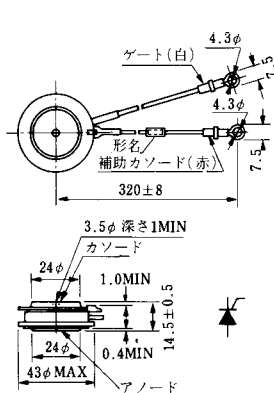
M-11



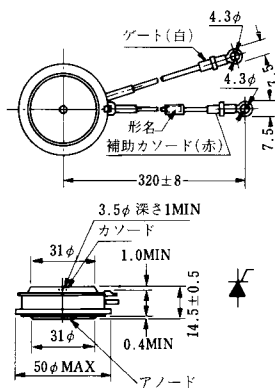
M-12



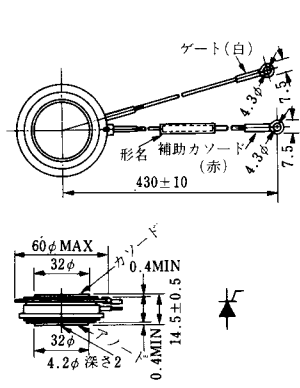
M-13



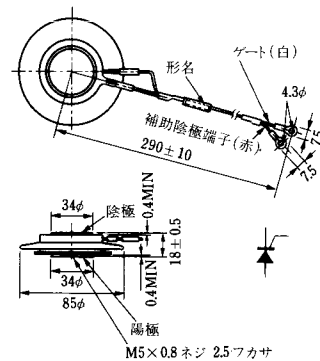
M-14

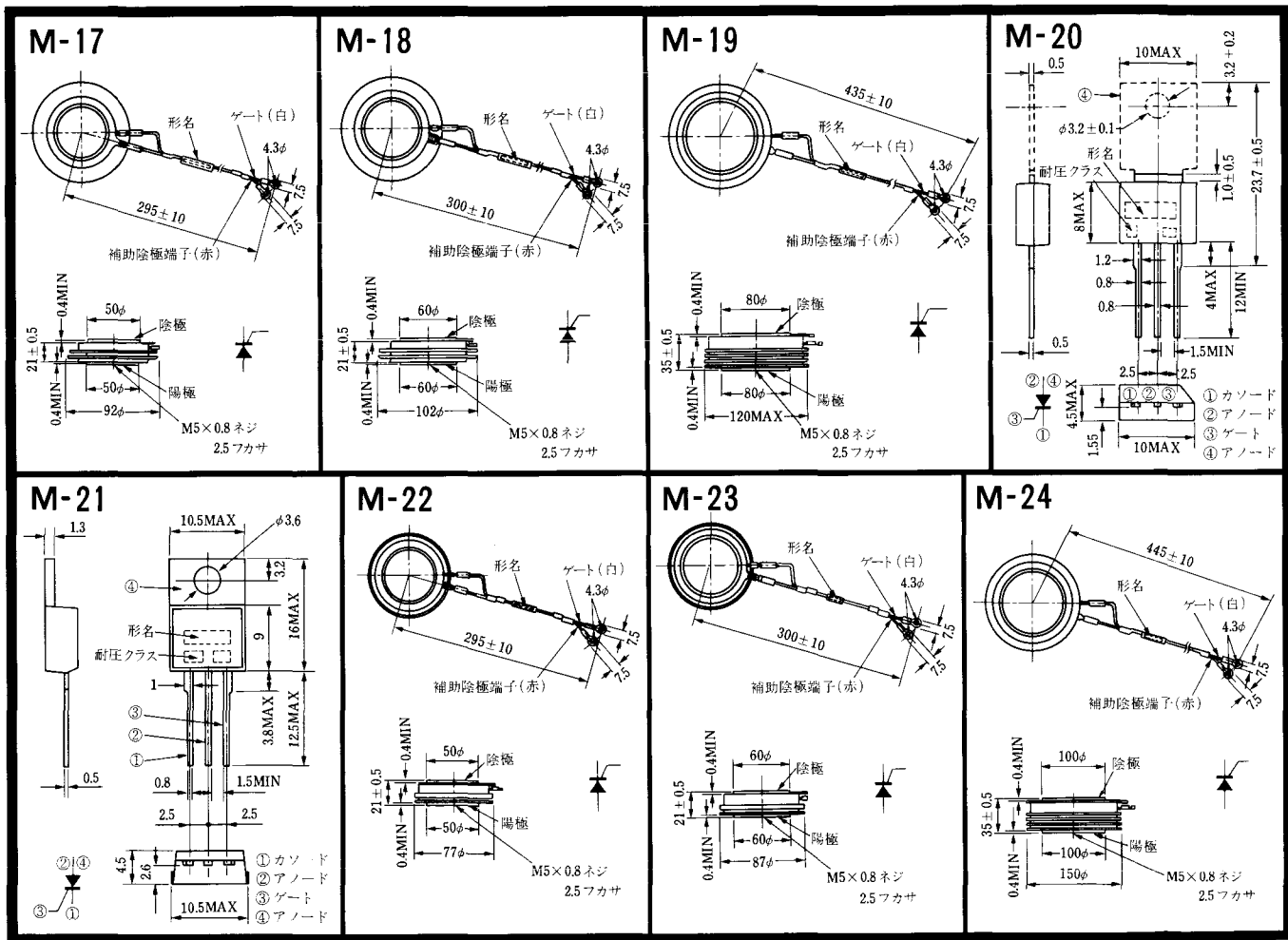


M-15

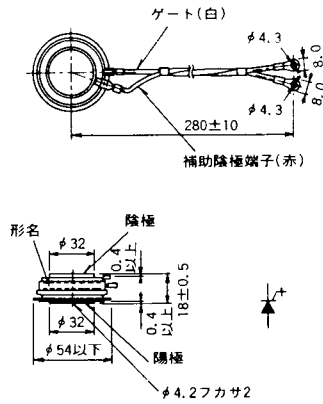


M-16

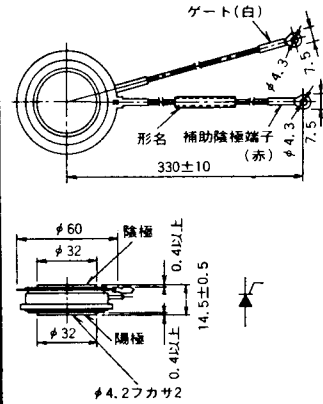




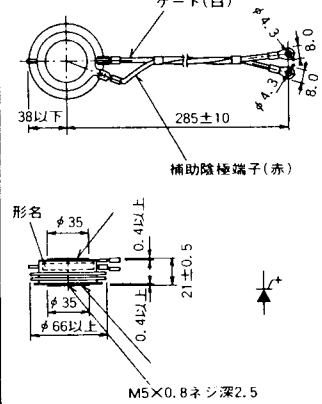
M-25



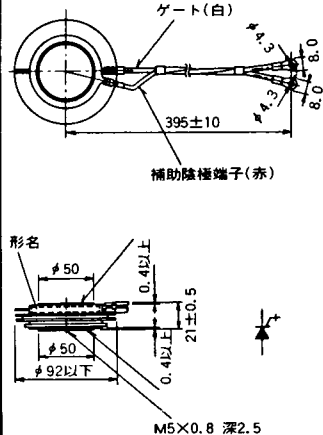
M-26



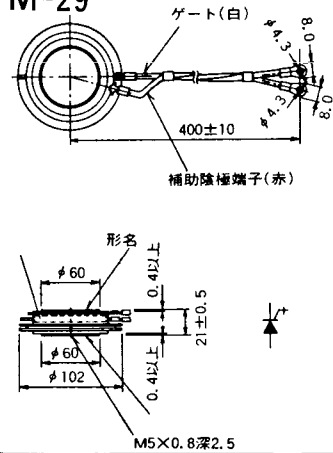
M-27



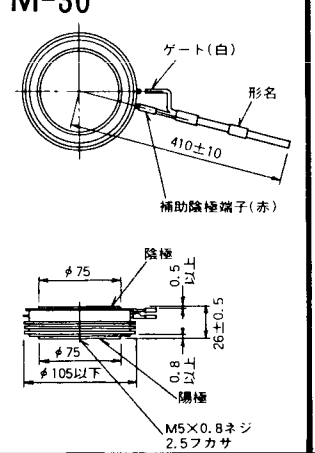
M-28



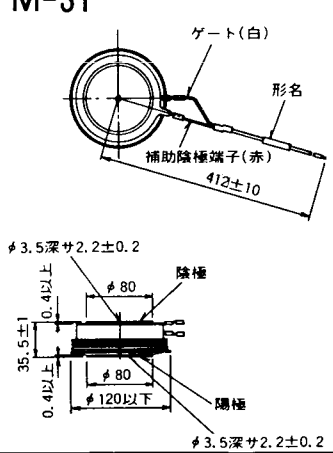
M-29



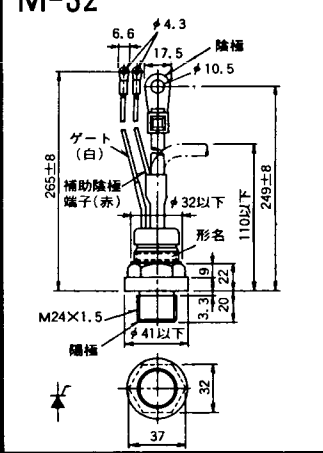
M-30



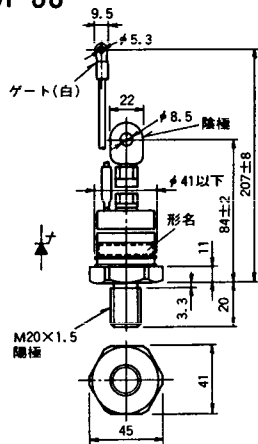
M-31



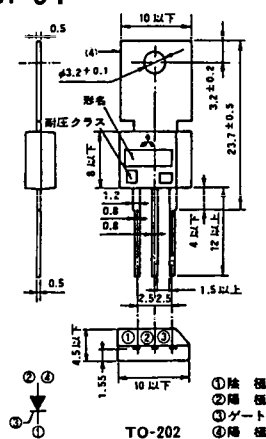
M-32



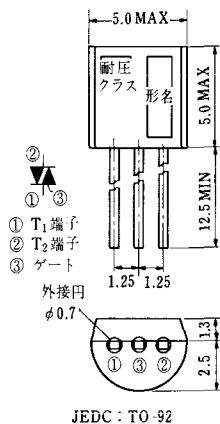
### M-33



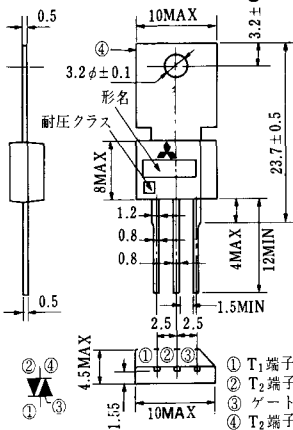
### M-34



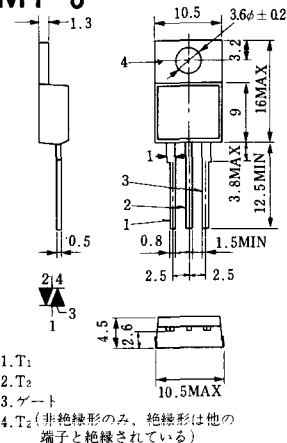
### MT-1



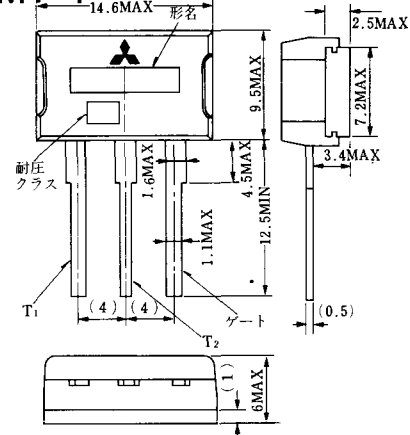
### MT-2



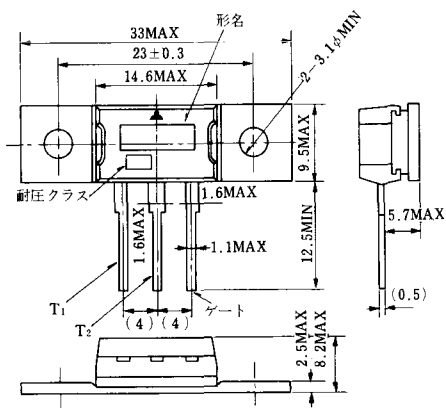
### MT-3



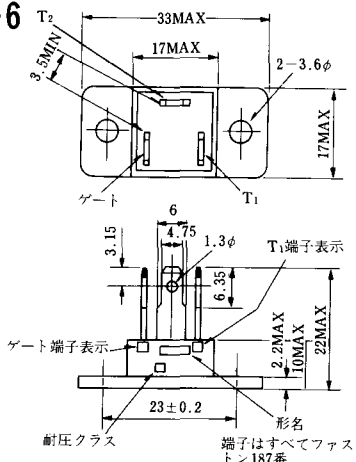
### MT-4



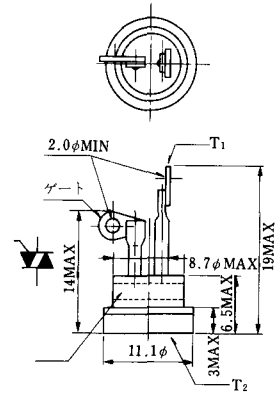
### MT-5



### MT-6

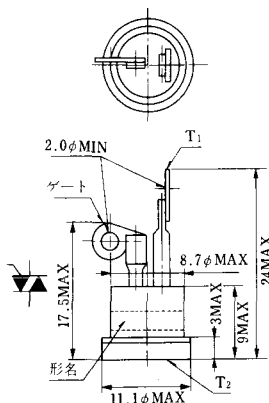


### MT-7

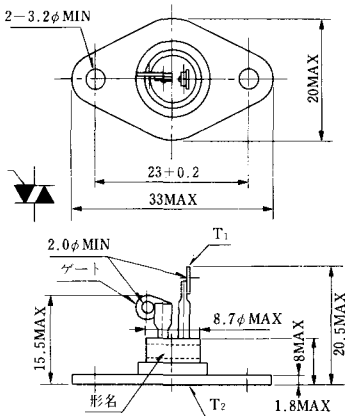




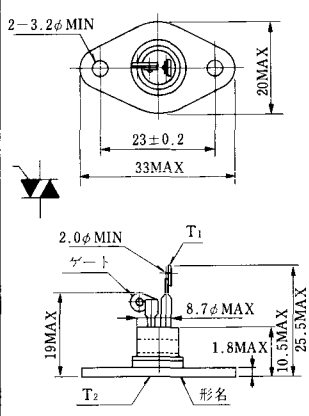
MT-8



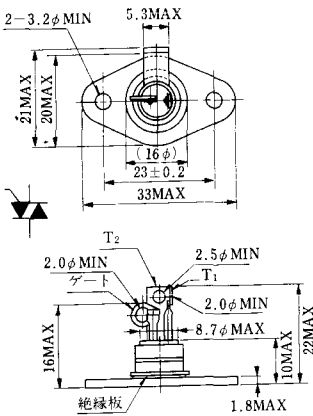
MT-9



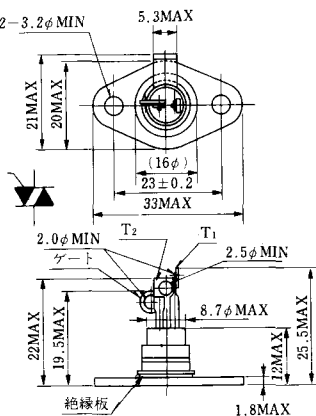
MT-10



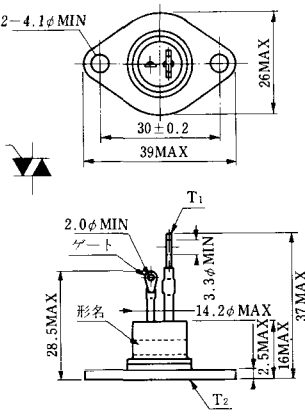
MT-11



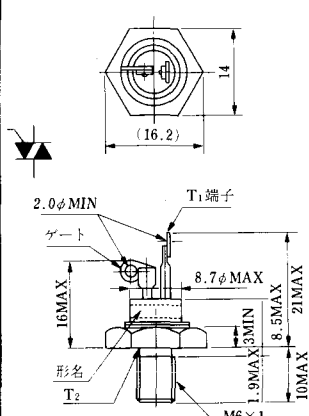
MT-12



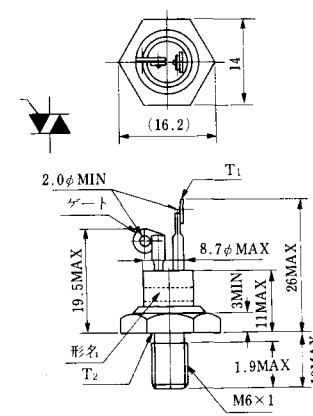
MT-13



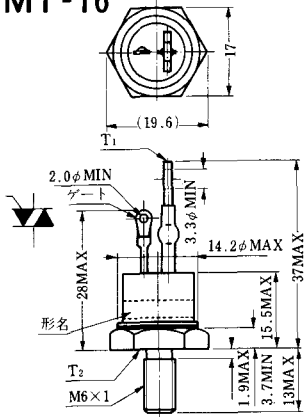
MT-14



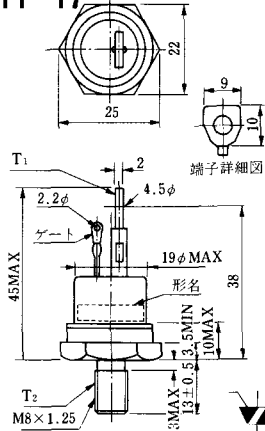
MT-15



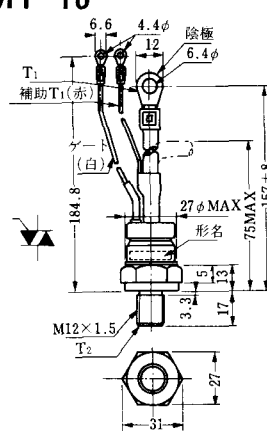
MT-16



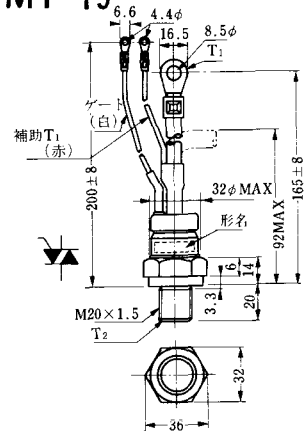
MT-17



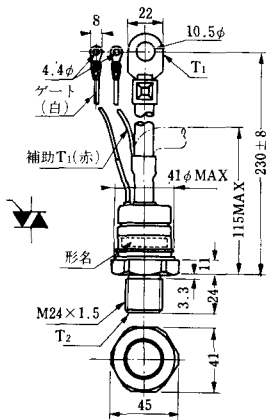
MT-18



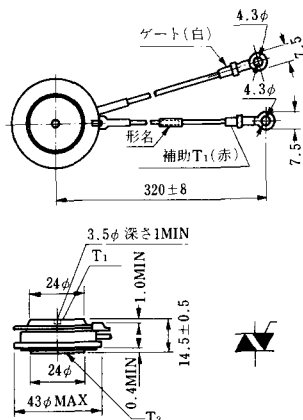
MT-19



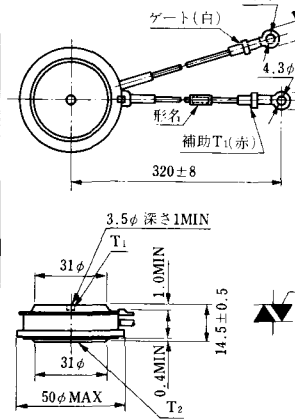
MT-20



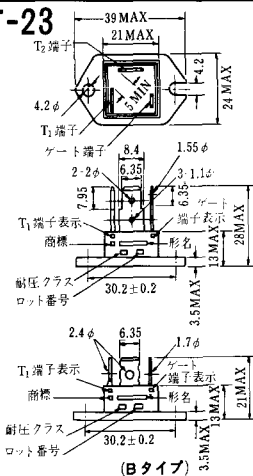
MT-21



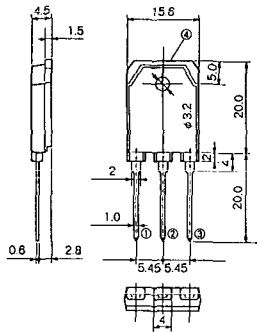
MT-22



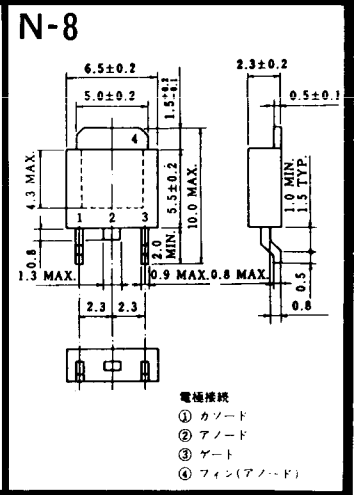
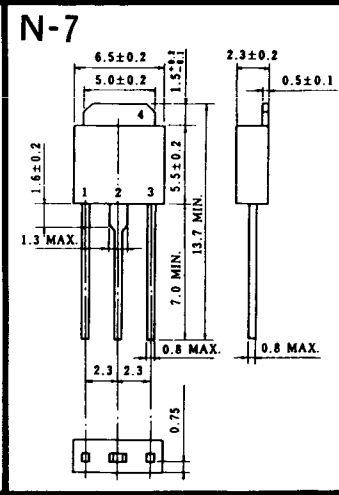
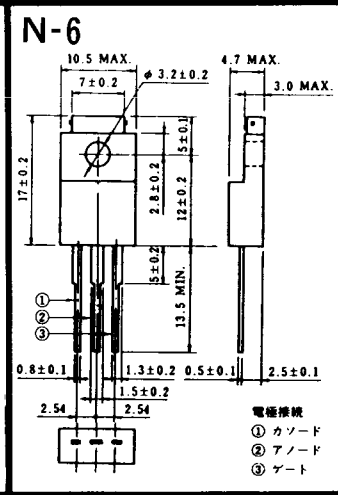
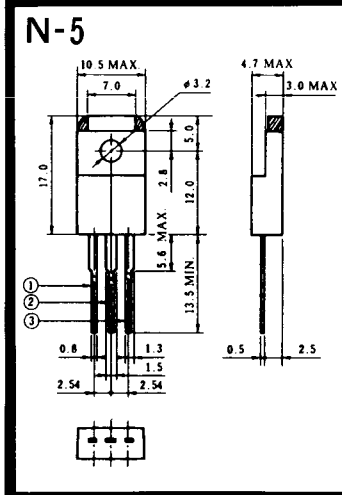
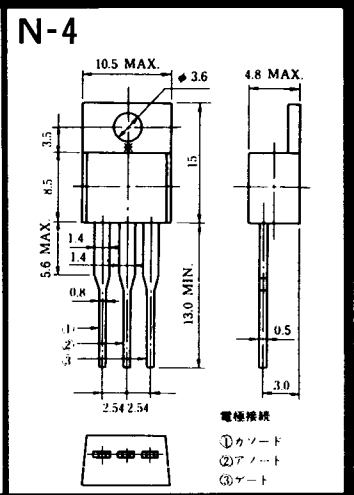
