

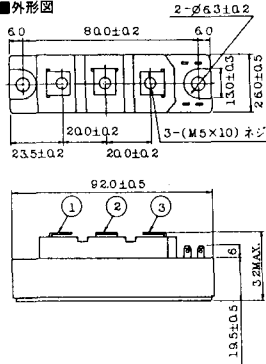
サイリスタ・モジュール

東 芝

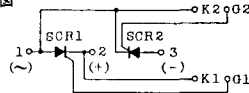
MSG60( )41

- 電力制御用
- 絶縁耐圧 MSG60G41~MSG60L41 2000V  
MSG60N41~MSG60U41 2500V

■外形図



■接続図



■最大定格

記号	G	J	L	N	Q	S	U		単位
$V_{RRM}$	500	720	960	1200	1440	1600	1750		V
$V_{DRM}$	400	600	800	1000	1200	1400	1600		V
$V_{DM}$	400	600	800	1000	1200	1400	1600		V
$I_{T(AV)}$	30 (单相半波, $T_r=84^\circ\text{C}$ )								
$I_{T(RMS)}$	47								
$I_{TSM}$	600/660:50Hz:60Hz, 正弦半波1サイクル波高値)								
$I^2 \cdot t$	1800								
$di/dt$	100 ( $V_D = \frac{1}{2} V_{DRM}$ )								
$P_{GM}$	5								
$P_{GM(AV)}$	0.5								
$V_{GDM}$	5								
$I_{GFM}$	2								
$T_j$	-40 ~ +125								
$T_{stg}$	-40 ~ +125								

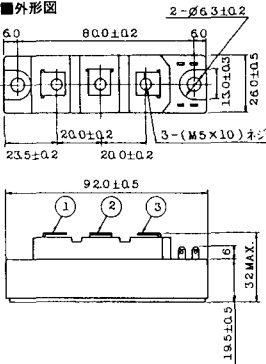
■電気的特性

記号	測定条件	最小	標準	最大	単位
$I_{RRM}$	$T_j = 125^\circ\text{C}, V_D = V_{RRM}$			6	mA
$I_{DRM}$	$T_j = 125^\circ\text{C}, V_D = V_{DRM}$			10	mA
$V_{TM}$	$T_a = 25^\circ\text{C}, I_{TM} = 100\text{A}$			1.5	V
$V_{GT}$	$T_a = 25^\circ\text{C}, V_D = 6\text{V}$			1.5	V
$I_{GT}$	$R_L = 10\Omega$			80	mA
$V_{GD}$	$T_r = 125^\circ\text{C}, V_D = \frac{1}{2} V_{DRM}$	0.25			V
$I_{GD}$					mA
$dv/dt$	$T_r = 125^\circ\text{C}, V_D = \frac{1}{2} V_{DRM}$	500			V/ $\mu\text{s}$
$I_H$	$T_a = 25^\circ\text{C}, R_L = 100\Omega$			150	mA
$R_{th}$	接合部-ケース間			0.8	$^\circ\text{C}/\text{W}$

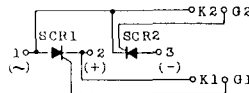
MSG100( )41

- 電力制御用
- 絶縁耐圧 MSG100G41~MSG100L41 2000V  
MSG100N41~MSG100U41 2500V

■外形図



■接続図



■最大定格

記号	G	J	L	N	Q	S	U		単位
$V_{RRM}$	500	720	960	1200	1440	1600	1750		V
$V_{DRM}$	400	600	800	1000	1200	1400	1600		V
$V_{DM}$	400	600	800	1000	1200	1400	1600		V
$I_{T(AV)}$	50 (单相半波, $T_r=86^\circ\text{C}$ )								
$I_{T(RMS)}$	79								
$I_{TSM}$	1000/1100 (50Hz:60Hz, 正弦半波1サイクル波高値)								
$I^2 \cdot t$	5000								
$di/dt$	100 ( $V_D = \frac{1}{2} V_{DRM}$ )								
$P_{GM}$	5								
$P_{GM(AV)}$	0.5								
$V_{GDM}$	5								
$I_{GFM}$	2								
$T_j$	-40 ~ +125								
$T_{stg}$	-40 ~ +125								

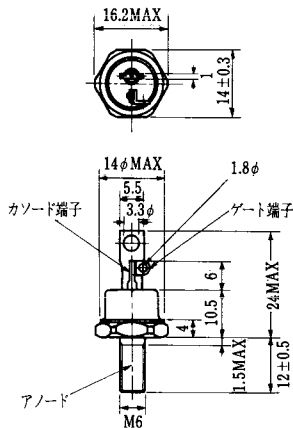
■電気的特性

記号	測定条件	最小	標準	最大	単位
$I_{RRM}$	$T_j = 125^\circ\text{C}, V_D = V_{RRM}$			10	mA
$I_{DRM}$	$T_j = 125^\circ\text{C}, V_D = V_{DRM}$			10	mA
$V_{TM}$	$T_a = 25^\circ\text{C}, I_{TM} = 150\text{A}$			1.5	V
$V_{GT}$	$T_a = 25^\circ\text{C}, V_D = 6\text{V}$			1.5	V
$I_{GT}$	$R_L = 10\Omega$			80	mA
$V_{GD}$	$T_r = 125^\circ\text{C}, V_D = \frac{1}{2} V_{DRM}$	0.25			V
$I_{GD}$					mA
$dv/dt$	$T_r = 125^\circ\text{C}, V_D = \frac{1}{2} V_{DRM}$	500			V/ $\mu\text{s}$
$I_H$	$T_a = 25^\circ\text{C}, R_L = 100\Omega$			150	mA
$R_{th}$	接合部-ケース間			0.5	$^\circ\text{C}/\text{W}$

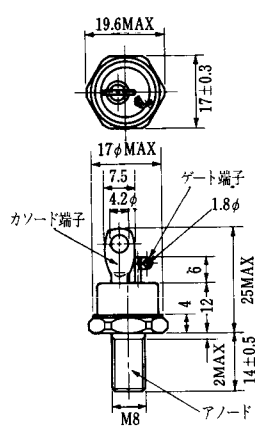
FD-1



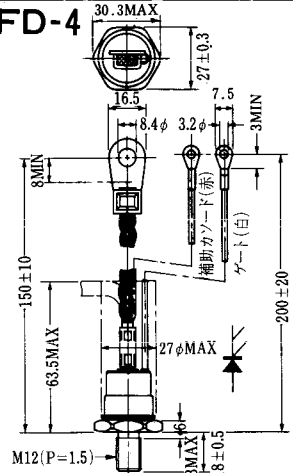
FD-2



FD-3



FD-4



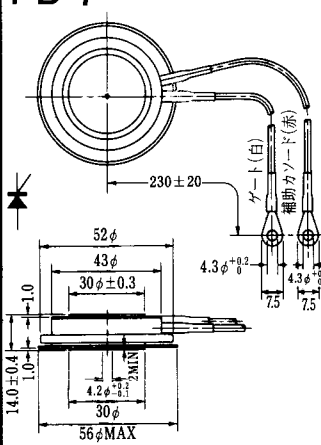
FD-5



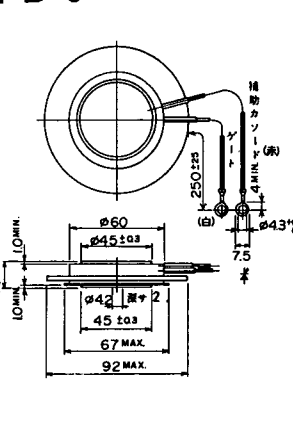
FD-6



FD-7



FD-8



FD-9



FD-10



FD-11

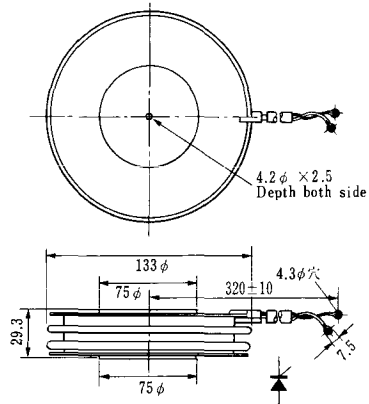
FD-12



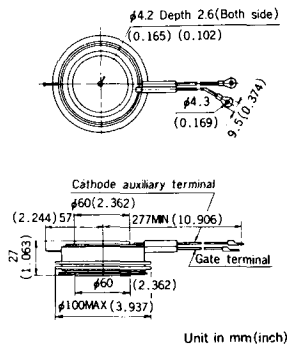


《寸法図単位：mm》

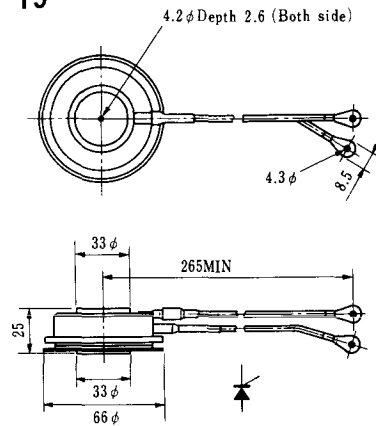
### H-17



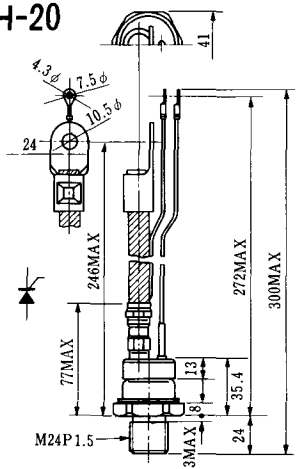
### H-18



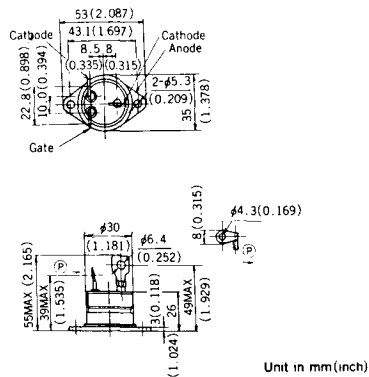
### H-19



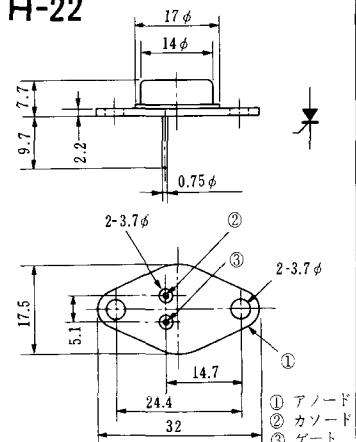
### H-20



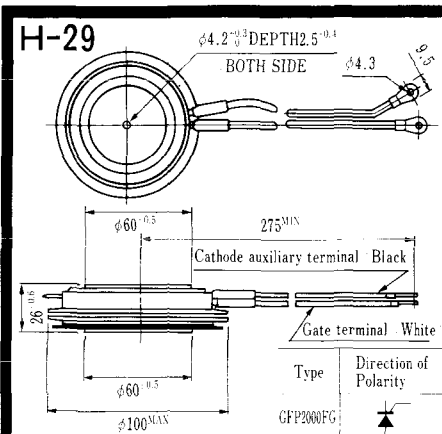
### H-21



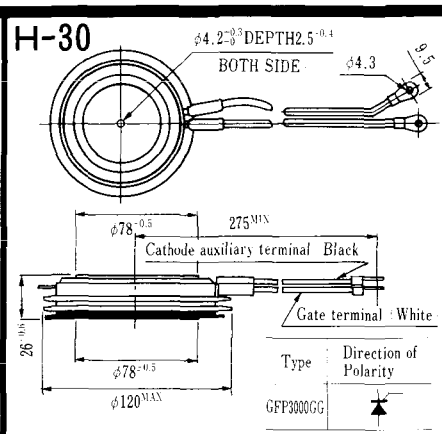
### H-22







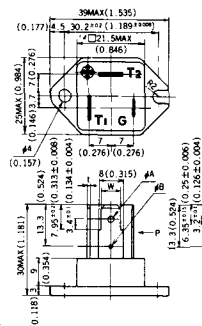
Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