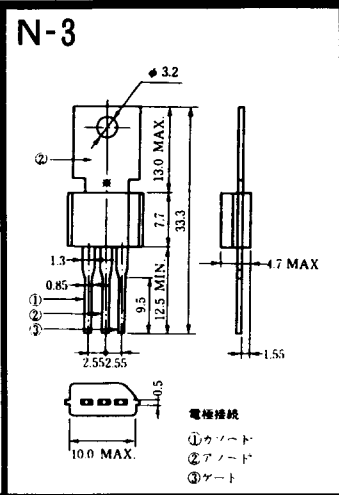
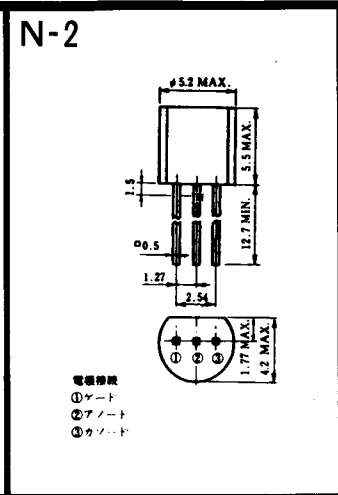
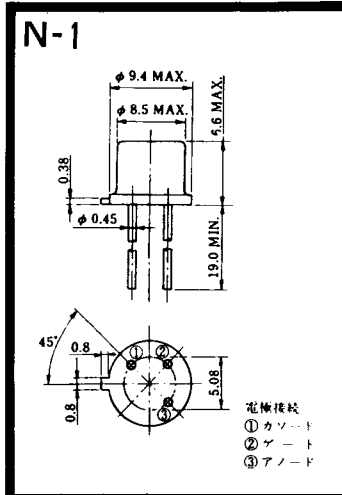
MT-23



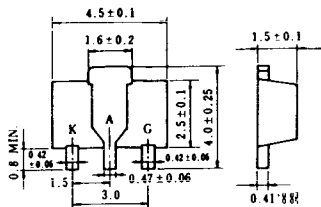
# MT-24



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



N-9



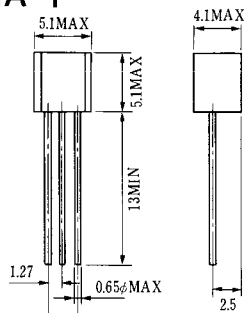
電極接続

K : カソード

A : アノード

G : ゲート

### NA-1

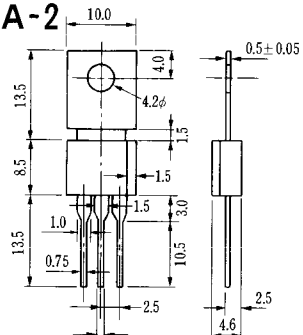


電極接続

1. ゲート
2. アノード
3. カソード

JEDEC: TO-92

### NA-2

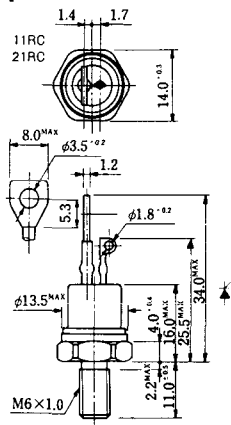


電極接続

1. カソード
2. アノード
3. ゲート

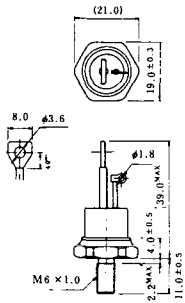
JEDEC: TO-202AA

### NI-1



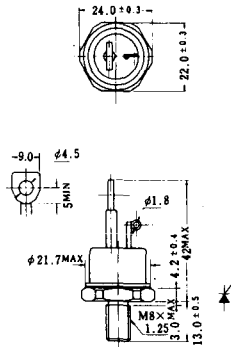
### NI-2

29RD



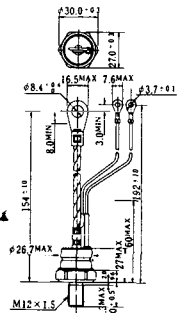
### NI-3

39RC  
59RC  
39RF  
59RF



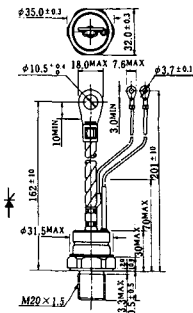
### NI-4

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



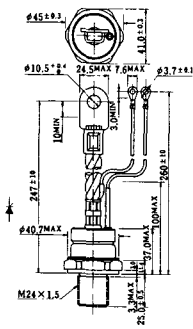
### NI-5

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



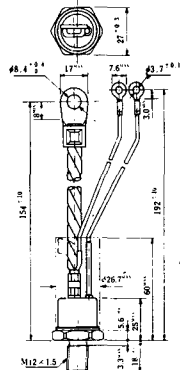
### NI-6

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



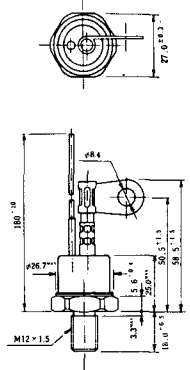
### NI-7

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



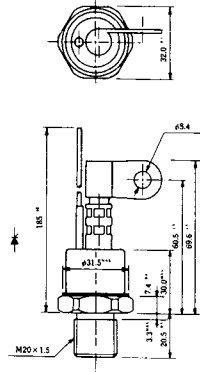
### NI-8

89RW  
129RW



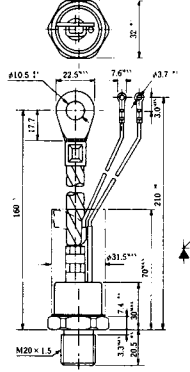
### NI-9

259RW  
309RW



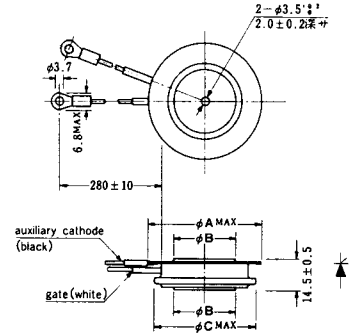
### NI-10

259RW<sub>J</sub>L  
309RW<sub>J</sub>L



### NI-11

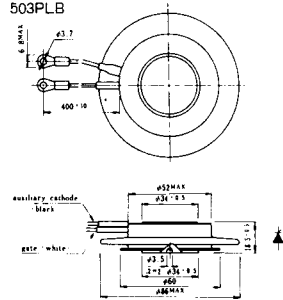
103PA  
253PA  
503PA  
553PA  
803PA  
103PLE  
103PLG  
103PLH  
203PLG  
253PLE  
253PLH  
353PLG  
403PLE  
403PLH



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

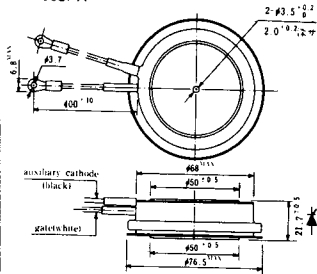
### NI-12

403PAB  
503PAB  
503PLB



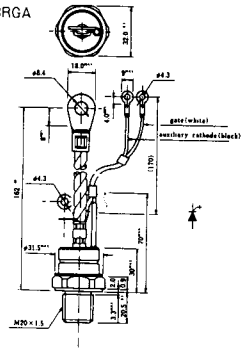
### NI-13

1003PA  
1003PAB  
1003PLF  
1003PLH  
1503PA



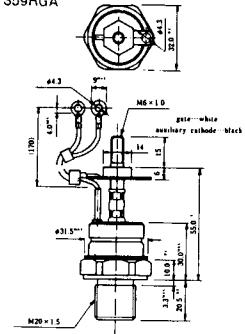
### NI-14

358RGA

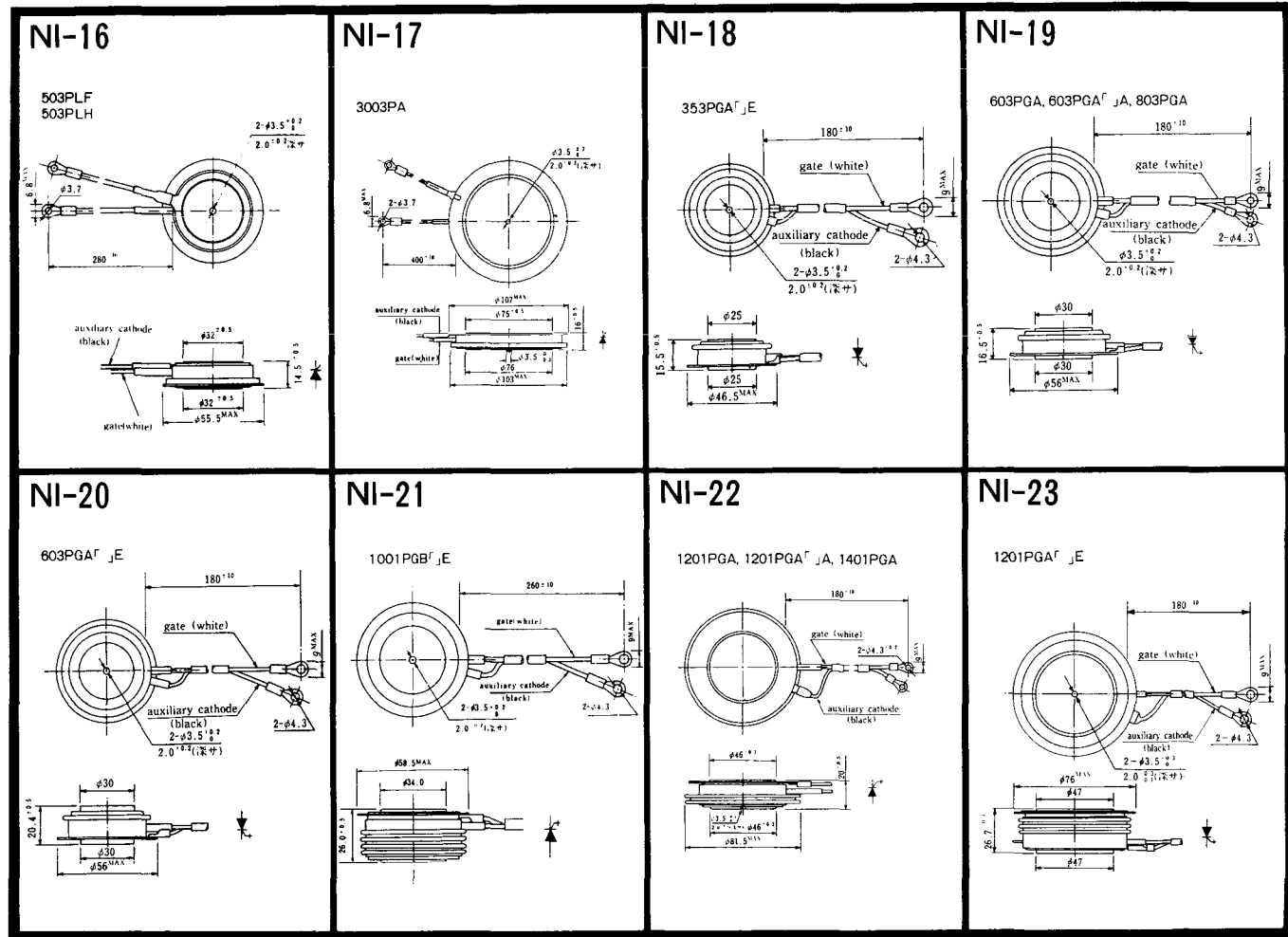


### NI-15

359RGA

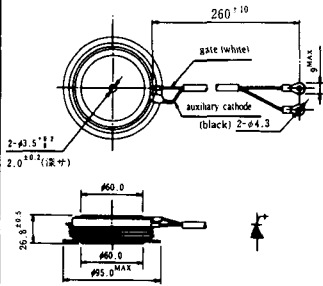






NI-24

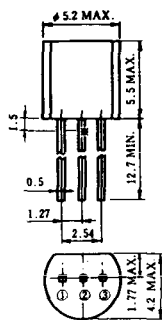
2001PGB<sup>r</sup> JE



NI-25

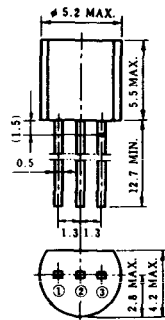
NI-26

### NT-1



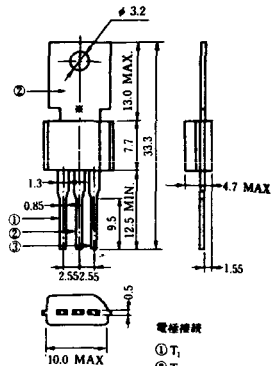
電極接続  
① T<sub>1</sub>  
② ゲート  
③ T<sub>2</sub>