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



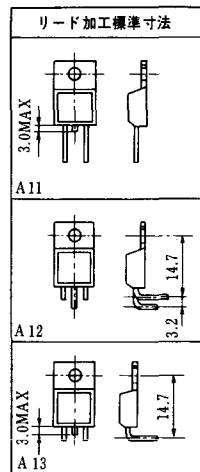
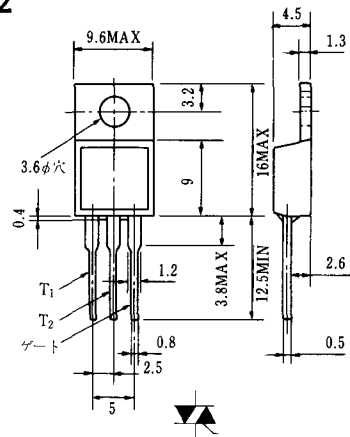
# HT-1



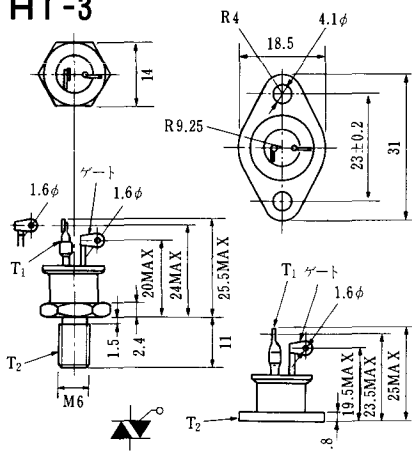
TERMINAL	t	W	φA	φB
T <sub>1</sub>	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 <sup>+0.1</sup> <sub>0</sub> (0.079 <sup>+0.004</sup> <sub>0</sub> )	1.3 (0.051)
T <sub>2</sub>	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 <sup>+0.1</sup> <sub>0</sub> (0.079 <sup>+0.004</sup> <sub>0</sub>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

Unit in mm (inch)