### NT-2



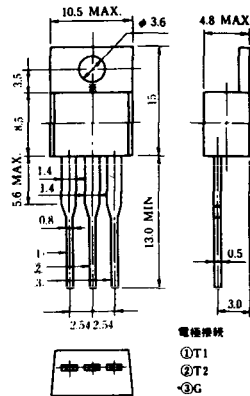
電極接続  
① T<sub>1</sub>  
② ゲート  
③ T<sub>2</sub>

### NT-3



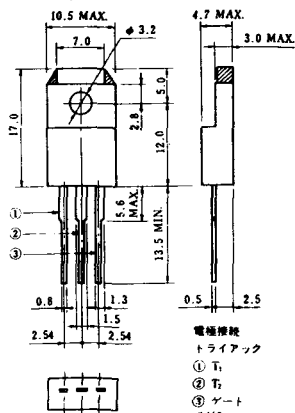
電極接続  
① T<sub>1</sub>  
② T<sub>2</sub>  
③ ゲート

### NT-4



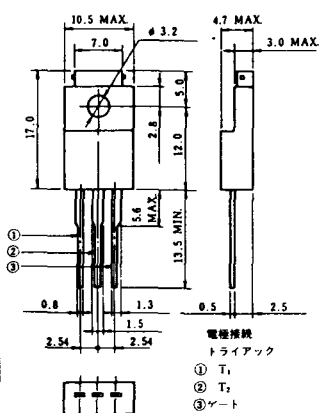
電極接続  
① T<sub>1</sub>  
② T<sub>2</sub>  
③ G

### NT-5



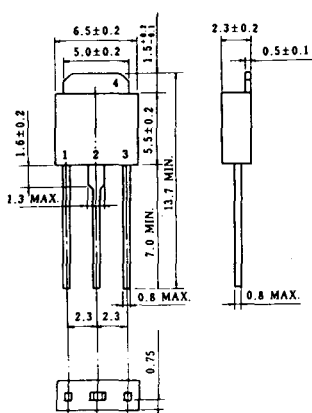
電極接続  
トライアック  
① T<sub>1</sub>  
② T<sub>2</sub>  
③ ゲート  
④ G

### NT-6

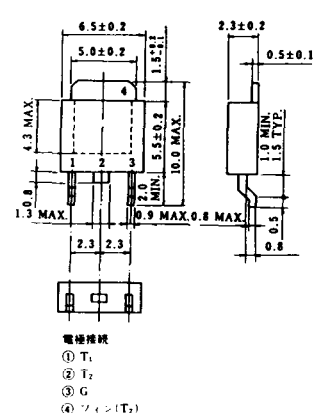


電極接続  
トライアック  
① T<sub>1</sub>  
② T<sub>2</sub>  
③ ゲート  
④ G

### NT-7

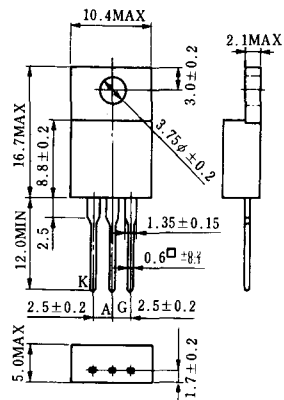


### NT-8

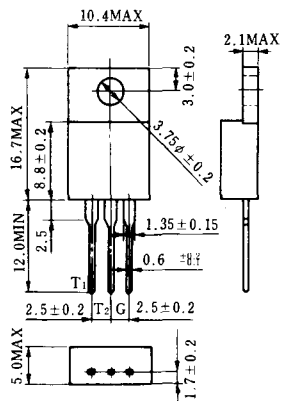


電極接続  
① T<sub>1</sub>  
② T<sub>2</sub>  
③ G  
④ シェン(T<sub>2</sub>)

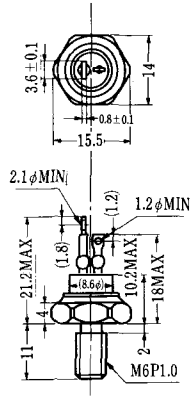
### S-1



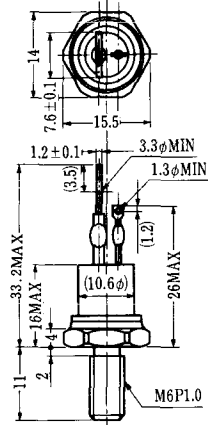
### ST-1



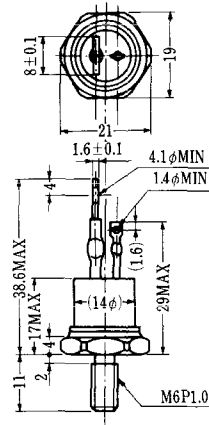
SA-1



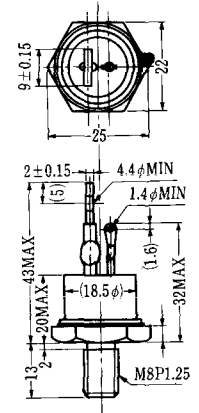
SA-2



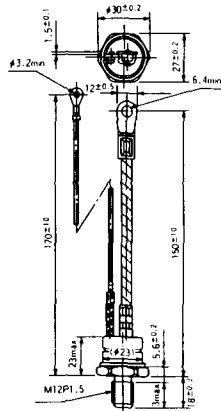
SA-3



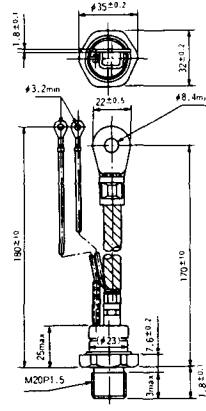
SA-4



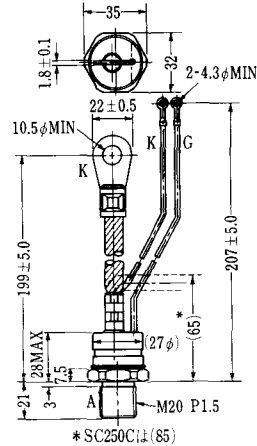
SA-5



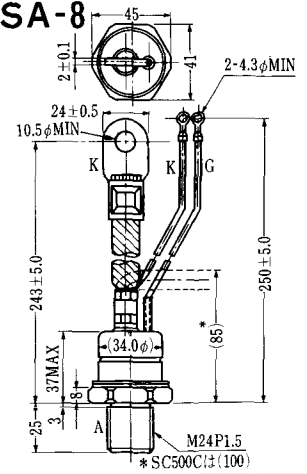
SA-6



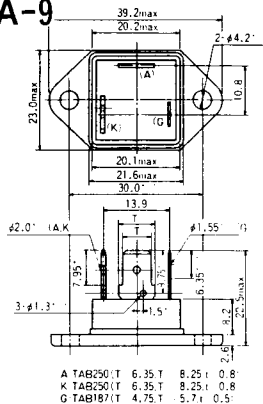
SA-7



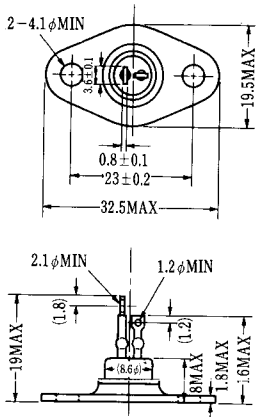
SA-8



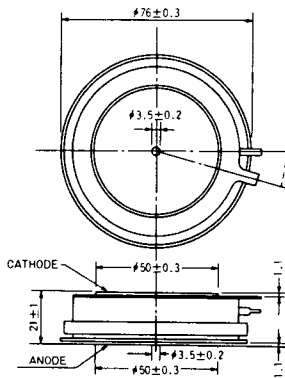
### SA-9



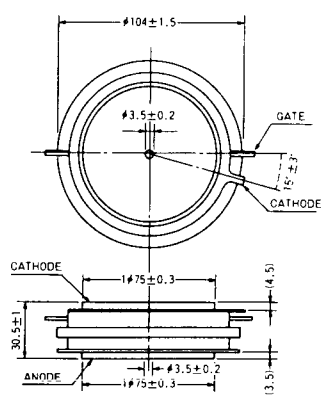
### SA-10



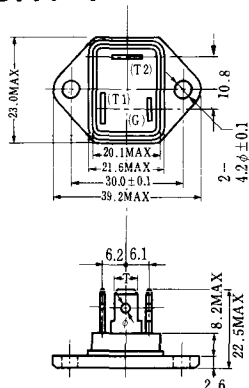
### SA-11



### SA-12

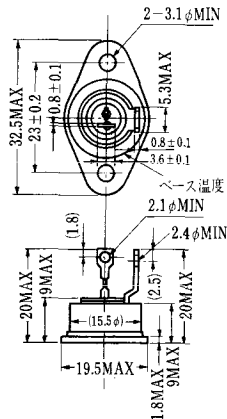


SAT-1

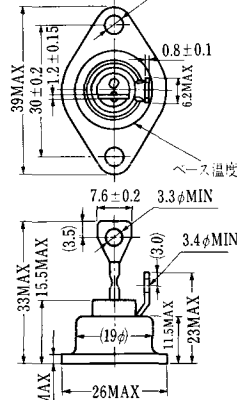


T1 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 T2 端子: フラスト > 250 (T=6.35, t=0.8, φ=1.65)  
 C 端子: フラスト > 187 (T=4.75, t=0.5, φ=1.3)

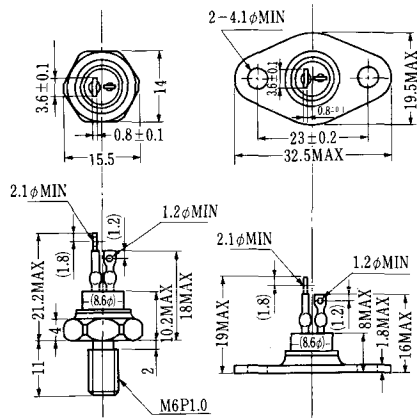
SAT-2



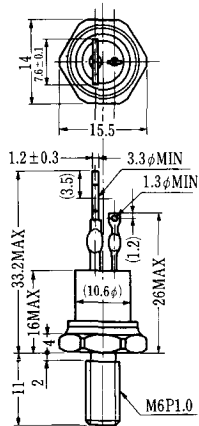
SAT-3



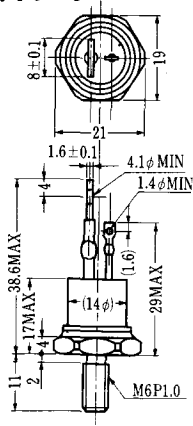
SAT-4



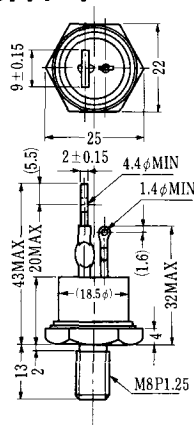
SAT-5



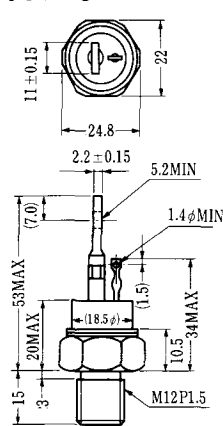
SAT-6



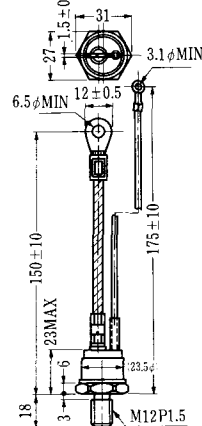
SAT-7



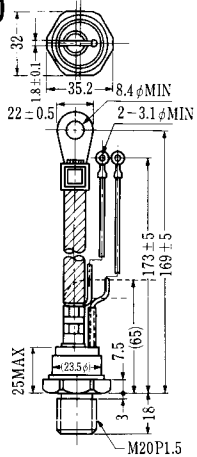
SAT-8



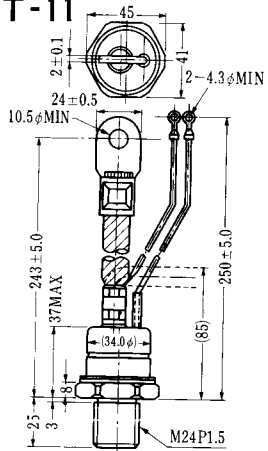
SAT-9



SAT-10

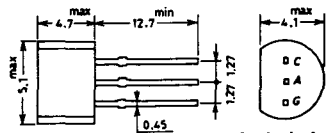


SAT-11



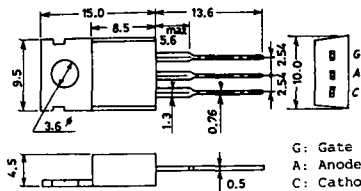


### SY-1 (1096A)



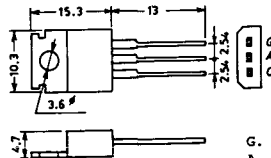
C: Cathode  
A: Anode  
G: Gate

### SY-2 (1151)



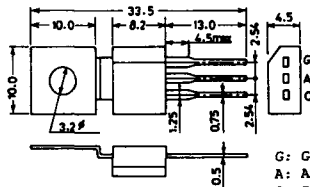
G: Gate  
A: Anode  
C: Cathode

### SY-3 (1104)



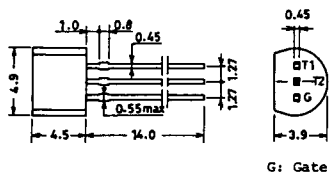
G: Gate  
A: Anode  
C: Cathode

### SY-4 (1150)



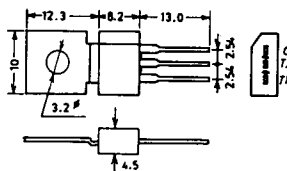
G: Gate  
A: Anode  
C: Cathode

1097A

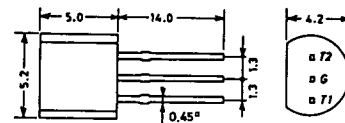


G: Gate

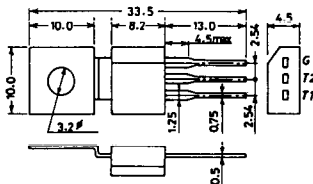
1102



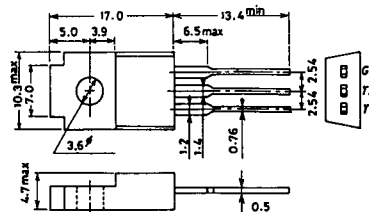
1141



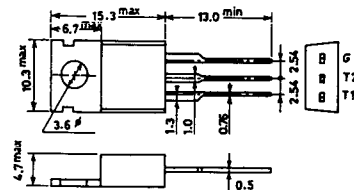
1142



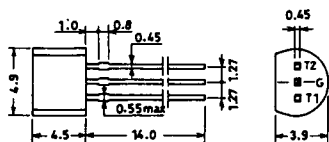
1144



1155

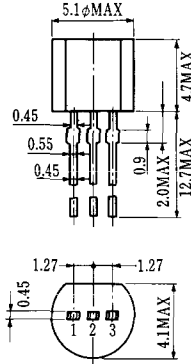


1192A



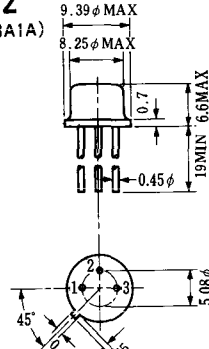
G: Gate

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



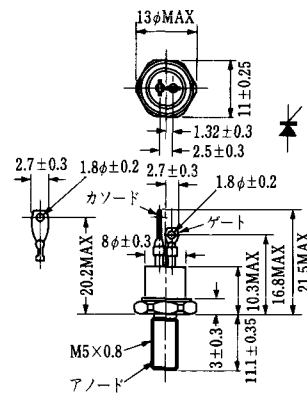
- 1 ゲート
- 2 アノード
- 3 カソード

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



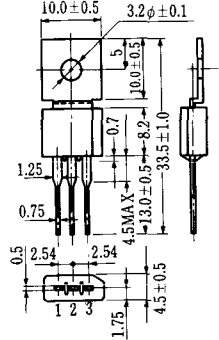
1. カソード
2. ゲート
3. アノード(ケース)

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



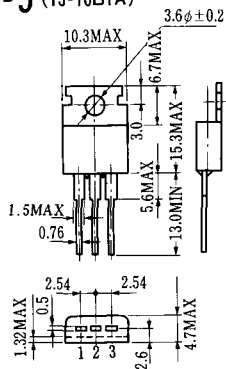
- 1 カソード
- 2 アノード
- 3 ゲート

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



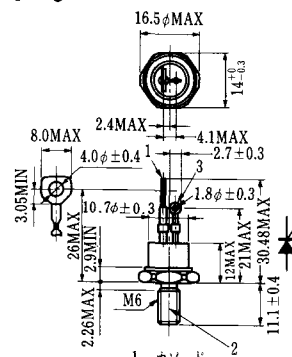
- 1 カソード
- 2 アノード
- 3 ゲート

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



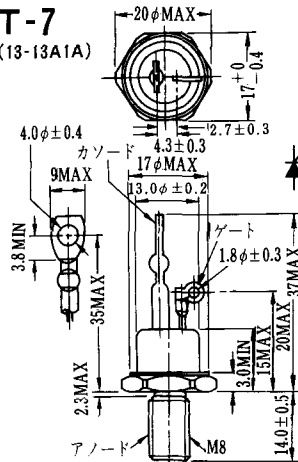
- 1 カソード
- 2 アノード
- 3 ゲート

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



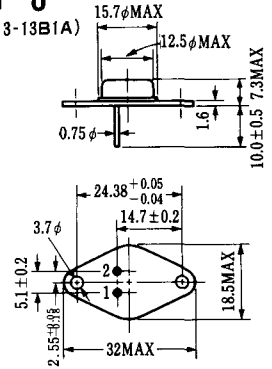
- 1 カソード
- 2 アノード
- 3 ゲート

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



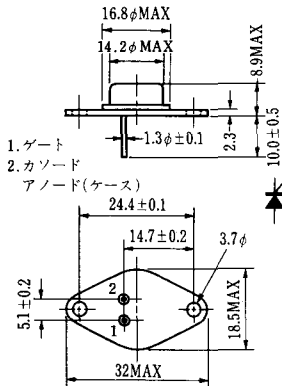
- 1 カソード
- 2 アノード
- 3 ゲート

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



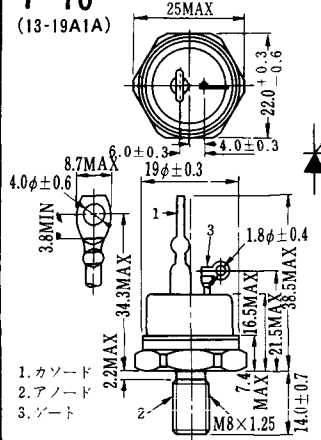
1. ゲート
2. カソード
3. アノード(ケース)

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



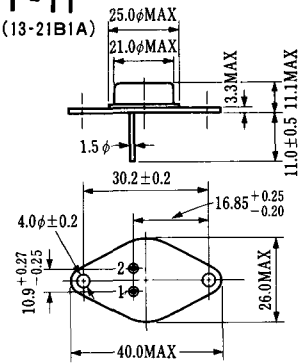
1. ゲート
2. カソード
- アノード(ケース)

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



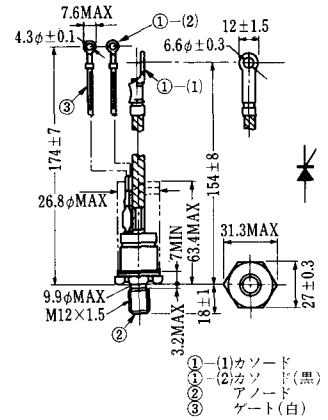
1. カソード
2. アノード
3. ゲート

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



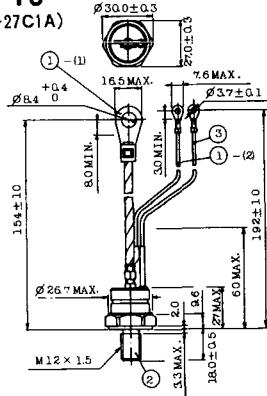
1. ゲート
2. カソード
- アノード(ケース)

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



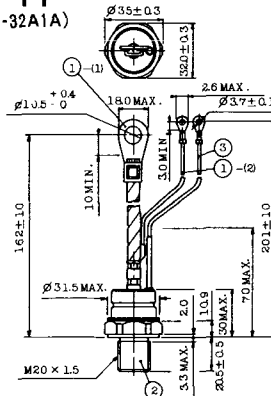
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



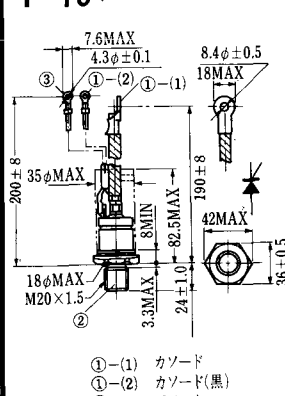
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

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



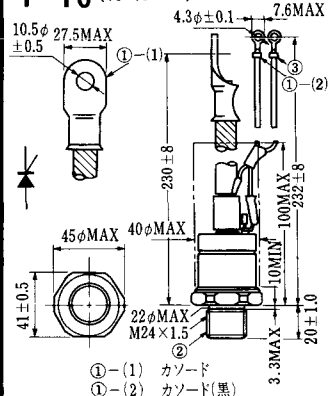
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

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



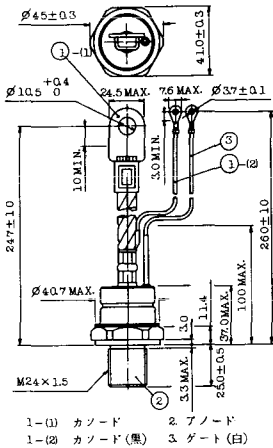
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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

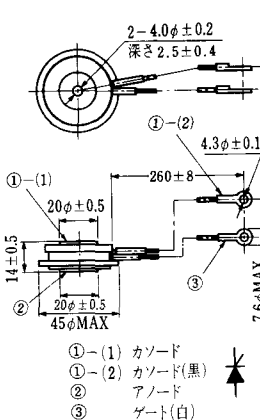


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

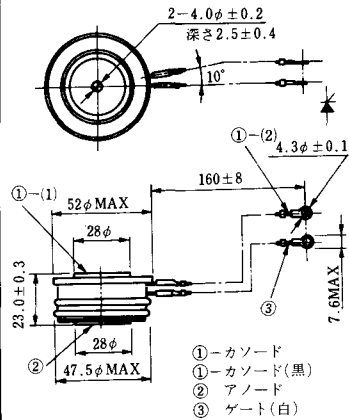
**T-17 (13-42A1A)**



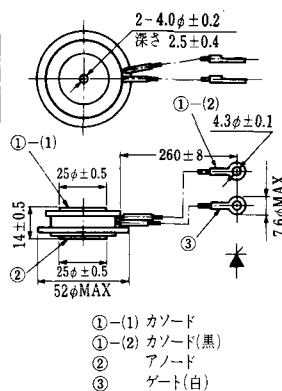
**T-18 (13-45D1A)**



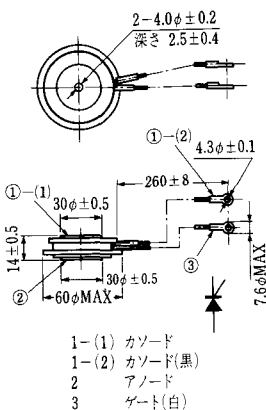
**T-19 (13-52B1A)**



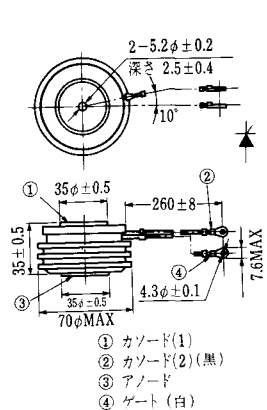
**T-20 (13-52C1A)**



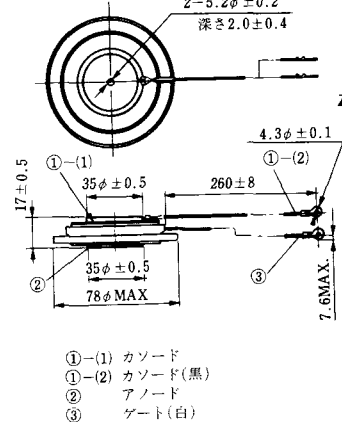
**T-21 (13-60A1A)**



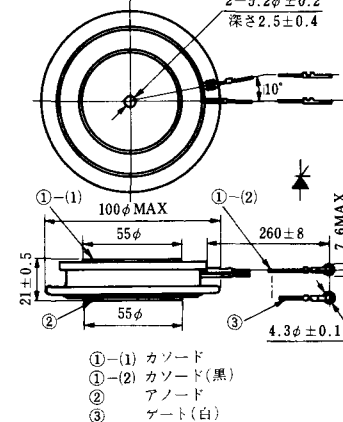
**T-22 (13-70C1A)**



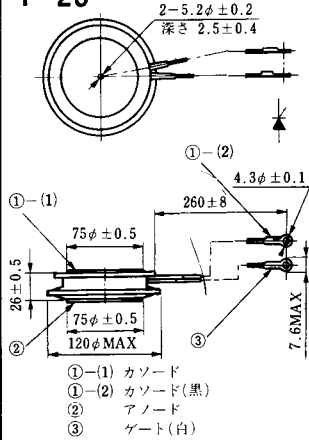
**T-23 (13-78A1A)**



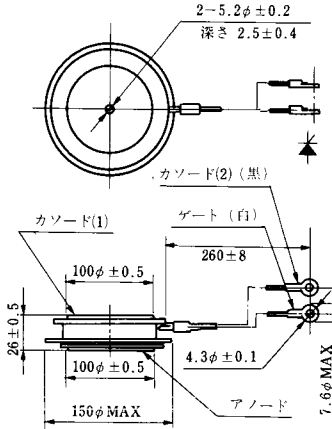
**T-24 (13-100C1A)**



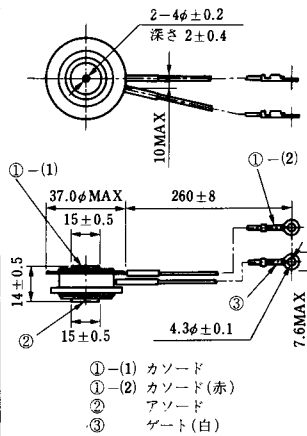
**T-25** (13-120A2A)



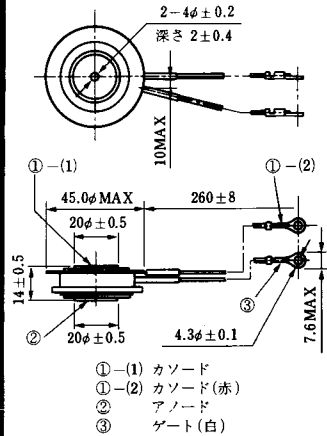
**T-26** (13-150A1A)



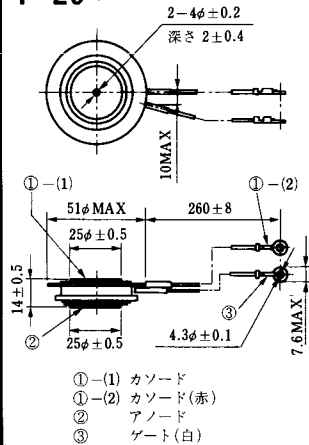
**T-27** (13-37A1A)



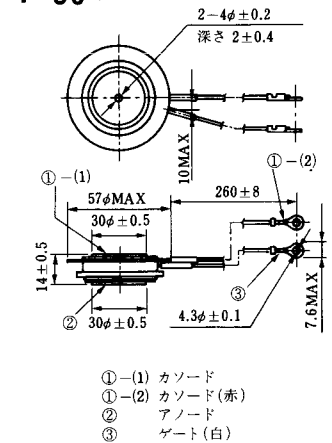
**T-28** (13-45E1A)



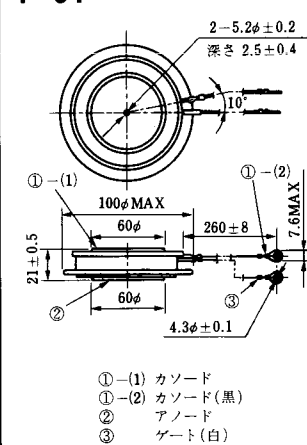
**T-29** (13-51A1A)



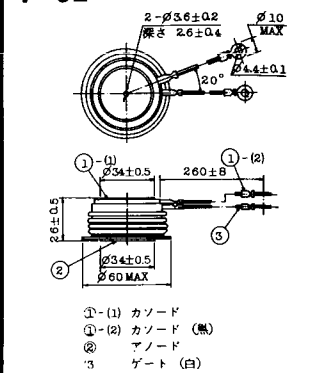
**T-30** (13-57A1A)



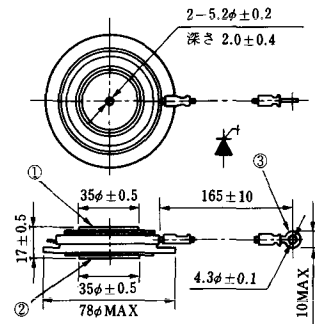
**T-31** (13-100E1A)



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

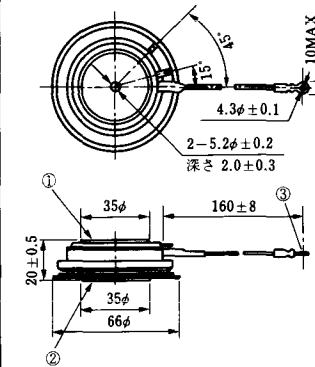


**T-33 (13-78B1A)**



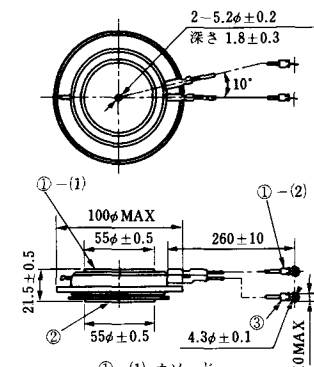
- ① カソード
- ② アノード
- ③ ゲート

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



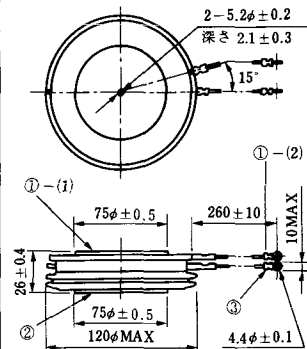
- ① カソード
- ② アノード
- ③ ゲート

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



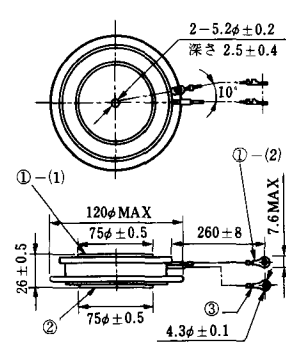
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



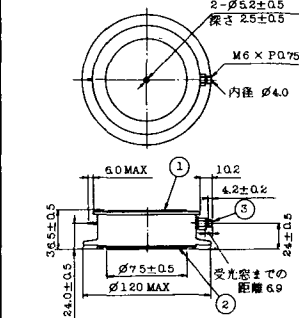
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



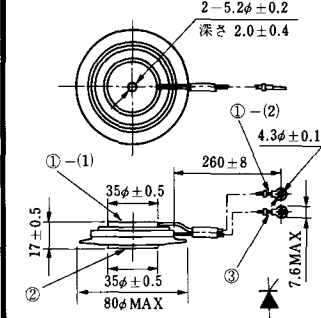
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