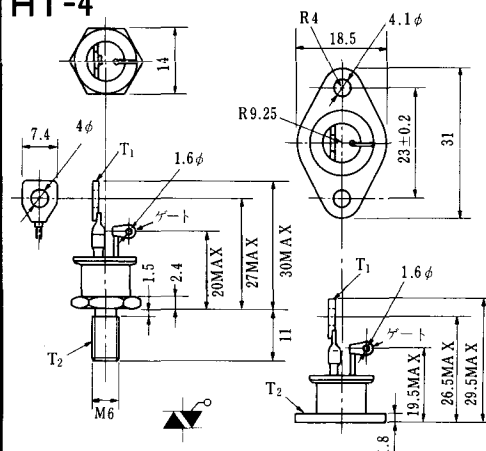
# HT-2



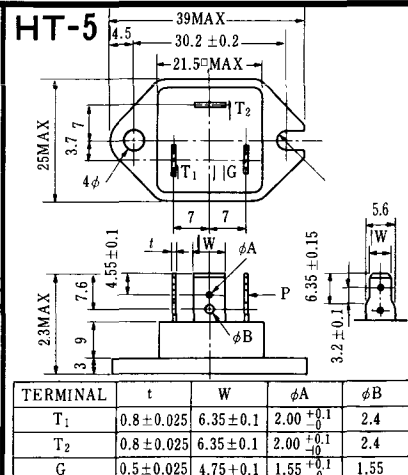
# HT-3



# HT-4



# HT-5



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

《寸法図単位：mm》

### M-1



### M-2



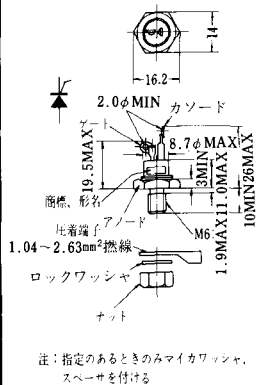
### M-3



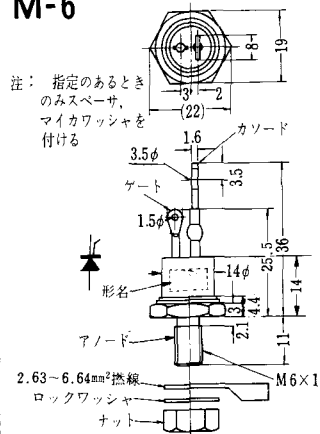
### M-4



### M-5



### M-6



### M-7



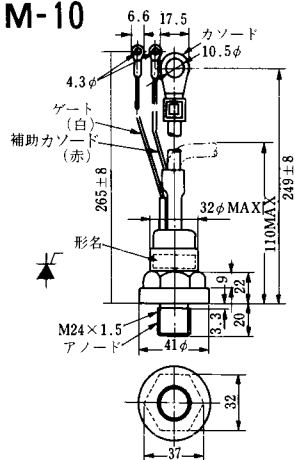
### M-8



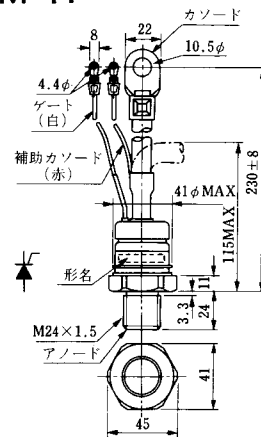
M-9



M-10



M-11



M-12



M-13



M-14



M-15

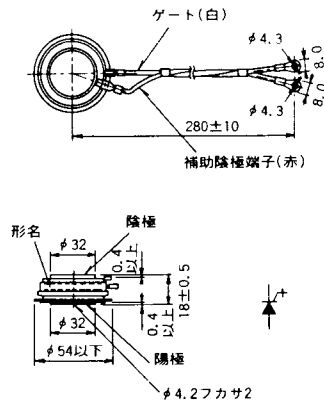


M-16





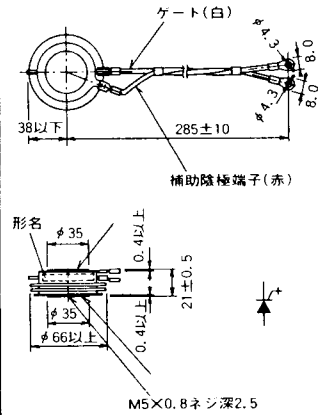
M-25



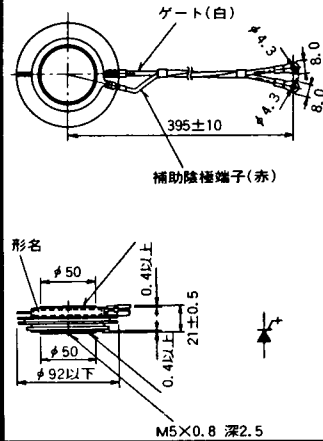
M-26



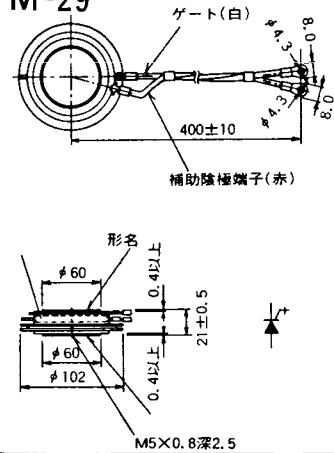
M-27



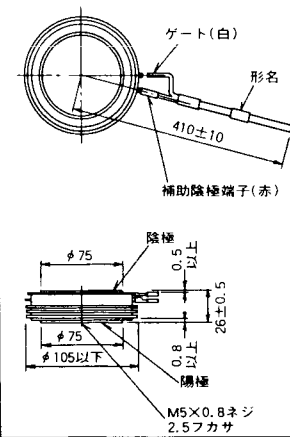
M-28



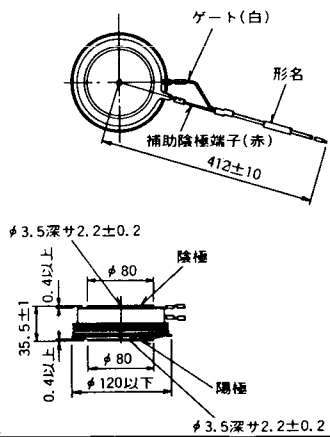
M-29



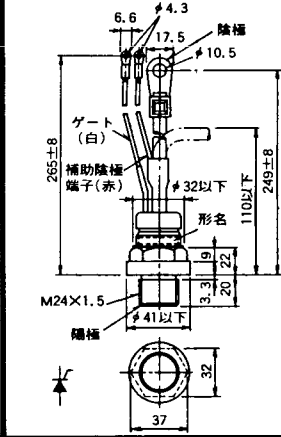
M-30



M-31



M-32



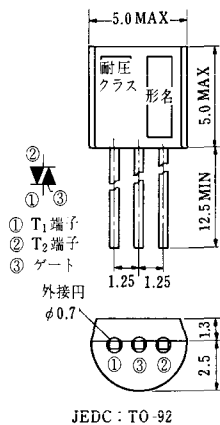
### M-33



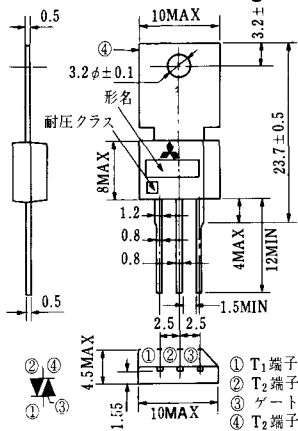
### M-34



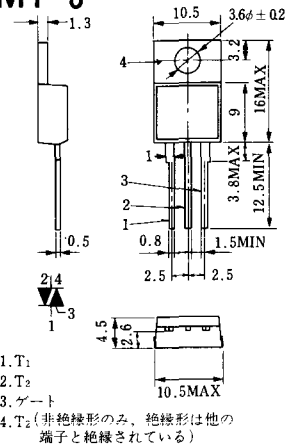
### MT-1



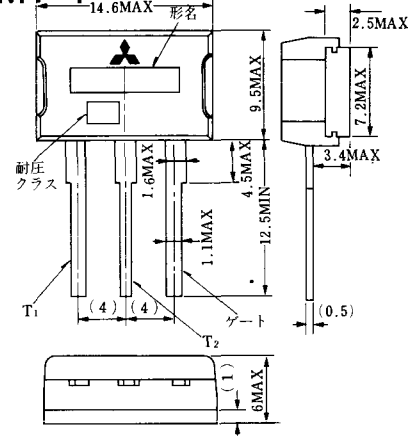
### MT-2



### MT-3



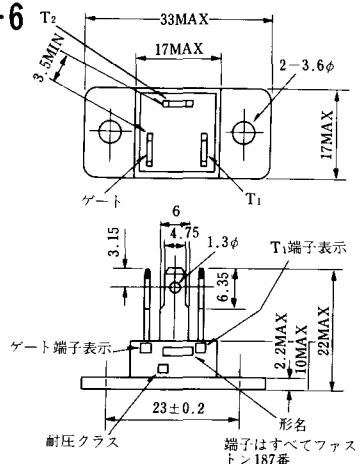
### MT-4



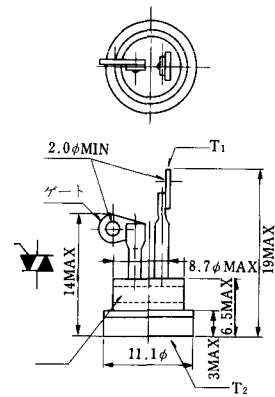
### MT-5



### MT-6



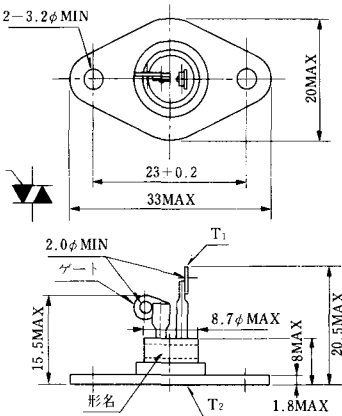
### MT-7



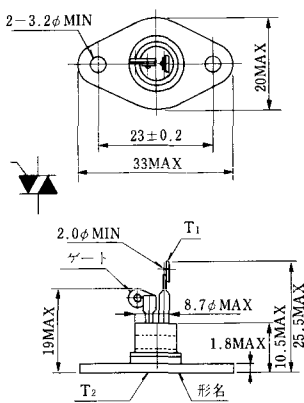
MT-8



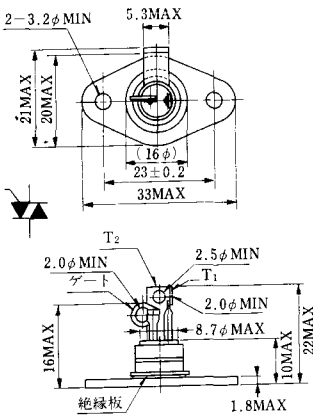
MT-9



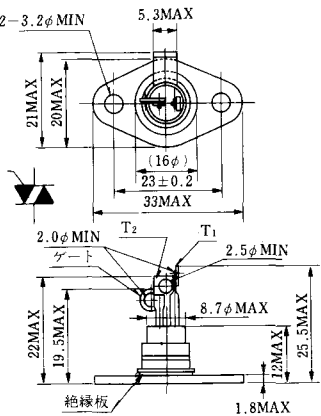
MT-10



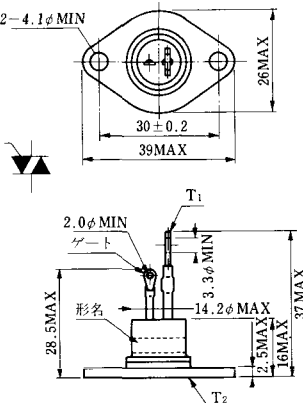
MT-11



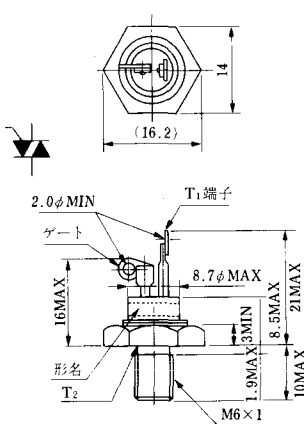
MT-12



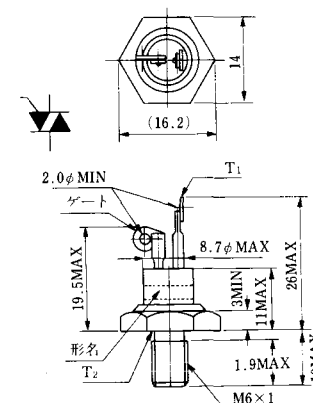
MT-13



MT-14



MT-15

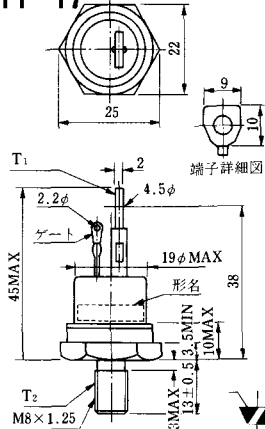




MT-16

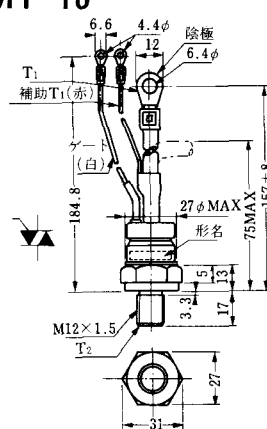


MT-17

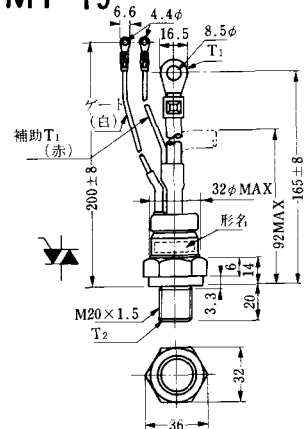


端子詳細図

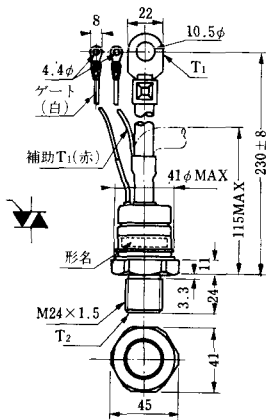
MT-18



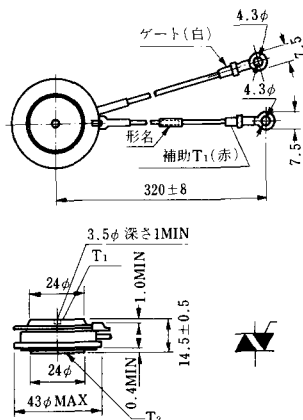
MT-19



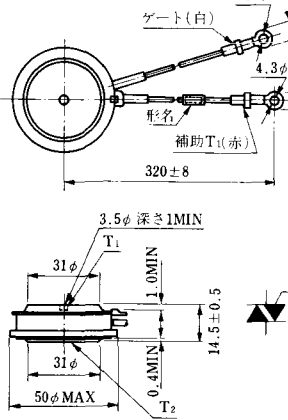
MT-20



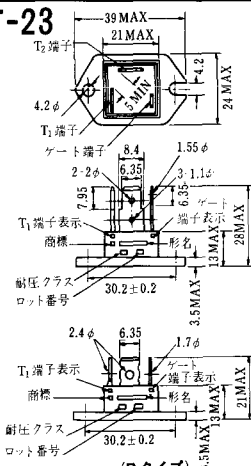
MT-21



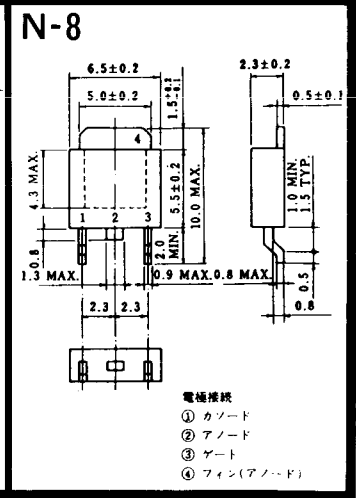
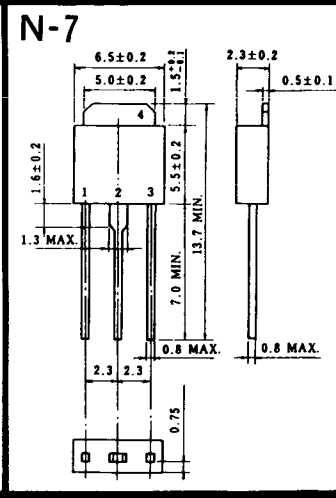
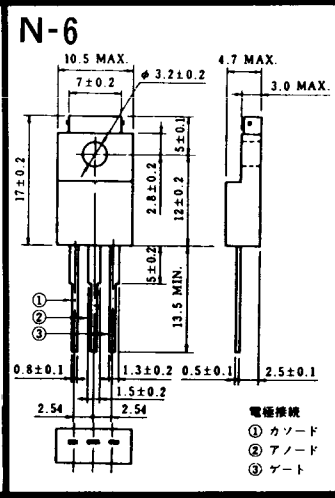
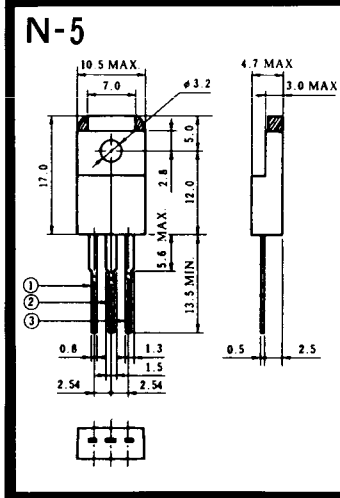
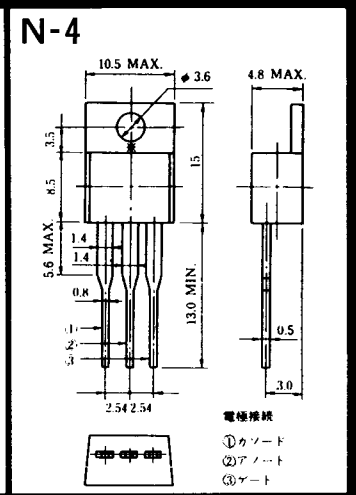
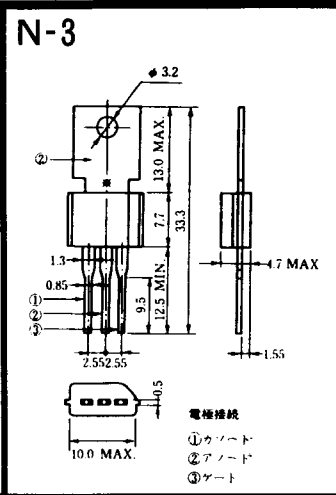
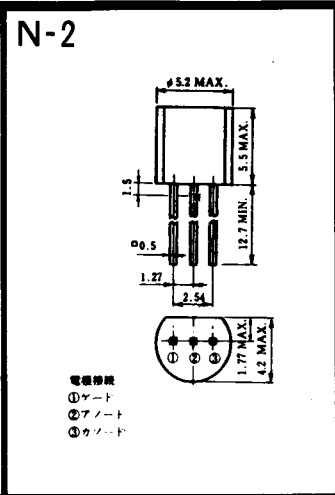
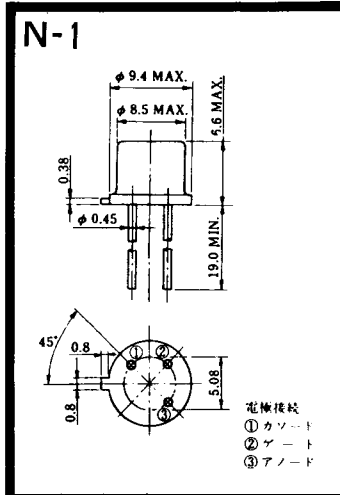
MT-22