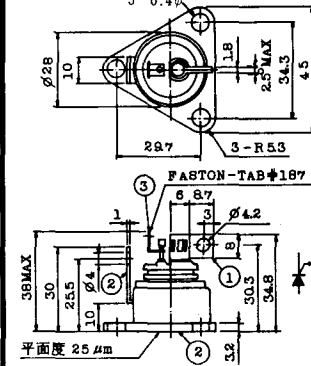
- ① カソード
- ② アノード
- ③ ゲート

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



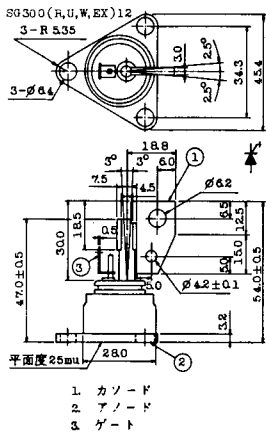
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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

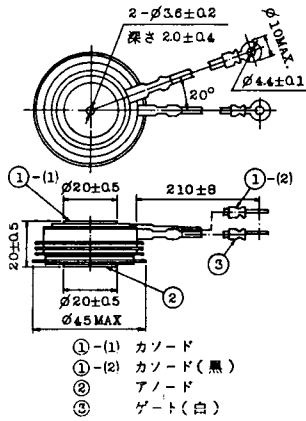


- 1. カソード
- 2. アノード
- 3. ゲート

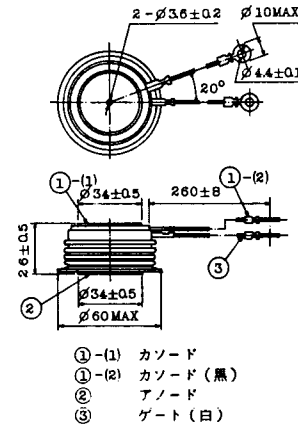
### T-41 (13-28A2A)



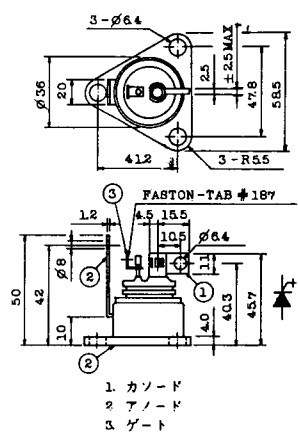
### T-42 (13-45F1A)



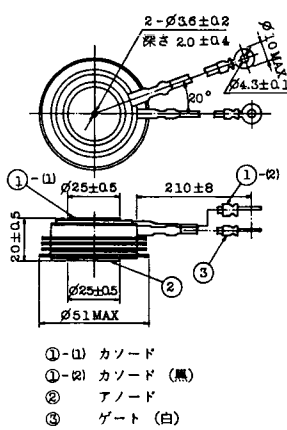
### T-43 (13-60E2A)



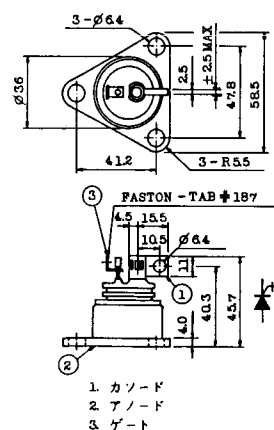
### T-44 (13-36A1A)



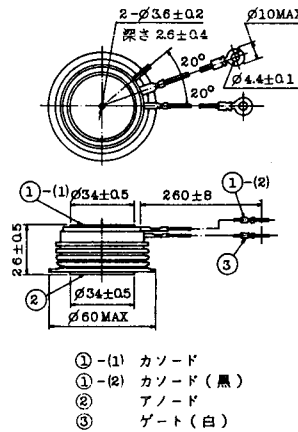
### T-45 (13-51B1A)



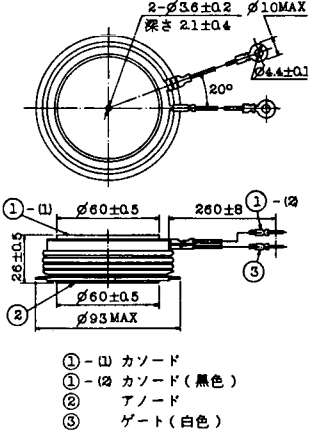
### T-46 (13-36B1A)



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

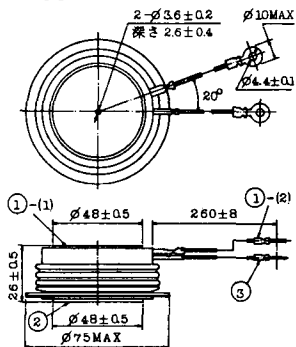


### T-48 (13-93C1A)



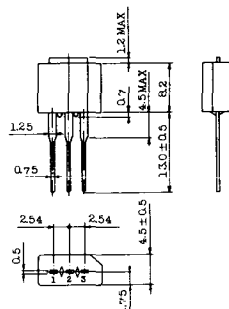


**T-49** (13-75A1A)



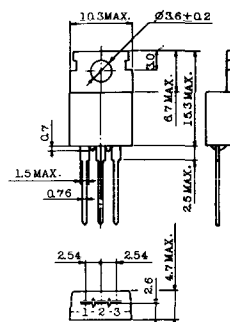
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

**T-50** (13-10A3A)



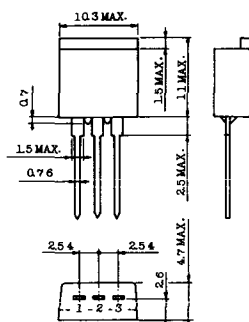
- 1 カソード
- 2 アノード
- 3 ゲート

**T-51** (13-10D1A)



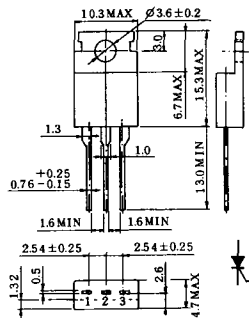
- 1 カソード
- 2 アノード
- 3 ゲート

**T-52** (13-10D2A)



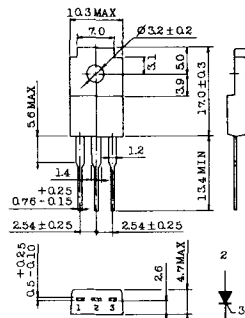
- 1 カソード
- 2 アノード
- 3 ゲート

**T-53** (13-10E1B)



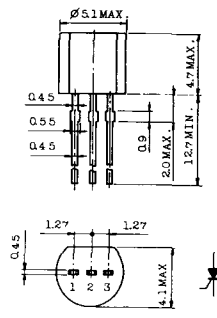
- 1 カソード
- 2 アノード
- 3 ゲート

**T-54** (13-10F1B)



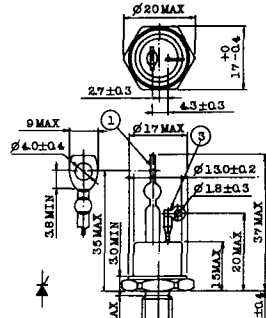
- 1 カソード
- 2 アノード
- 3 ゲート

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



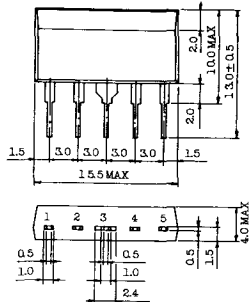
- 1 カソード
- 2 アノード
- 3 アノード

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



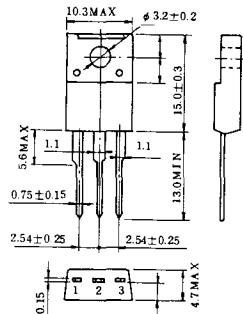
- 1 カソード
- 2 アノード
- 3 ゲート

T-57 (12-16C1A)



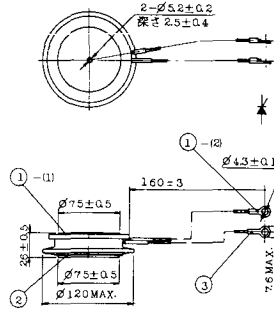
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



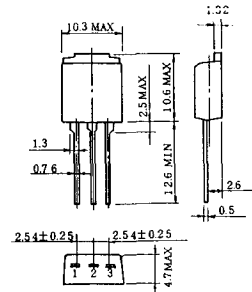
1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



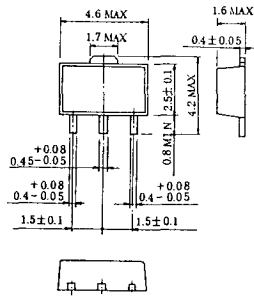
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



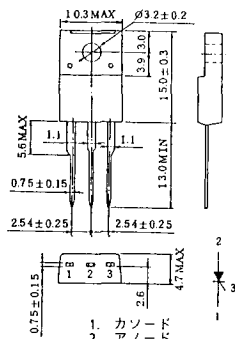
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



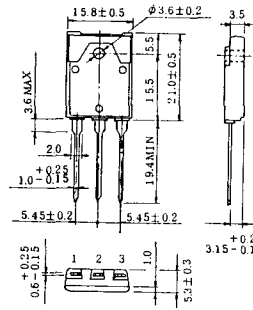
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



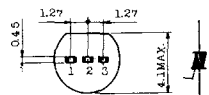
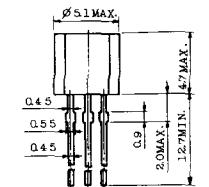
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



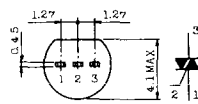
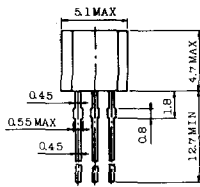
1. カソード
2. アノード
3. ゲート

TT-1



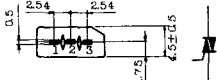
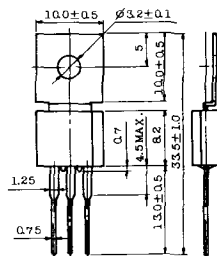
- 1 ゲート
- 2 T<sub>2</sub>
- 3 T<sub>1</sub>

TT-2



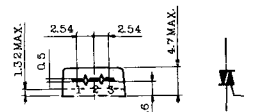
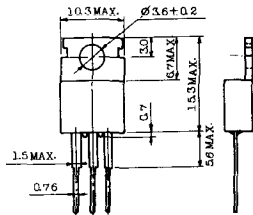
- 1 T<sub>1</sub>
- 2 ゲート
- 3 T<sub>2</sub>

TT-3



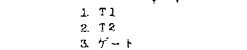
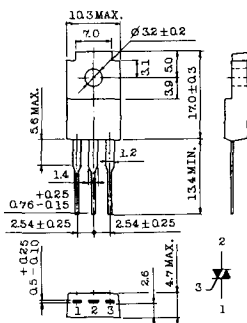
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-4



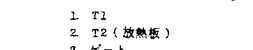
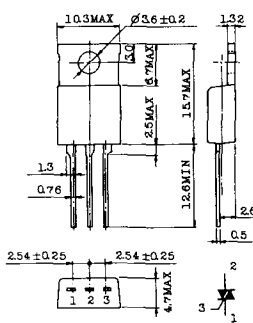
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-5



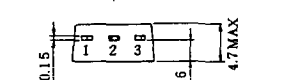
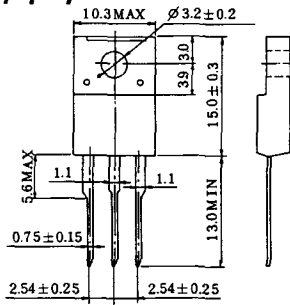
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-6



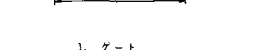
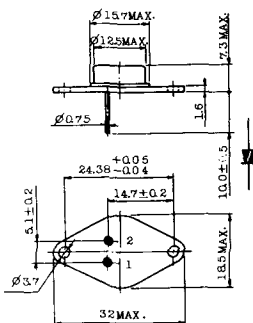
- 1 T<sub>1</sub>
- 2 T<sub>2</sub> (放熱板)
- 3 ゲート

TT-7



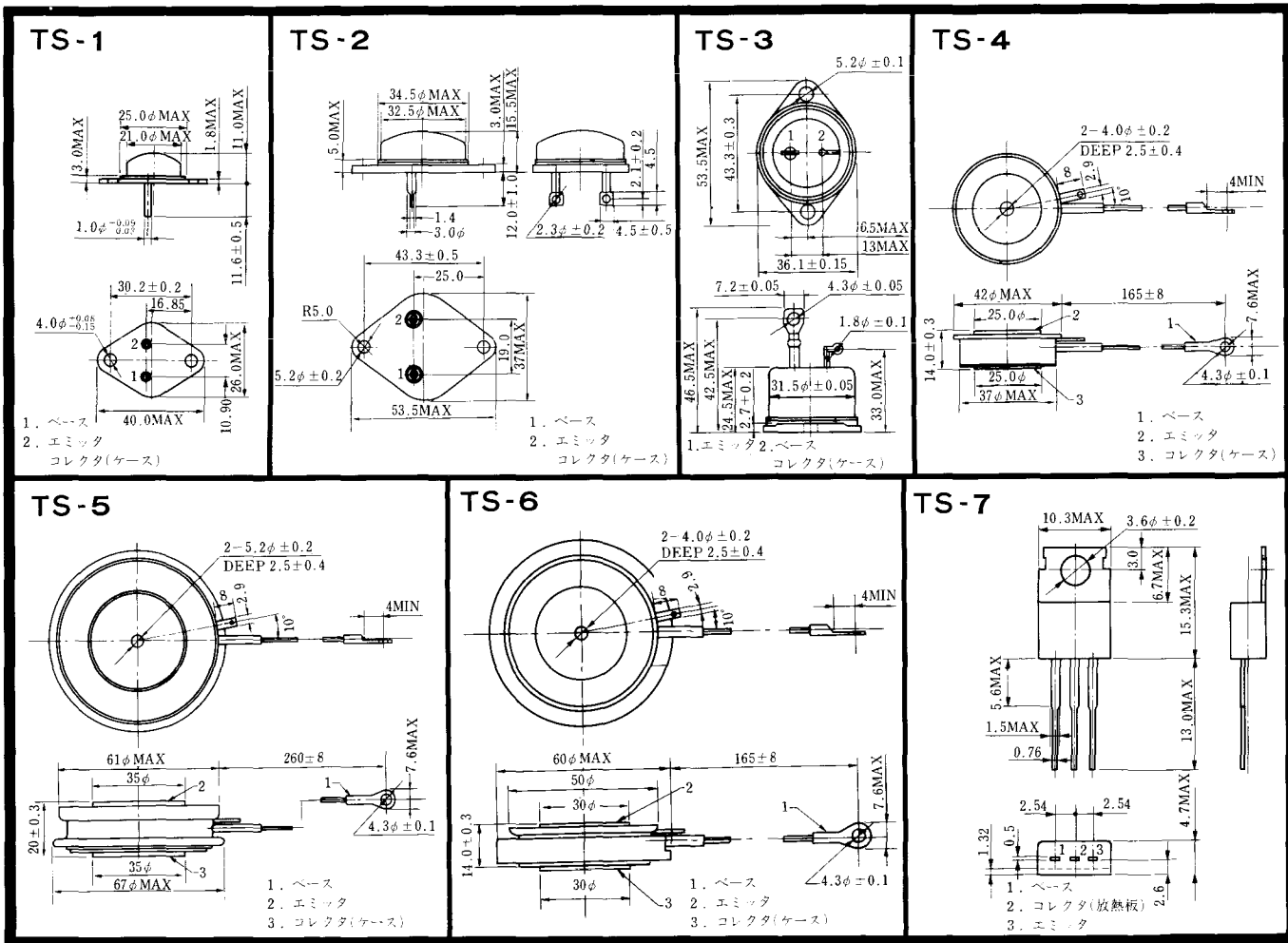
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-8

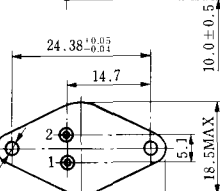
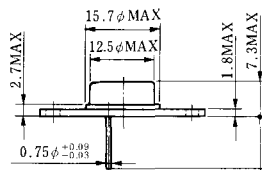


- 1 ゲート
- 2 T<sub>1</sub>
- T<sub>2</sub> (ケース)



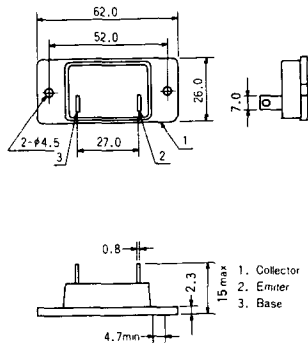


TS-8

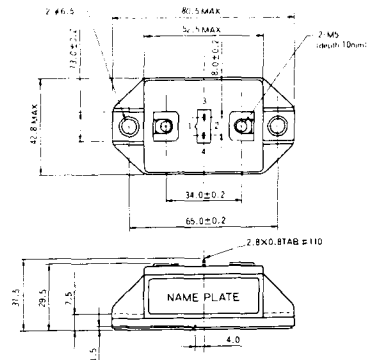


1. ベース
2. エミッタ  
コレクタ  
(ケース)

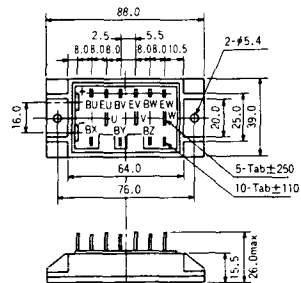
### S-62A1A



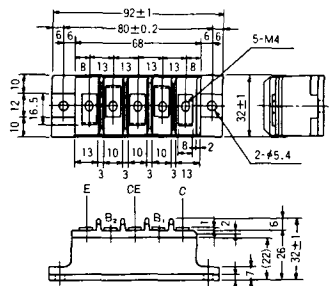
### S-80A1A



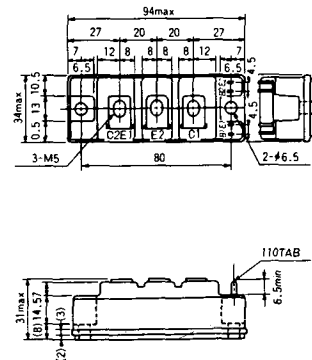
### S-88D1A



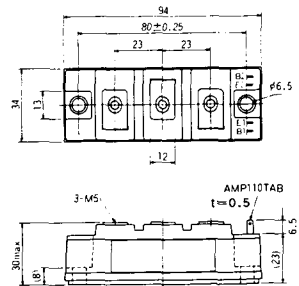
### S-92B1A



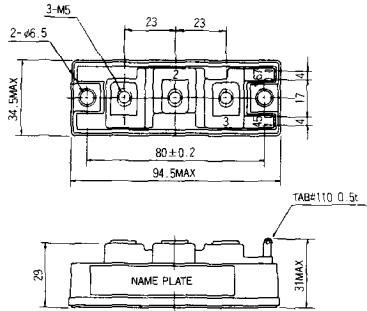
### S-94B1A



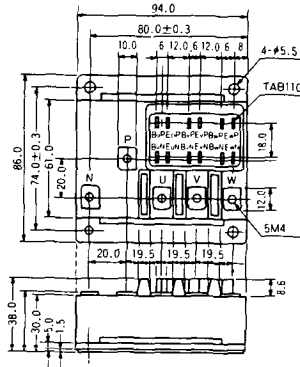
### S-94B1B



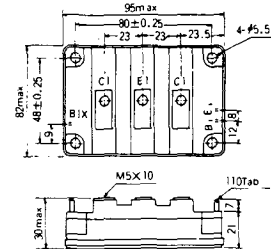
S-94B2A



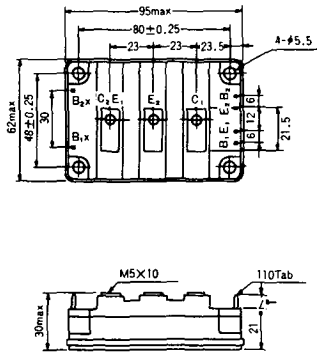
S-94D1A



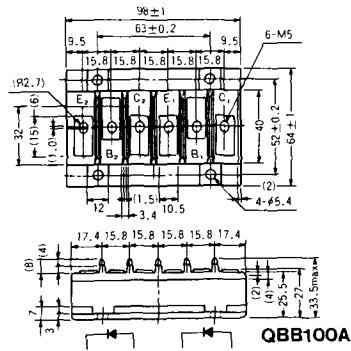
S-95A1A



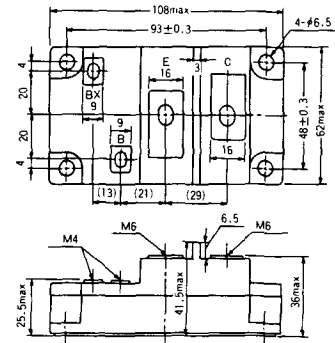
S-95B1A



S-98B1B

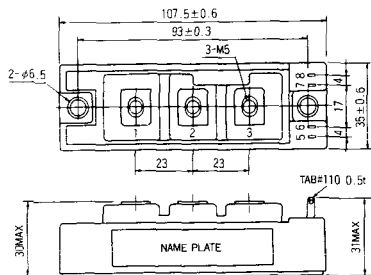


S-108A2A

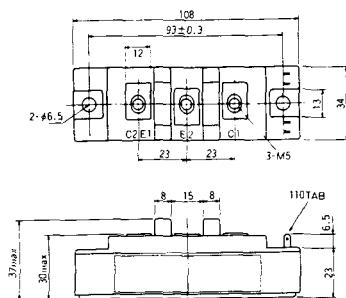




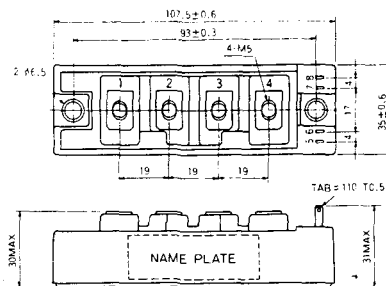
### S-108B1A



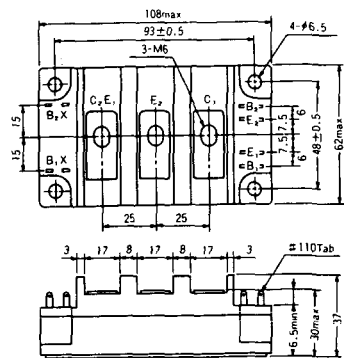
### S-108B1B



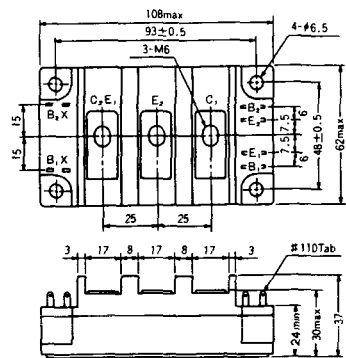
### S-108B1C



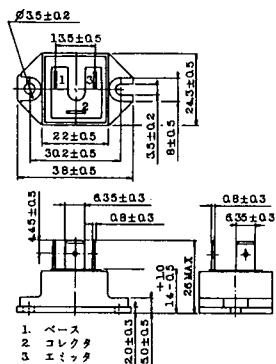
### S-108B2A



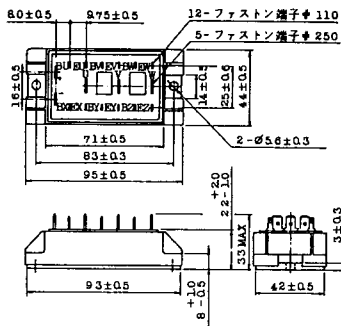
### S-108B2B



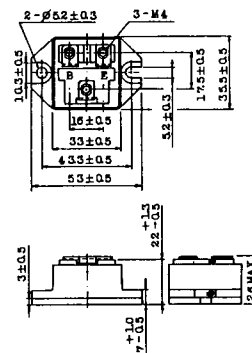
### 2-22B1A



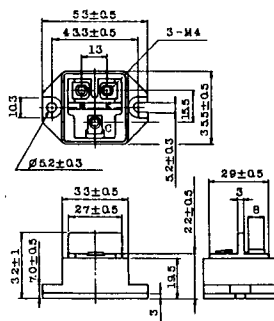
### 2-27A4A



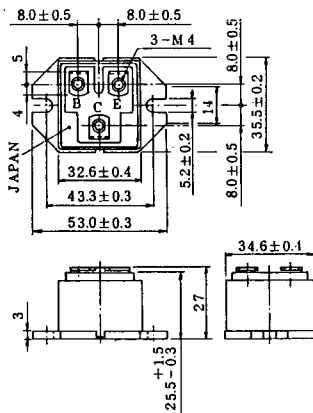
### 2-33C1A



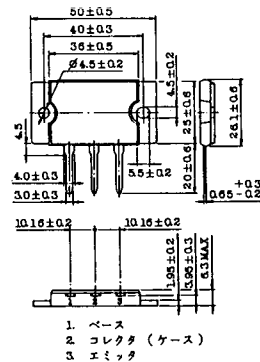
### 2-33D1A



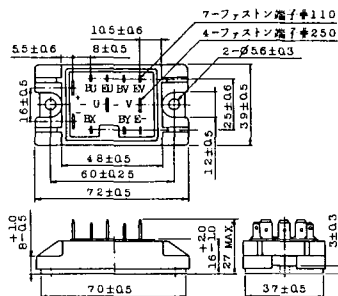
### 2-33F1A



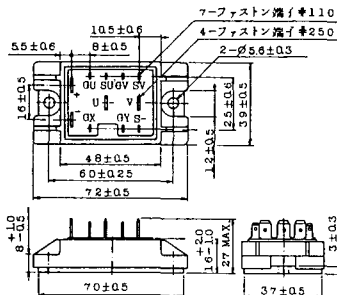
### 2-37A1A



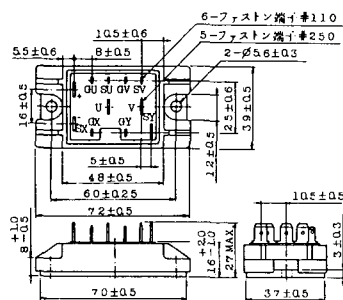
2-48A3A



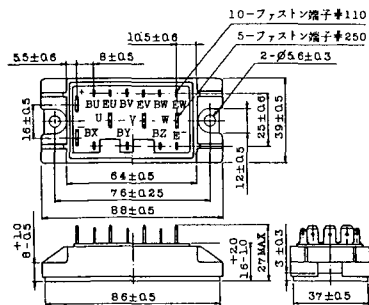
2-48A3B



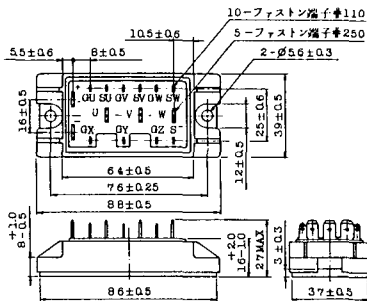
2-48A4A



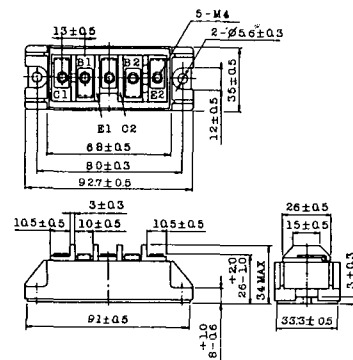
2-64A2A



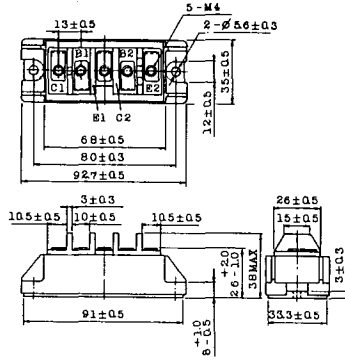
2-64A2B



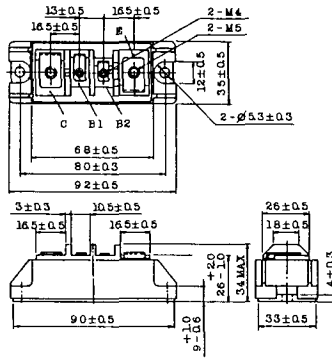
2-68A2A



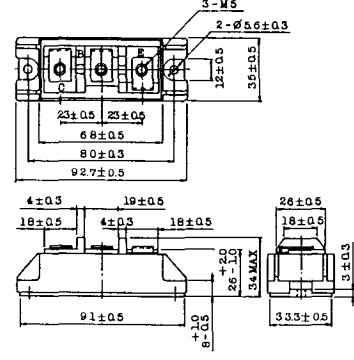
2-68B2A



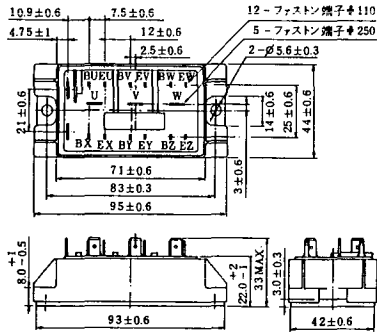
2-68C1A



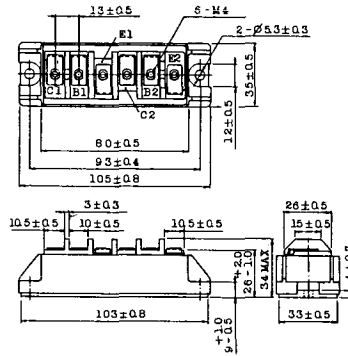
2-68D2A



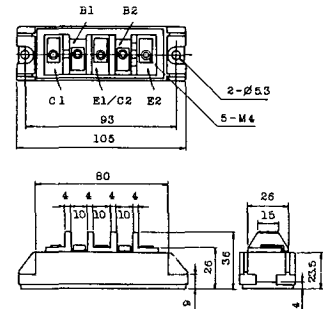
2-72A3A



2-80A1A

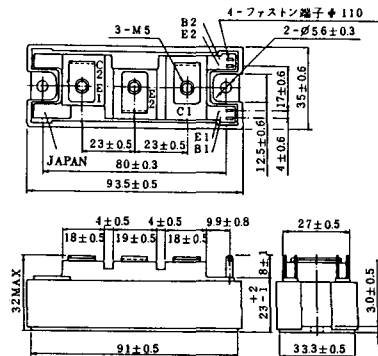


2-80B1A

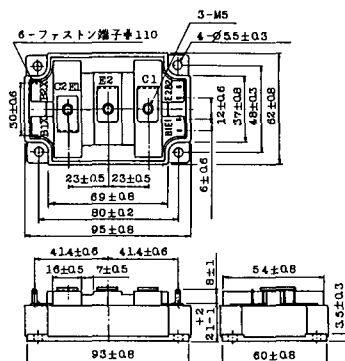




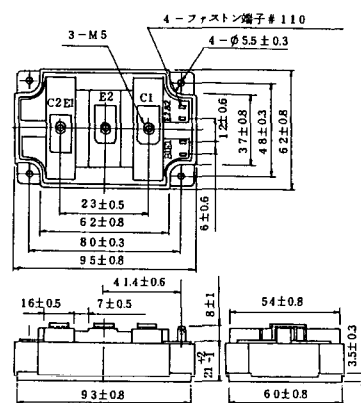
### 2-94D1A



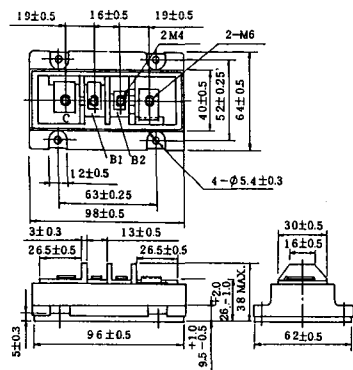
### 2-96A3A



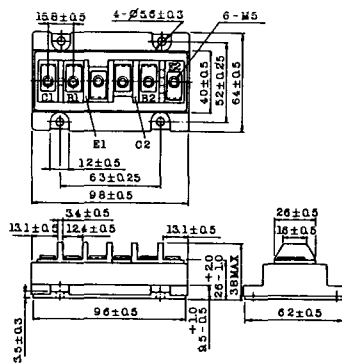
### 2-96A4A



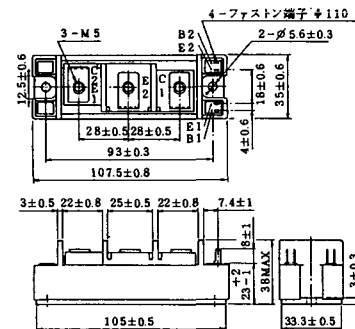
### 2-98B1A



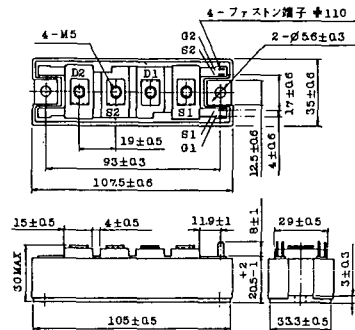
### 2-98C2A



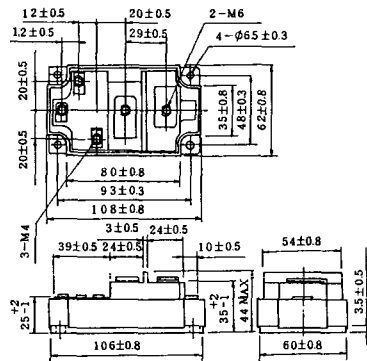
### 2-108A2A



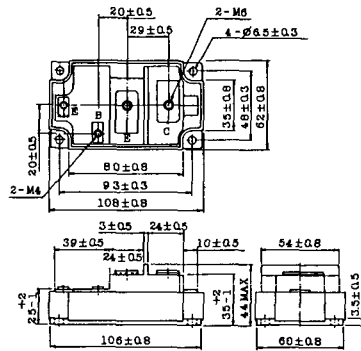
### 2-108B1A



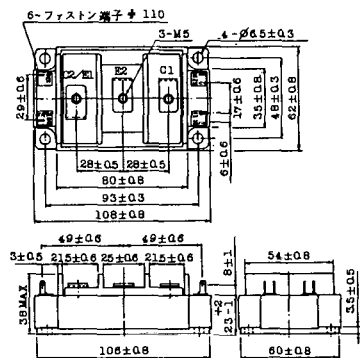
### 2-109A3A



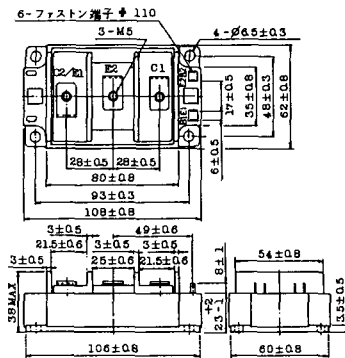
### 2-109A4A



### 2-109B3A

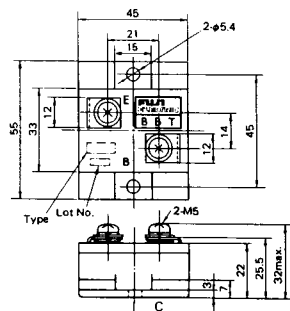