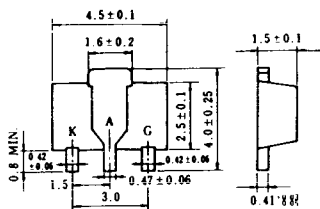
MT-23







N-9



電極接続

K : カソード

A : アノード

G : ゲート

### NA-1

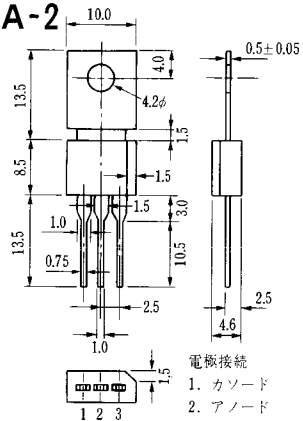


電極接続

1. ゲート
2. アノード
3. カソード

JEDEC: TO-92

### NA-2

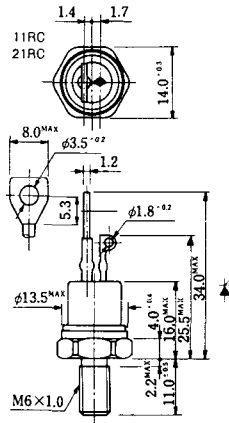


電極接続

1. カソード
2. アノード
3. ゲート

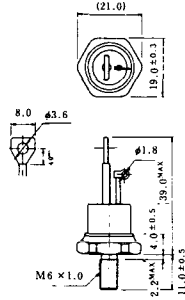
JEDEC: TO-202AA

### NI-1



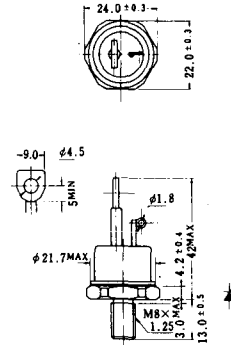
### NI-2

29RD



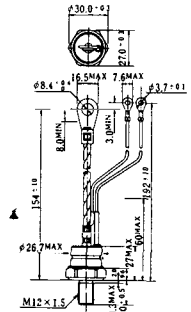
### NI-3

39RC  
59RC  
39RF  
59RF



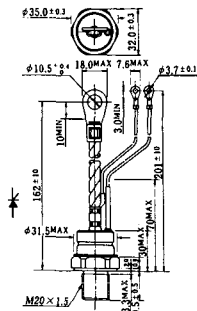
### NI-4

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



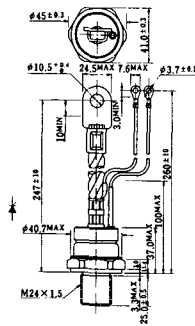
### NI-5

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



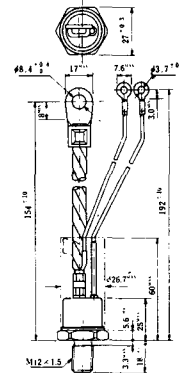
### NI-6

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



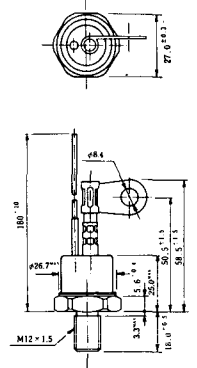
### NI-7

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



### NI-8

89RW  
129RW









NI-24

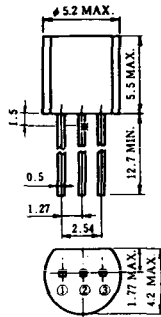
2001PGB<sup>r</sup> JE



NI-25

NI-26

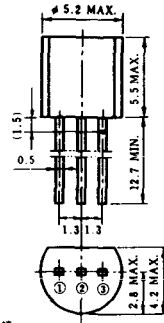
### NT-1



電極接続

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

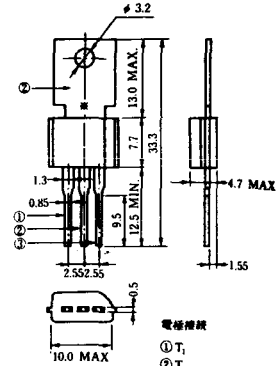
### NT-2



電極接続

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

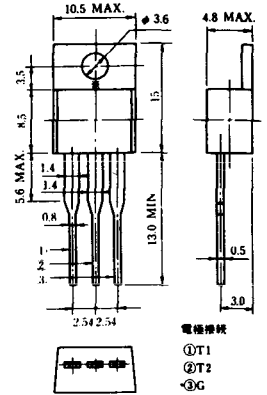
### NT-3



電極接続

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

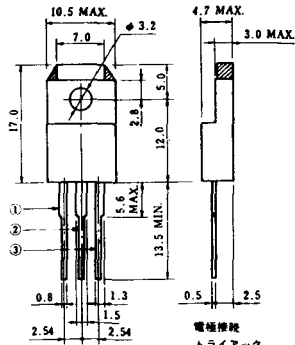
### NT-4



電極接続

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

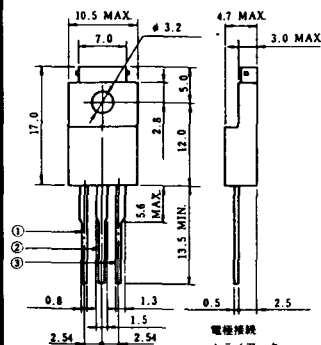
### NT-5



電極接続  
トライアック

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

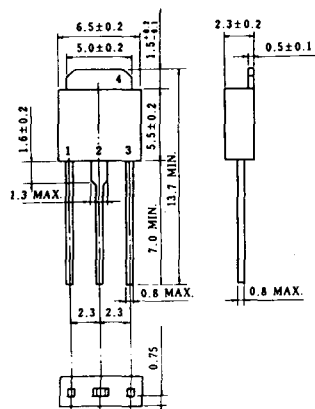
### NT-6



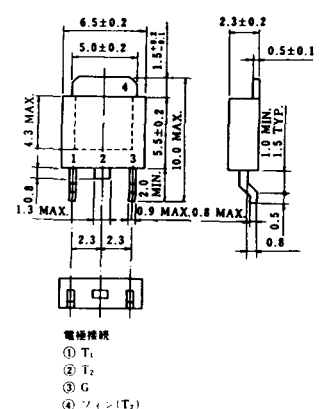
電極接続  
トライアック

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

### NT-7



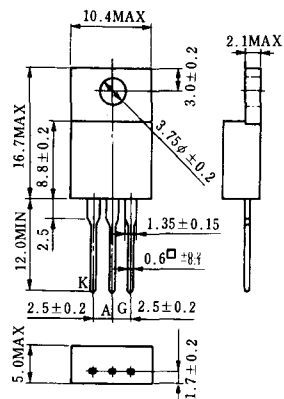
### NT-8



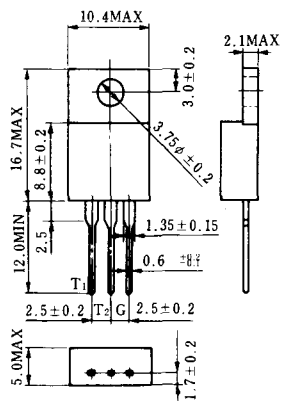
電極接続

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

### S-1



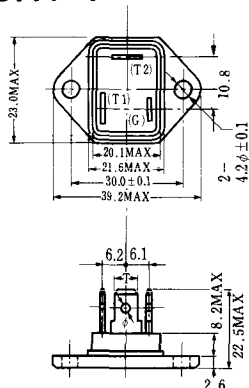
### ST-1







SAT-1



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

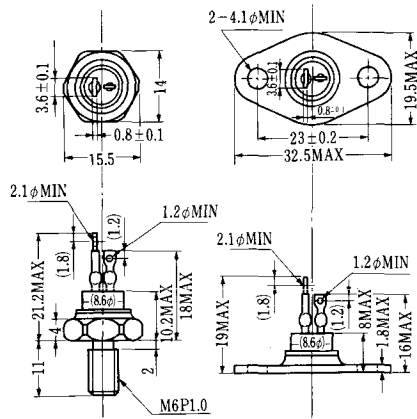
SAT-2



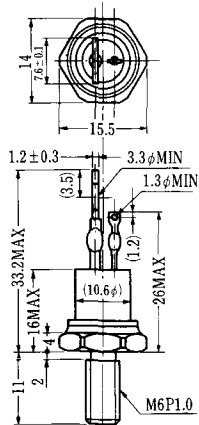
SAT-3



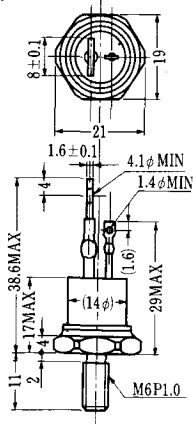
SAT-4



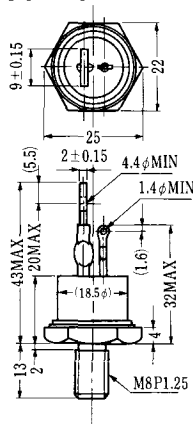
SAT-5



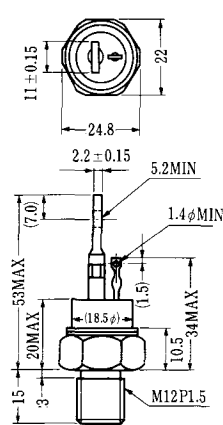
SAT-6



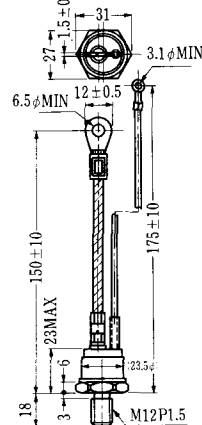
SAT-7



SAT-8



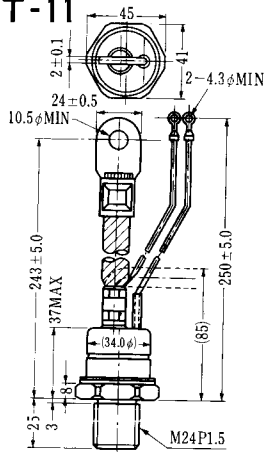
SAT-9



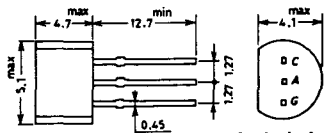
SAT-10



SAT-11

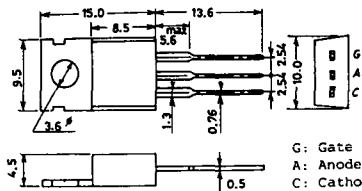


### SY-1 (1096A)



C: Cathode  
A: Anode  
G: Gate

### SY-2 (1151)



G: Gate  
A: Anode  
C: Cathode

### SY-3 (1104)



G: Gate  
A: Anode  
C: Cathode

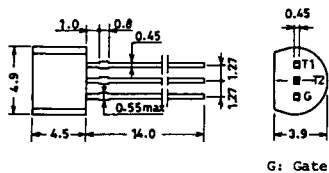
### SY-4 (1150)



G: Gate  
A: Anode  
C: Cathode

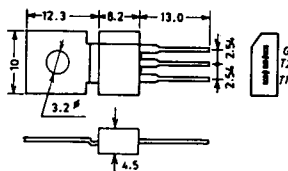


1097A



G: Gate

1102



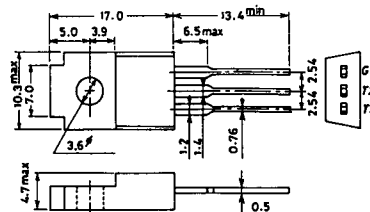
1141



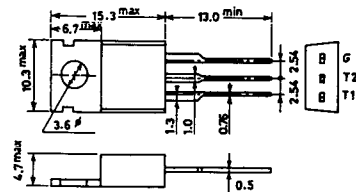
1142



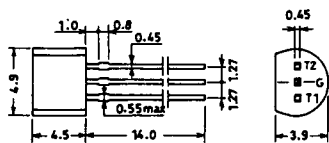
1144



1155

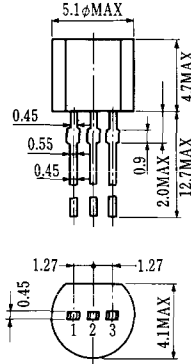


1192A



G: Gate

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



- 1 ゲート
- 2 アノード
- 3 カソード

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



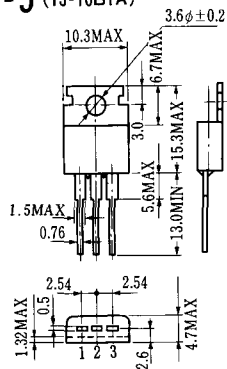
1. カソード
2. ゲート
3. アノード(ケース)

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



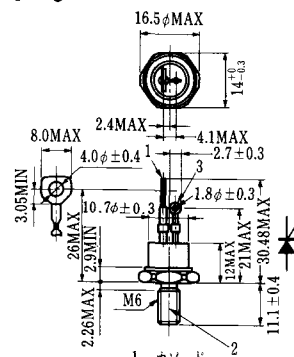
- 1 カソード
- 2 アノード
- 3 ゲート

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



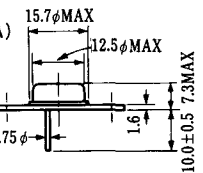
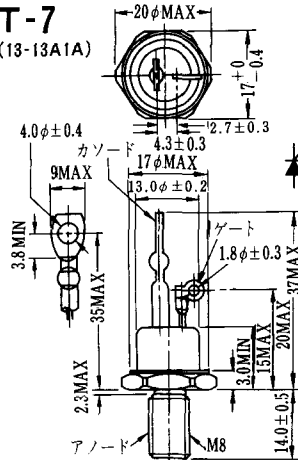
- 1 カソード
- 2 アノード
- 3 ゲート

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



- 1 カソード
- 2 アノード
- 3 ゲート

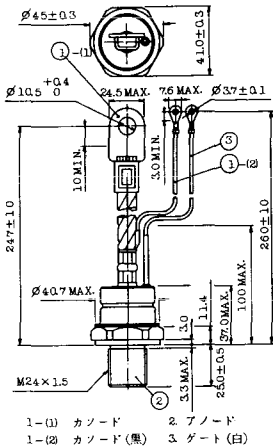
**T-7 (13-13A1A)**



1. ゲート
2. カソード
3. アノード(ケース)



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



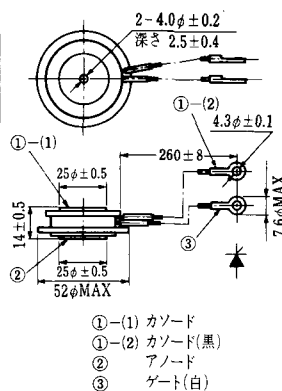
**T-18 (13-45D1A)**



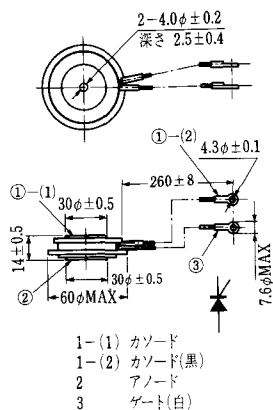
**T-19 (13-52B1A)**



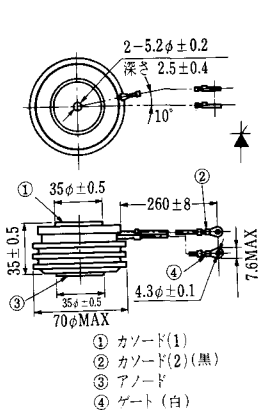
**T-20 (13-52C1A)**



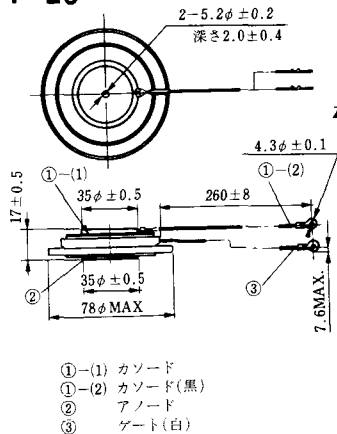
**T-21 (13-60A1A)**



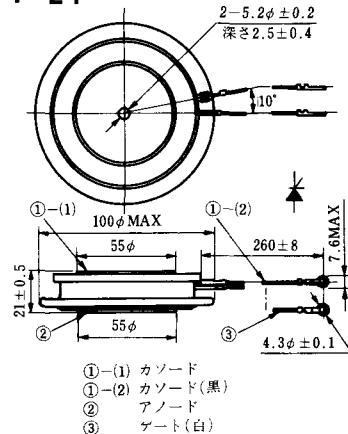
**T-22 (13-70C1A)**



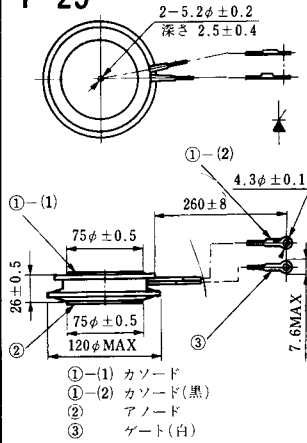
**T-23 (13-78A1A)**



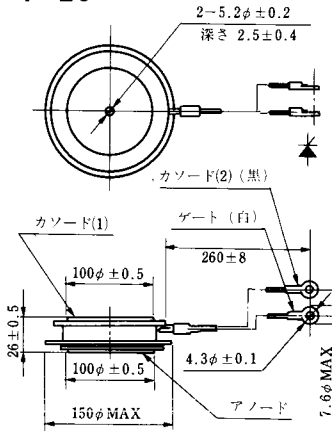
**T-24 (13-100C1A)**



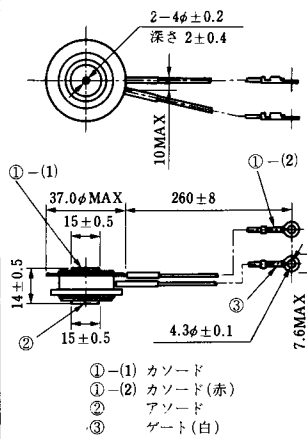
**T-25** (13-120A2A)



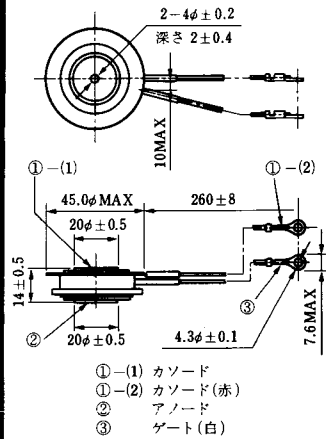
**T-26** (13-150A1A)



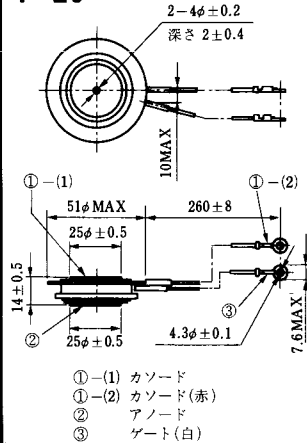
**T-27** (13-37A1A)



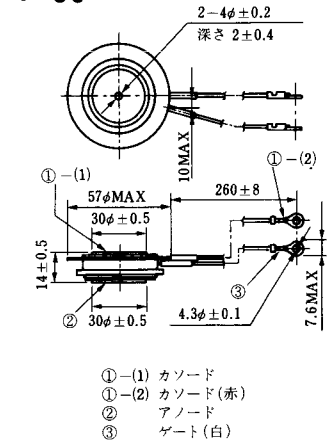
**T-28** (13-45E1A)



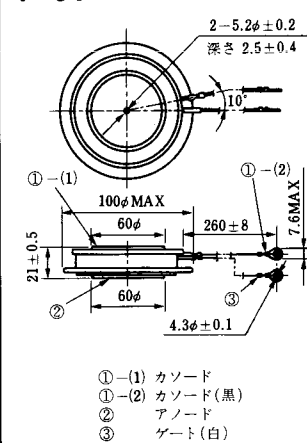
**T-29** (13-51A1A)



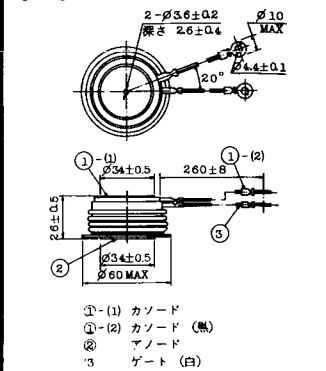
**T-30** (13-57A1A)