### 2-109B4A



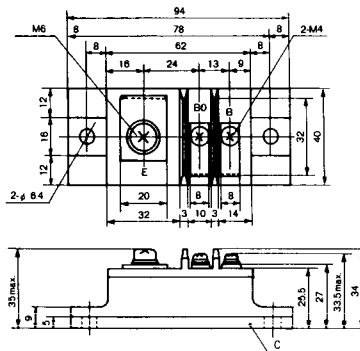
### BBT-II

BBTII  
1D200A-020



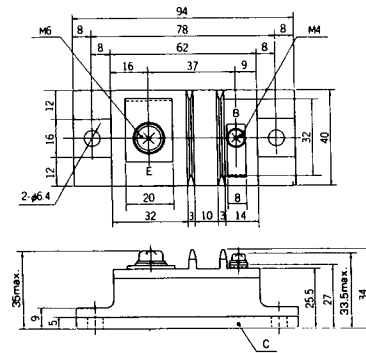
### BBT-III

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



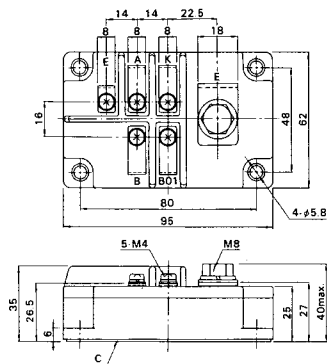
### BBT-III

BBTIII  
ETN01-055  
ET1257



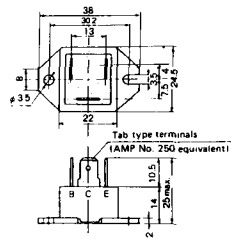
### BBT-IV

BBTIV  
1D500A-030

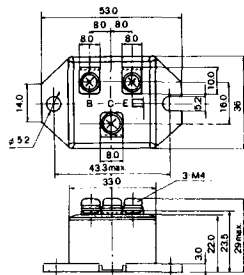




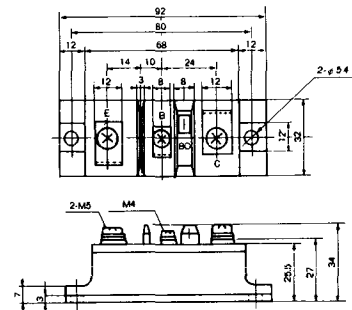
M-101



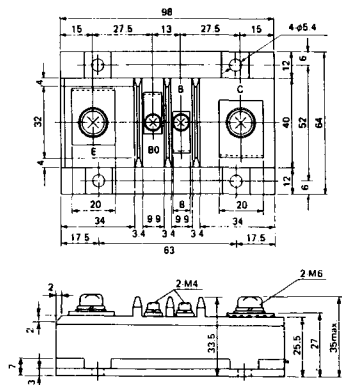
M-102



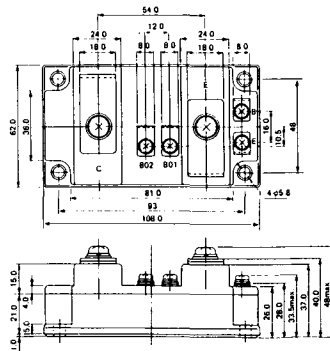
M-103



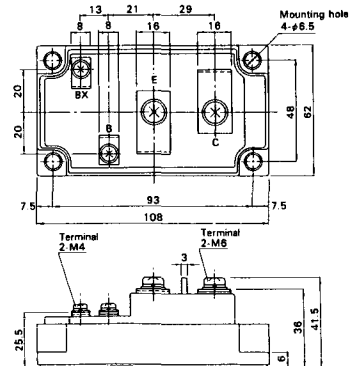
M-104



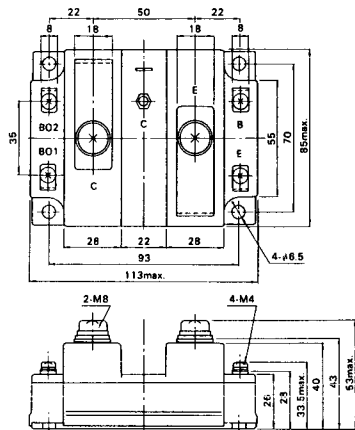
M-105



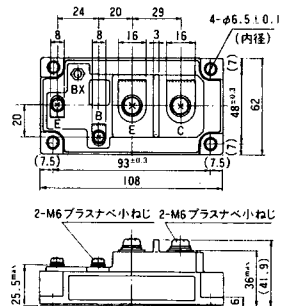
M-106



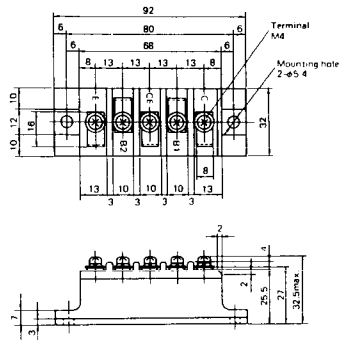
### M-107



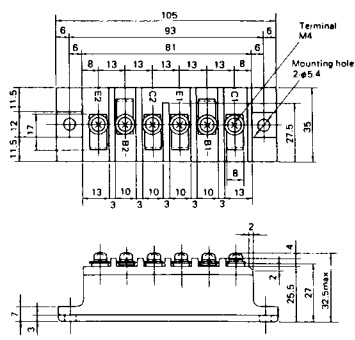
### M-116



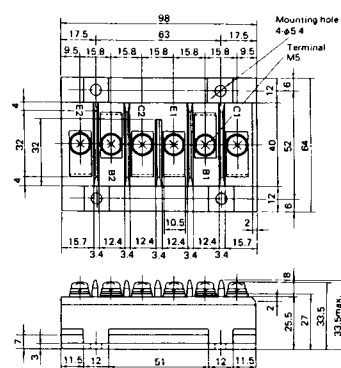
M-201



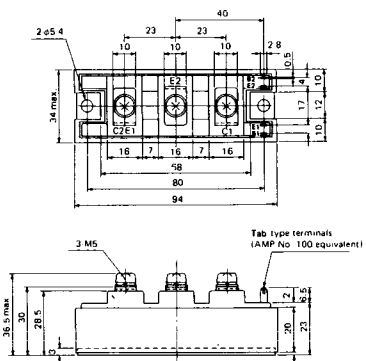
M-202



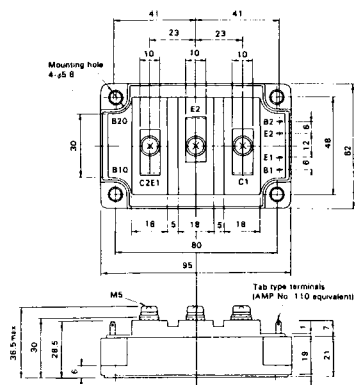
M-203



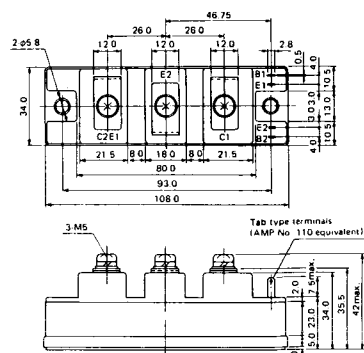
M-204



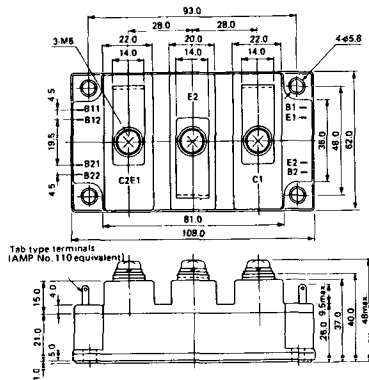
M-205



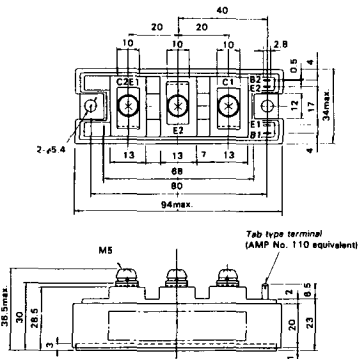
M-206



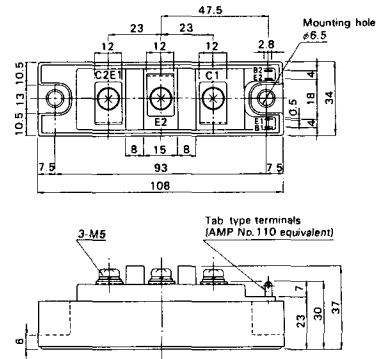
M-207



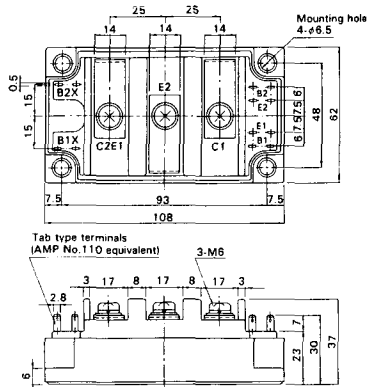
M-208



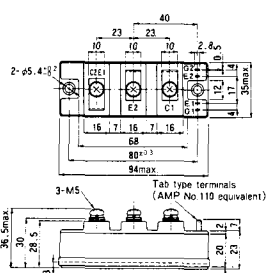
M-209



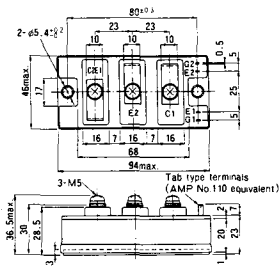
M-210



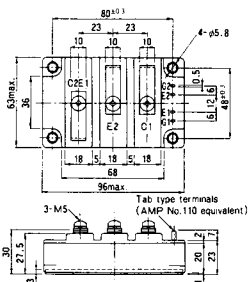
M-211



M-212

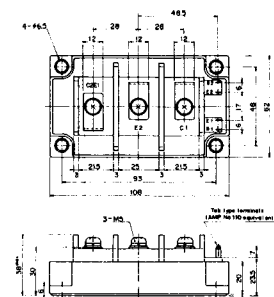


M-213

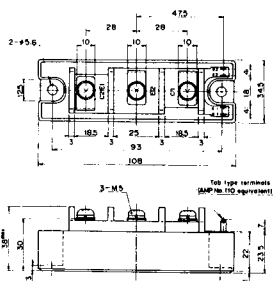


M-214

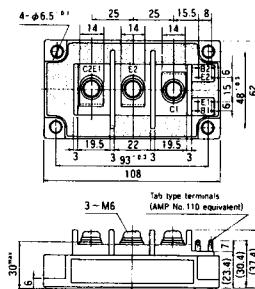
M-215



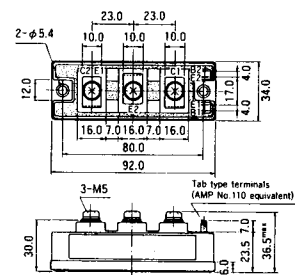
M-216



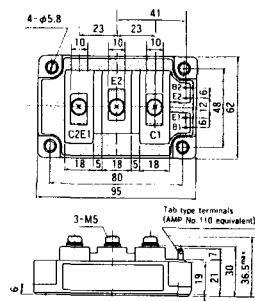
M-217



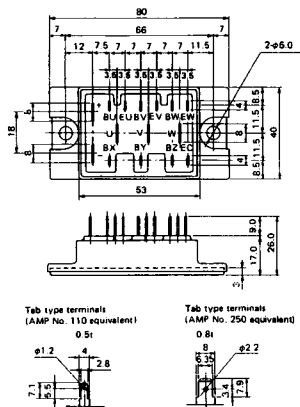
M-218



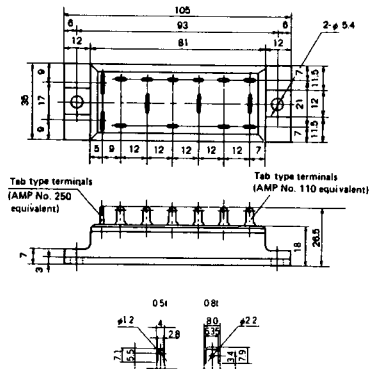
M-219



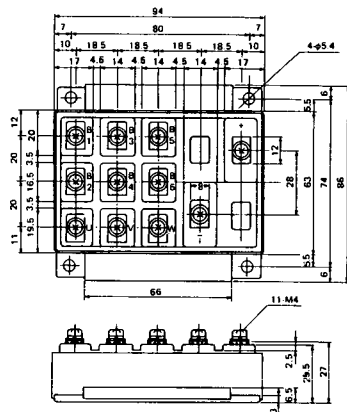
### M-601



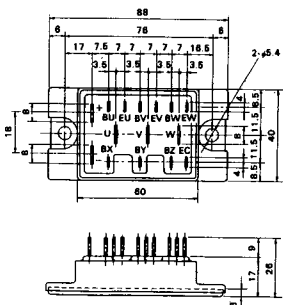
### M-602



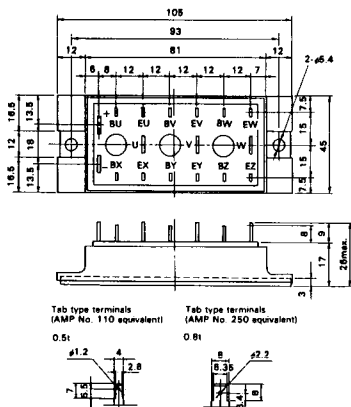
### M-603



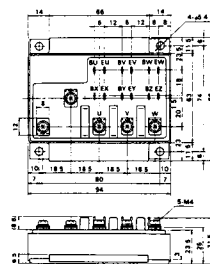
### M-604



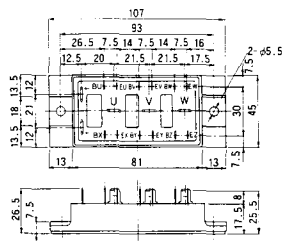
### M-605



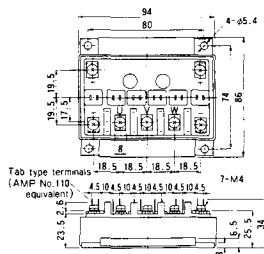
### M-606



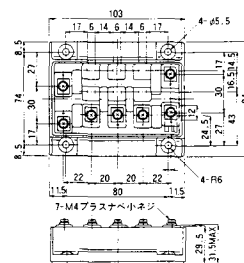
M-607



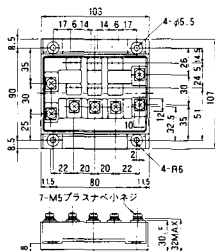
M-608



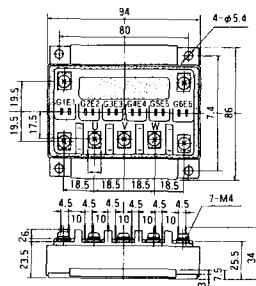
M-609



M-610



M-616

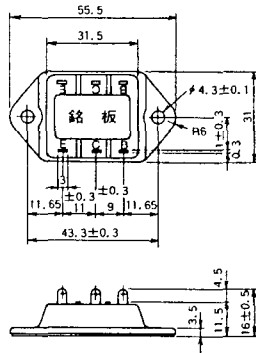




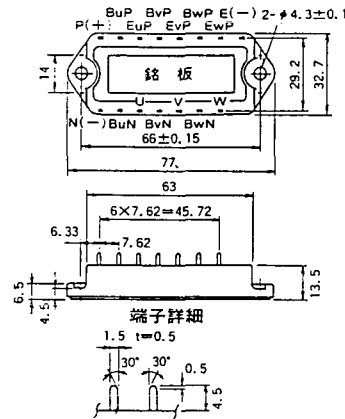




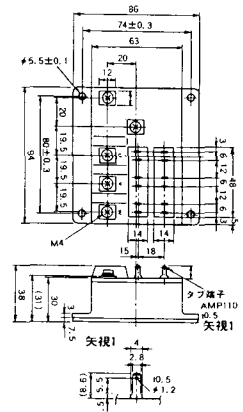
M-3C1A



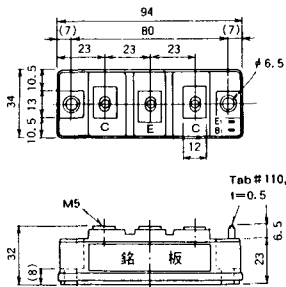
M-3D6A