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

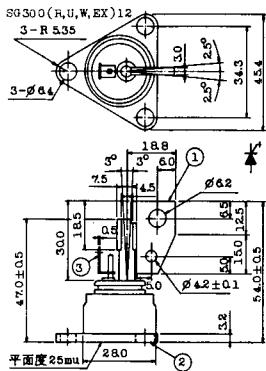


**T-32** (13-60E3A)



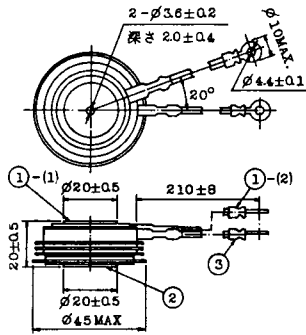


### T-41 (13-28A2A)



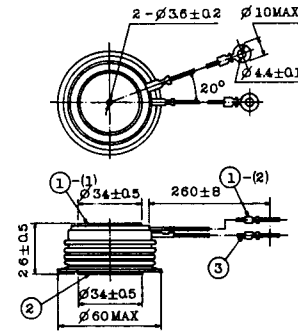
- 1 カソード
- 2 アノード
- 3 ゲート

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



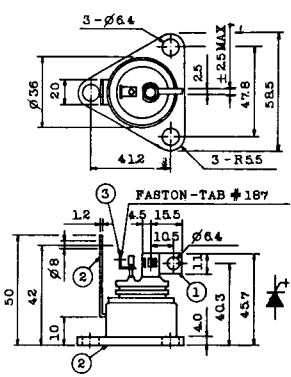
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



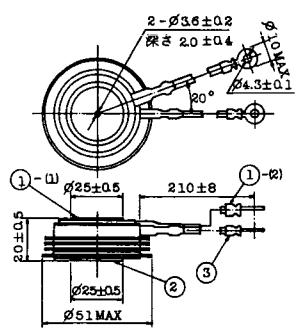
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



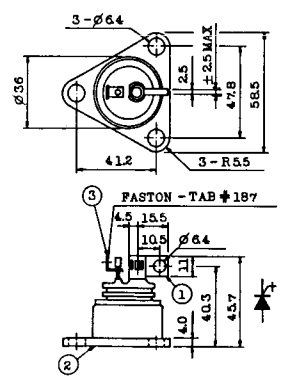
- 1 カソード
- 2 アノード
- 3 ゲート

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



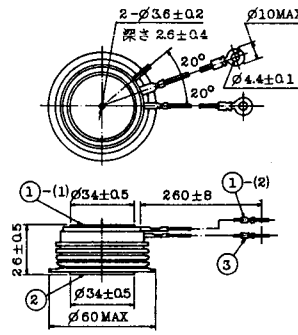
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

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



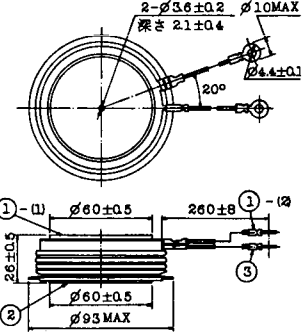
- 1 カソード
- 2 アノード
- 3 ゲート

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



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

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



- ①-(1) カソード
- ①-(2) カソード(黒色)
- ② アノード
- ③ ゲート(白色)

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



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

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



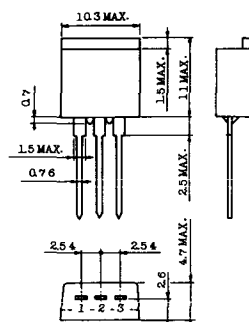
- 1 カソード
- 2 アノード
- 3 ゲート

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



- 1 カソード
- 2 アノード
- 3 ゲート

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



- 1 カソード
- 2 アノード
- 3 ゲート

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



- 1 カソード
- 2 アノード
- 3 ゲート

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



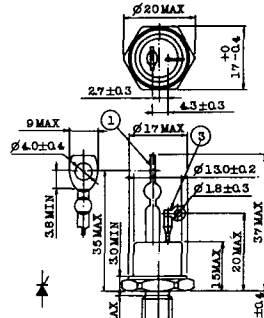
- 1 カソード
- 2 アノード
- 3 ゲート

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



- 1 カソード
- 2 アノード
- 3 アノード

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



- 1 カソード
- 2 アノード
- 3 ゲート



T-57 (12-16C1A)



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

T-58 (13-10H1B)



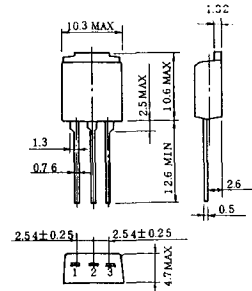
1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



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

T-60



1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



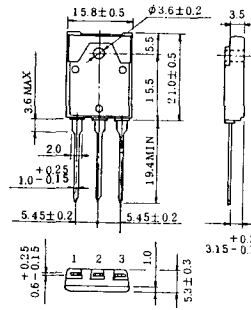
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



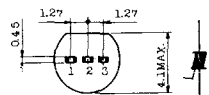
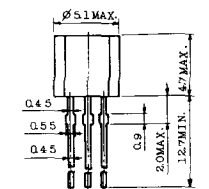
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



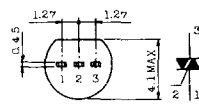
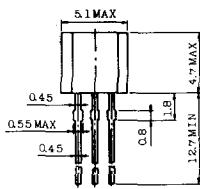
1. カソード
2. アノード
3. ゲート

TT-1



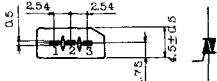
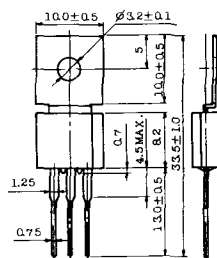
- 1 ゲート
- 2 T<sub>2</sub>
- 3 T<sub>1</sub>

TT-2



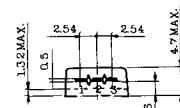
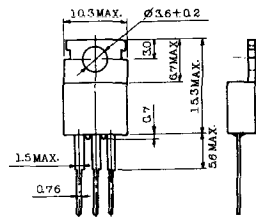
- 1 T<sub>1</sub>
- 2 ゲート
- 3 T<sub>2</sub>

TT-3



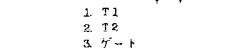
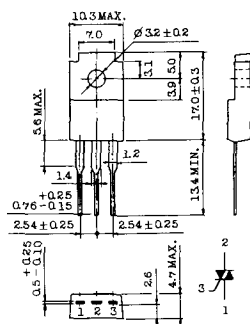
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-4



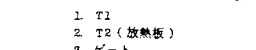
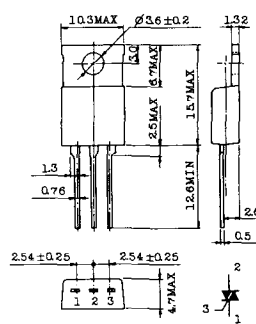
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-5



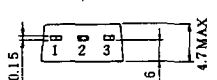
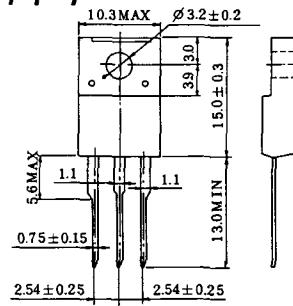
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-6



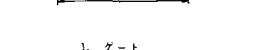
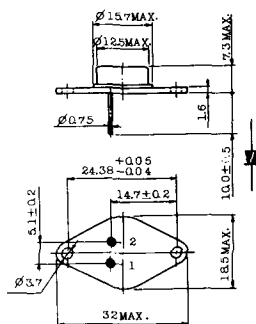
- 1 T<sub>1</sub>
- 2 T<sub>2</sub> (放熱板)
- 3 ゲート

TT-7



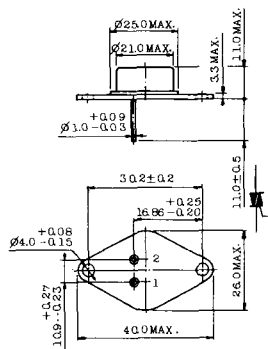
- 1 T<sub>1</sub>
- 2 T<sub>2</sub>
- 3 ゲート

TT-8



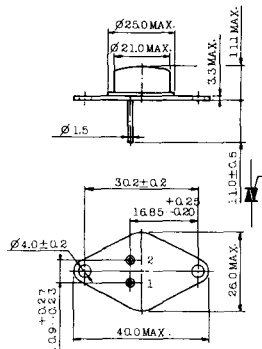
- 1 ゲート
- 2 T<sub>1</sub>
- T<sub>2</sub> (ケース)

TT-9



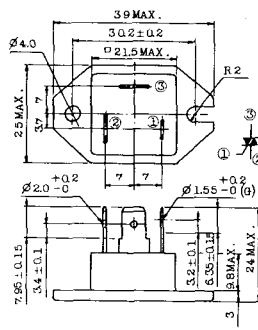
1. ゲート
2. T<sub>1</sub>
3. T<sub>2</sub> (ケース)

TT-10



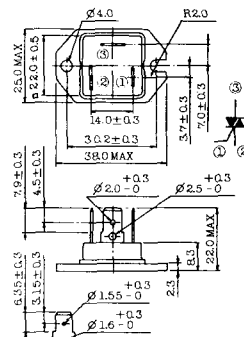
1. ゲート
2. T<sub>1</sub>
3. T<sub>2</sub> (ケース)

TT-11



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

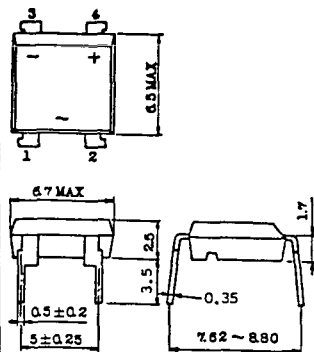
TT-12



ゲート端子詳細

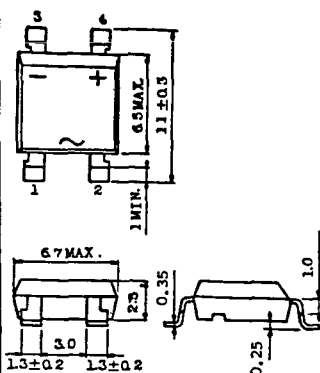
- ① ゲート (フーストン端子 #187)
- ② T<sub>1</sub> ( " #250)
- ③ T<sub>2</sub> ( " #250)

TT-13



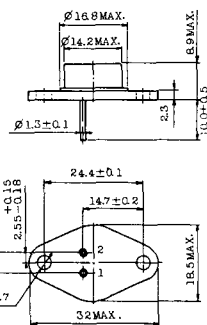
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

TT-14



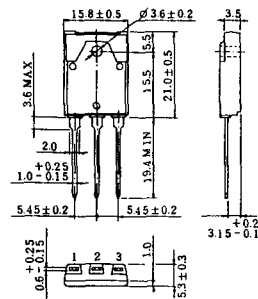
- 1, 2: T<sub>2</sub>
- 3: GATE
- 4: T<sub>1</sub>

TT-15 (13-14A1B)



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

TT-16 (13-16A1A)



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

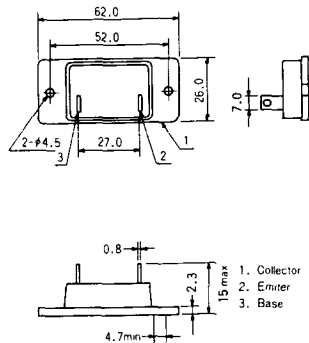


TS-8

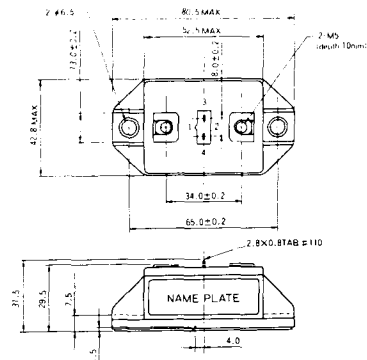


- 1. ベース
- 2. エミッタ  
コレクタ  
(ケース)

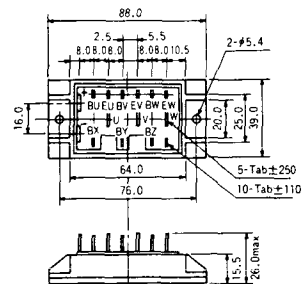
### S-62A1A



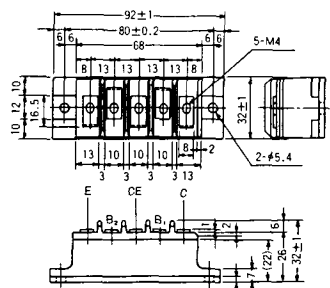
### S-80A1A



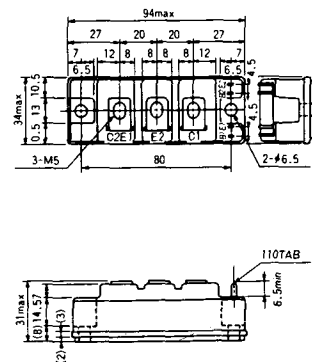
### S-88D1A



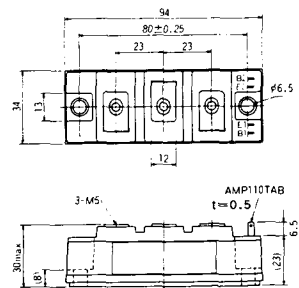
### S-92B1A



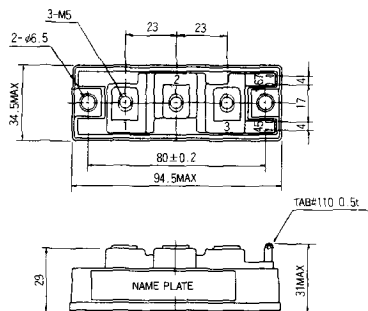
### S-94B1A



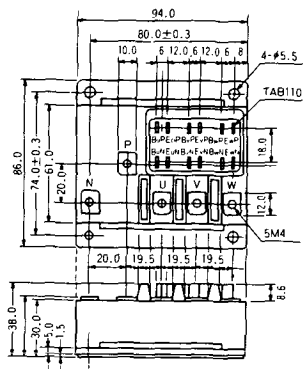
### S-94B1B



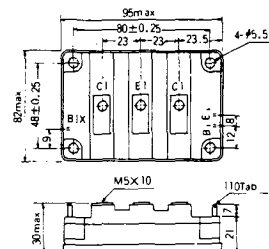
### S-94B2A



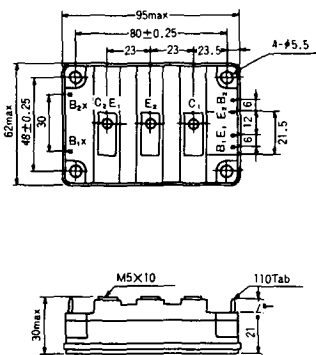
### S-94D1A



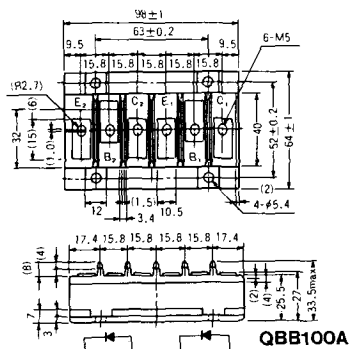
### S-95A1A



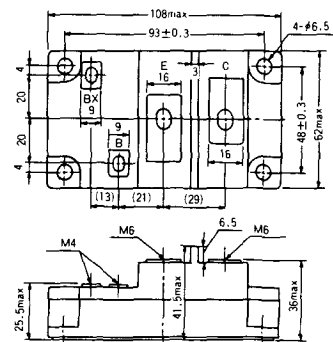
### S-95B1A



### S-98B1B



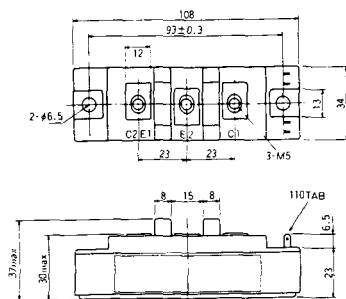
### S-108A2A



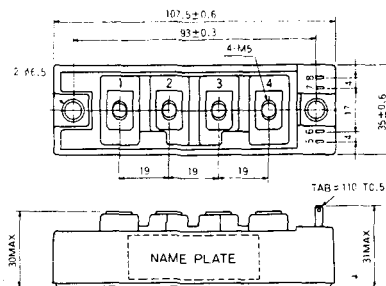
S-108B1A



S-108B1B



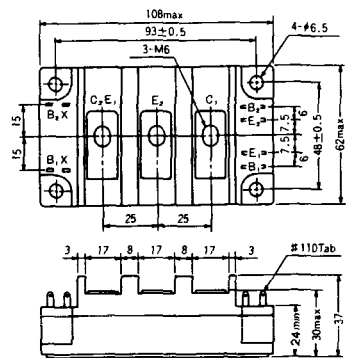
S-108B1C



S-108B2A

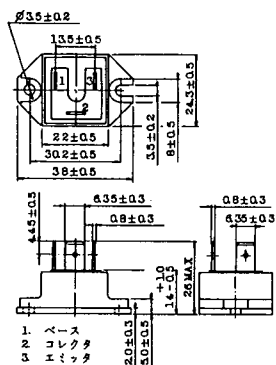


S-108B2B

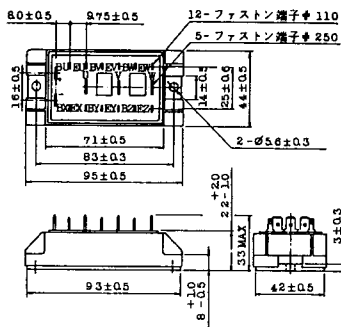




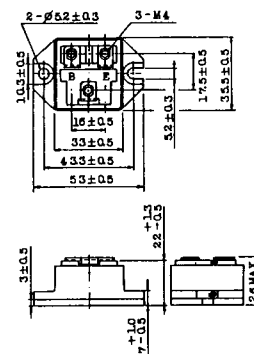
### 2-22B1A



### 2-27A4A



### 2-33C1A



### 2-33D1A



### 2-33F1A



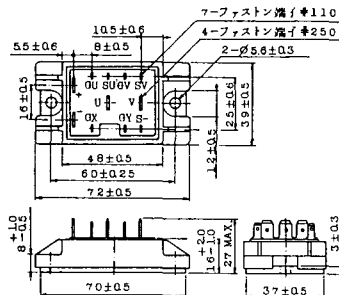
### 2-37A1A



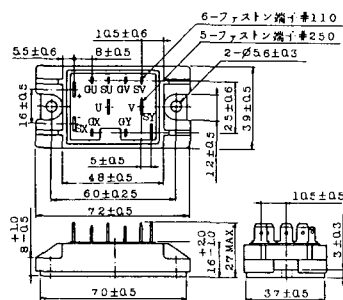
2-48A3A



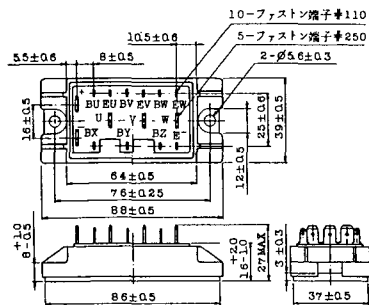
2-48A3B



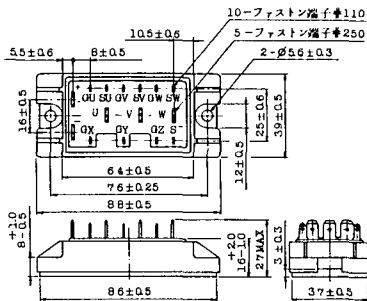
2-48A4A



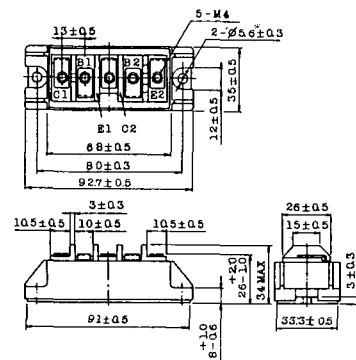
2-64A2A



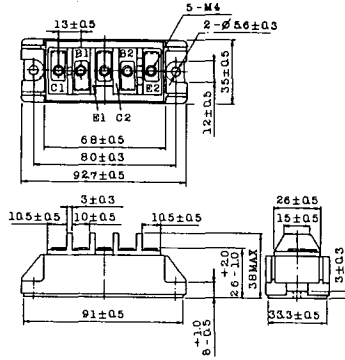
2-64A2B



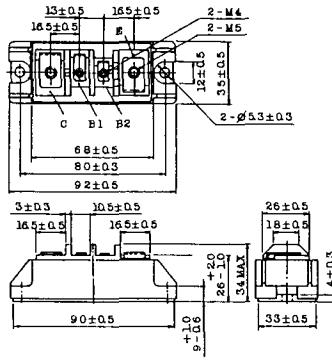
2-68A2A



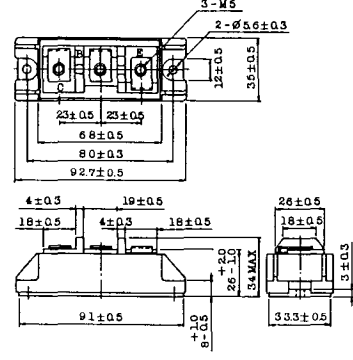
2-68B2A



2-68C1A



2-68D2A



2-72A3A



2-80A1A



2-80B1A





### 2-94D1A



### 2-96A3A



### 2-96A4A



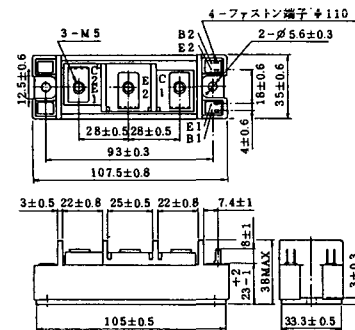
### 2-98B1A



### 2-98C2A



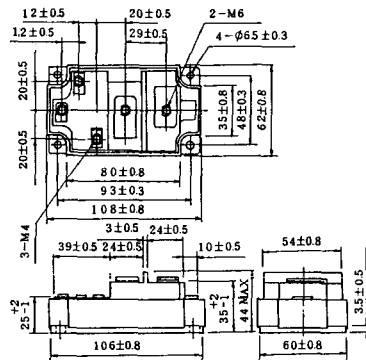
### 2-108A2A



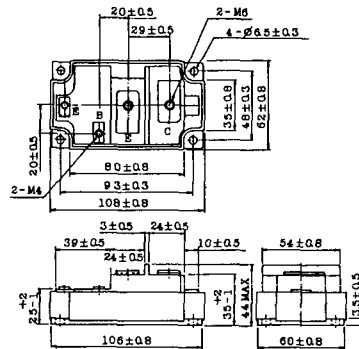
### 2-108B1A



### 2-109A3A



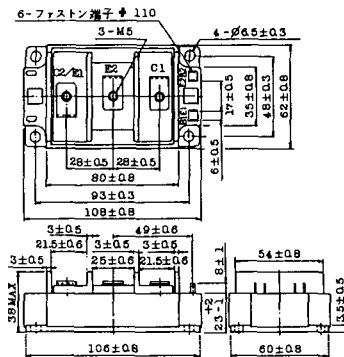