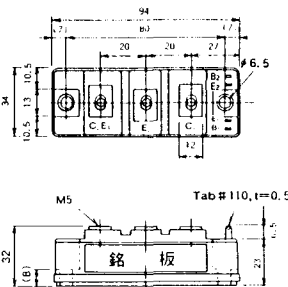
M-3E6A



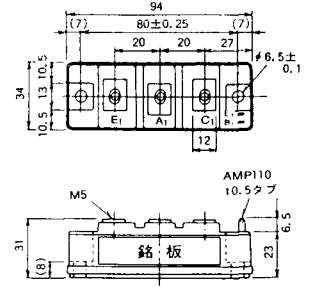
M-4A1A



M-4A2A

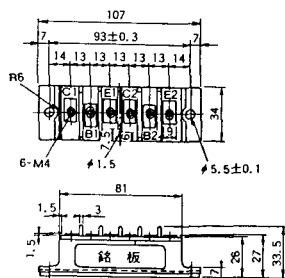


M-4A1B

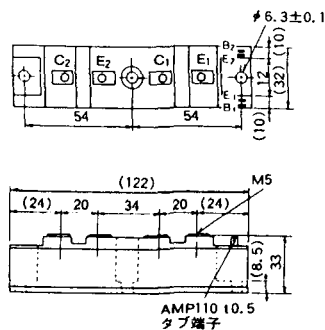




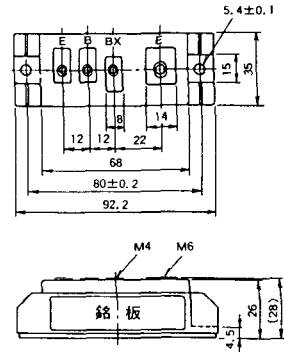
M-5C2A



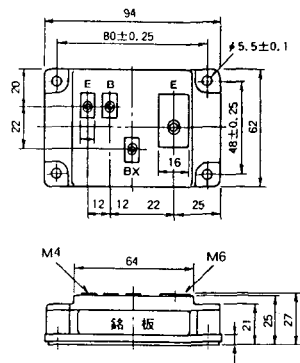
M-5D2A



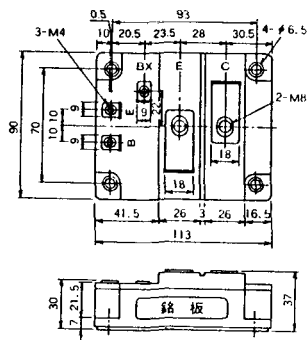
M-6A1A



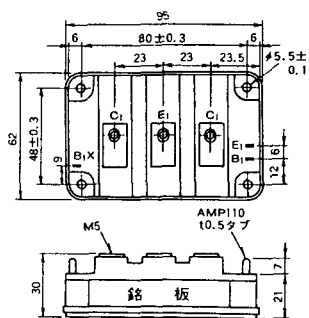
M-7A1A



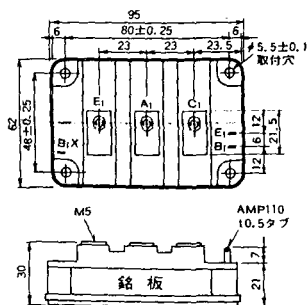
M-7B1A



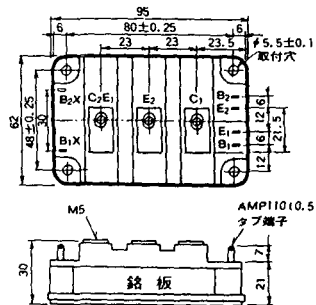
M-8A1A



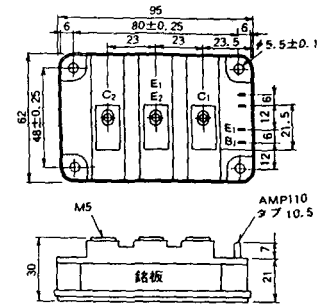
M-8A1B



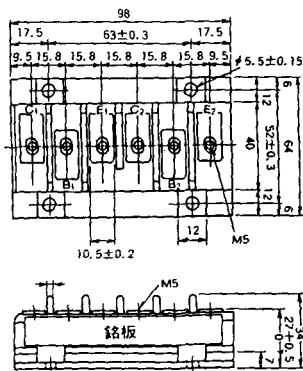
M-8A2A



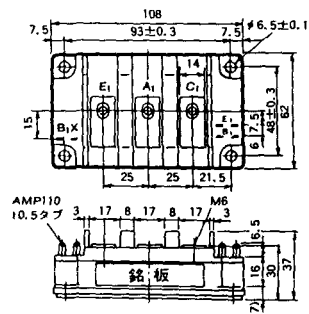
M-8A2B



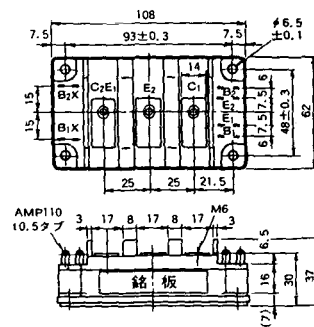
M-8B2A



M-9A1A



M-9A2A

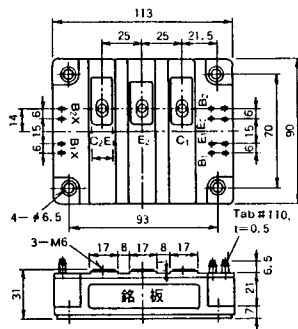




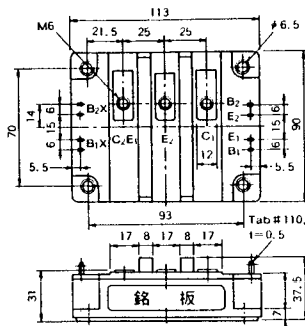




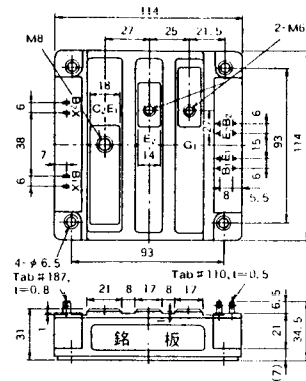
M-10A2A



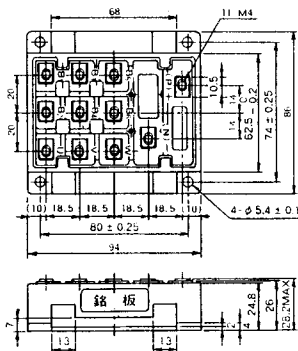
M-10A2B



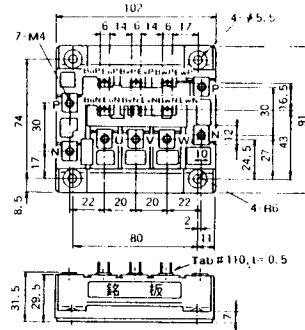
M-11A2A



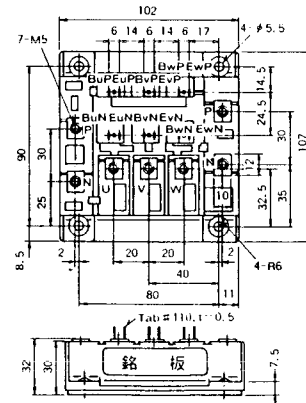
M-12A6A



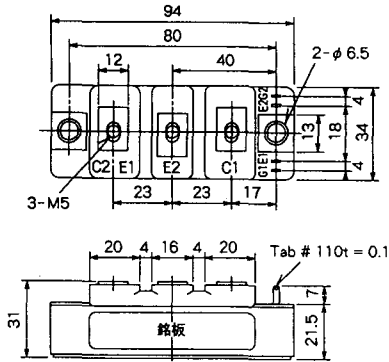
M-12B6A



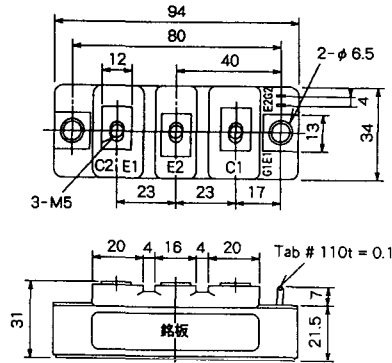
M-12B6B



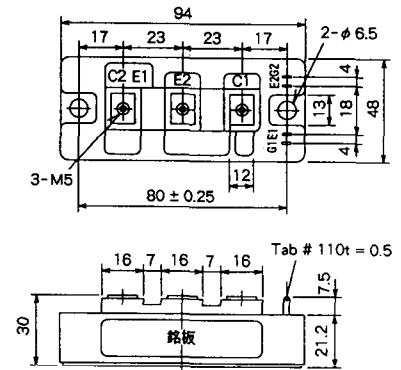
M-4A2D



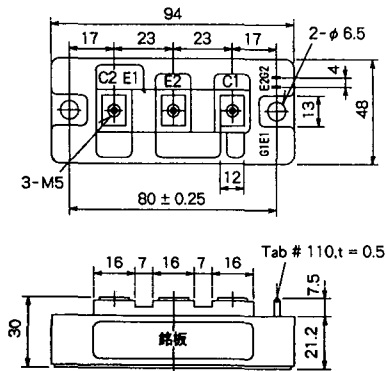
M-4A2E



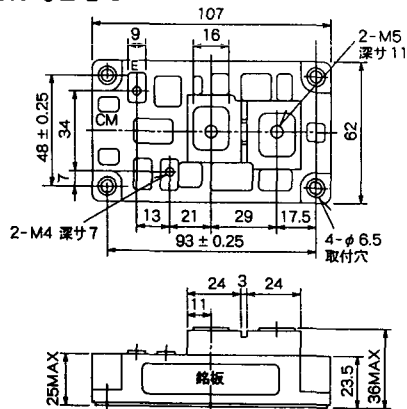
M-4C2A



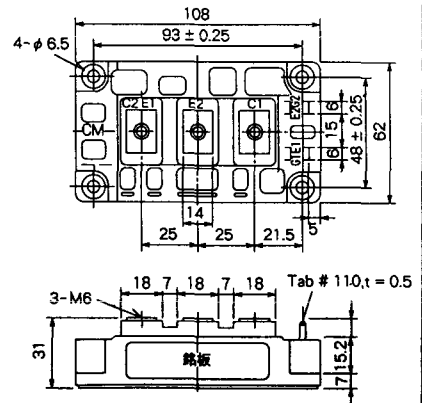
M-4C2B



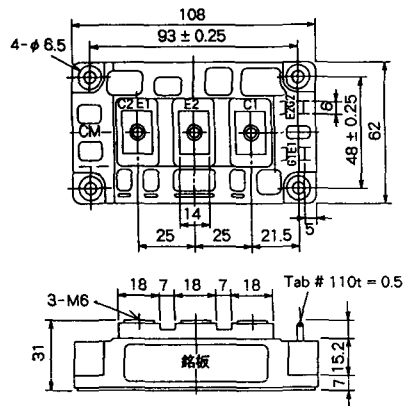
M-9B1C



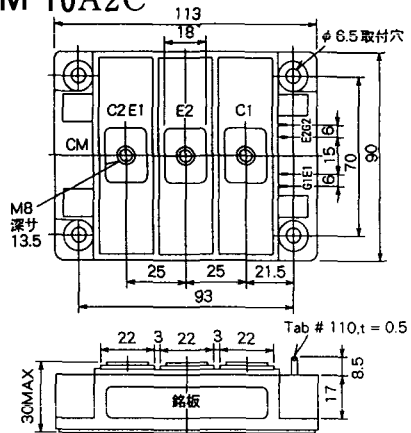
M-9D2A



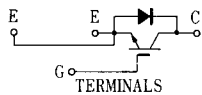
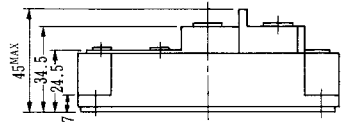
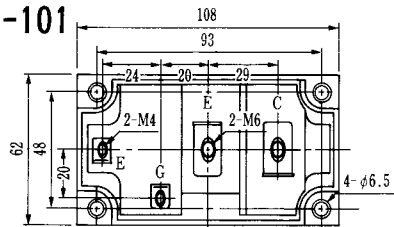
M-9D2B



M-10A2C

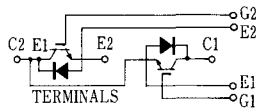
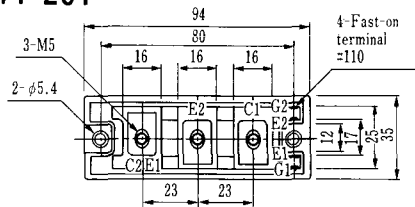


H-101



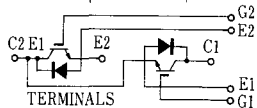
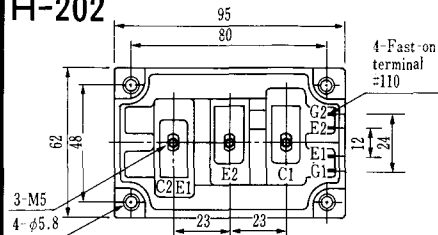
Weight :480g

### H-201



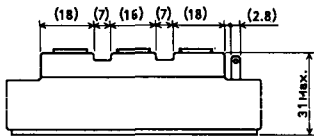
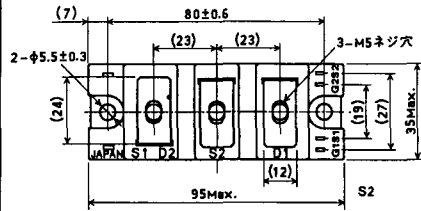
Weight: 200g

### H-202

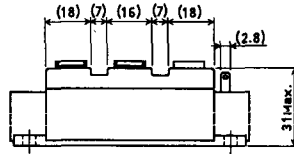
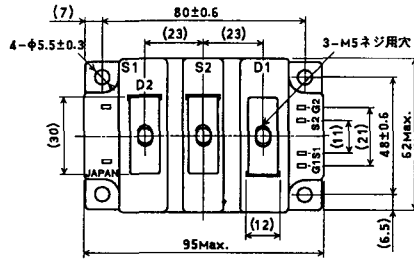


Weight: 360g

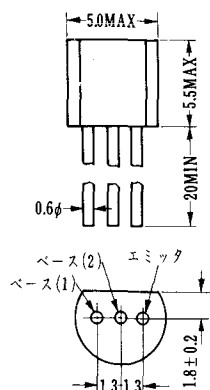
### LF-J



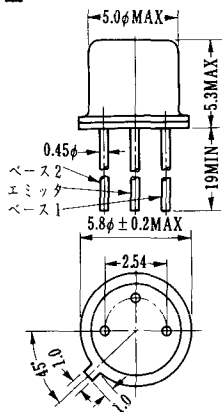
### LF-K



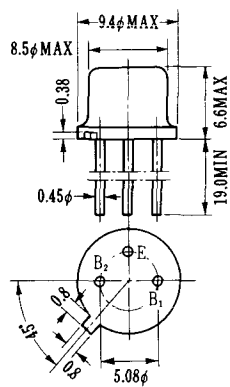
U-1



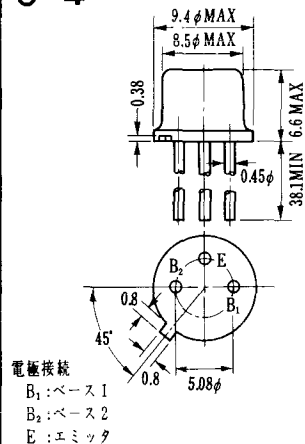
U-2



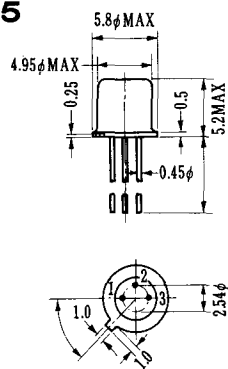
U-3



U-4

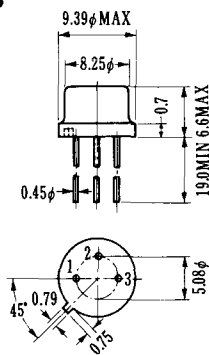


U-5



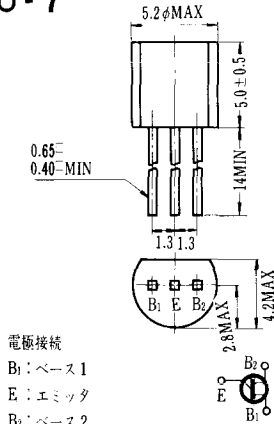
1. BASE 1
2. EMITTER
3. BASE 2 (CASE)

U-6



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

U-7



U-8