### 2-109A4A



### 2-109B3A

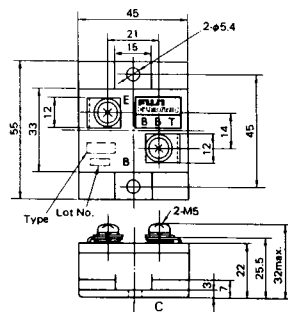


### 2-109B4A



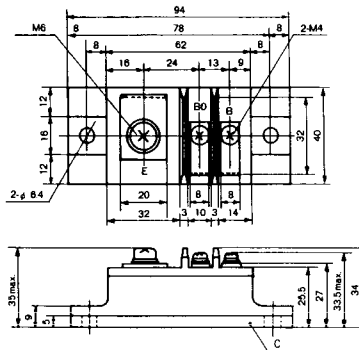
### BBT-II

BBTII  
1D200A-020



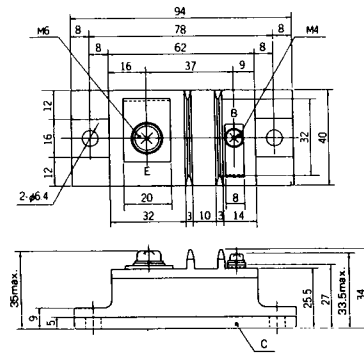
### BBT-III

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



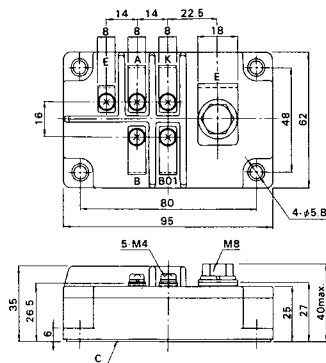
### BBT-III

BBTIII  
ETN01-055  
ET1257

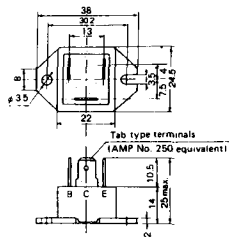


### BBT-IV

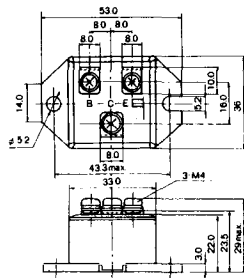
BBTIV  
1D500A-030



M-101



M-102



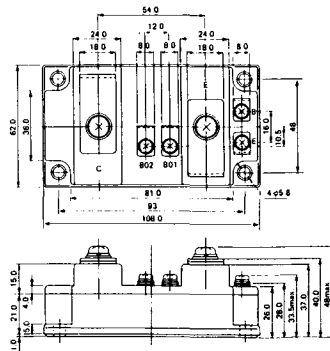
M-103



M-104



M-105



M-106

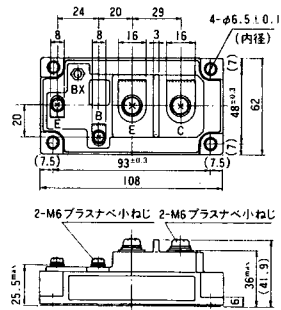




### M-107



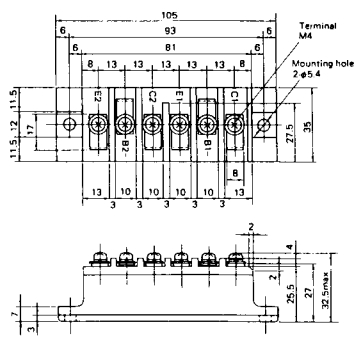
### M-116



M-201



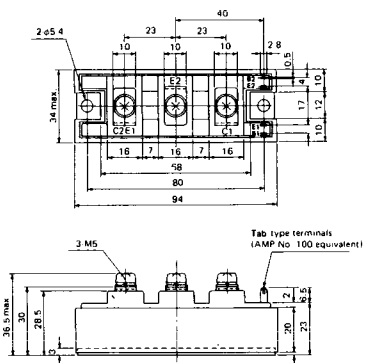
M-202



M-203



M-204



M-205



M-206



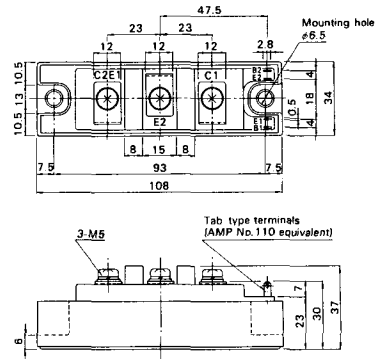
M-207



M-208



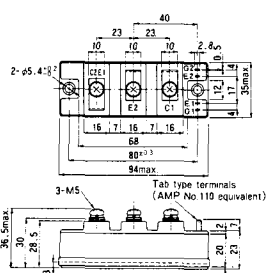
M-209



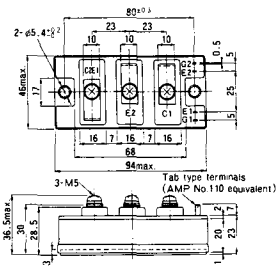
M-210



M-211



M-212



M-213

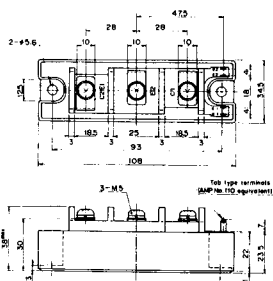


M-214

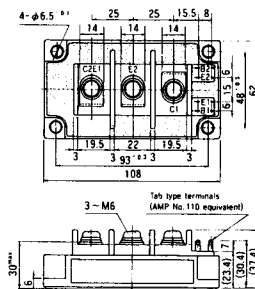
M-215



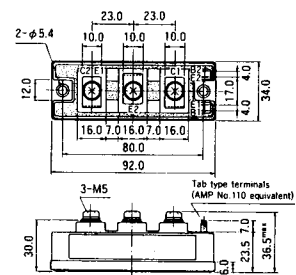
M-216



M-217



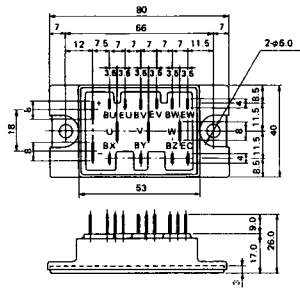
M-218



M-219



M-601



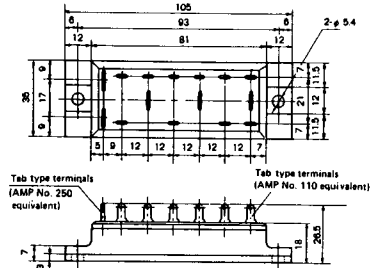
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



M-602



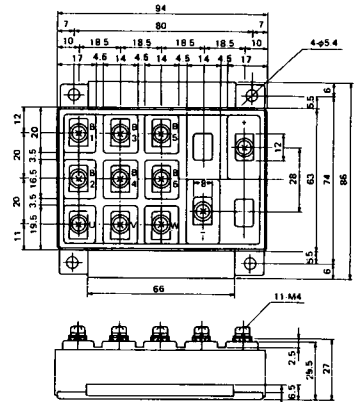
Tab type terminals  
(AMP No. 250 equivalent)



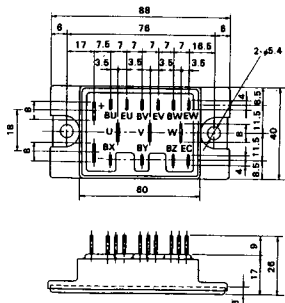
Tab type terminals  
(AMP No. 110 equivalent)



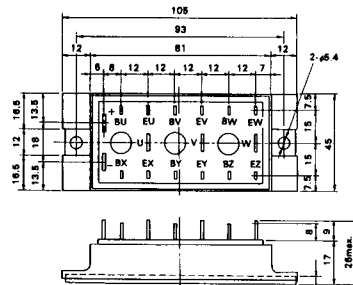
M-603



M-604



M-605



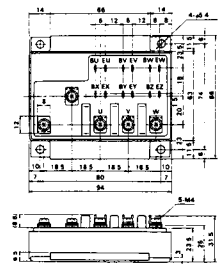
Tab type terminals  
(AMP No. 110 equivalent)



Tab type terminals  
(AMP No. 250 equivalent)



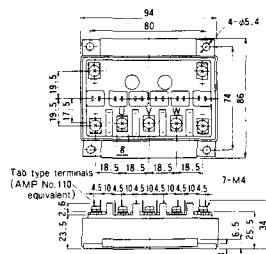
M-606



M-607



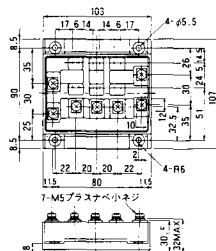
M-608



M-609



M-610



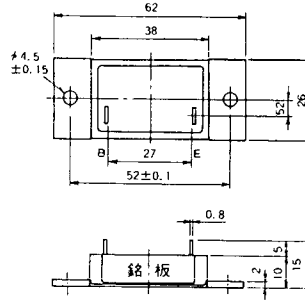
M-616



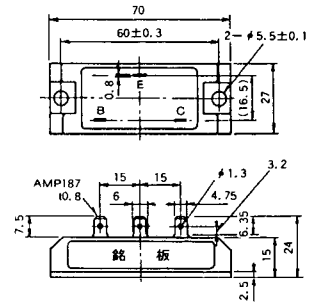
M-1A1A



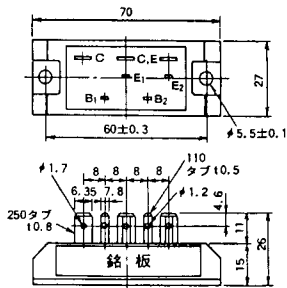
M-2A1A



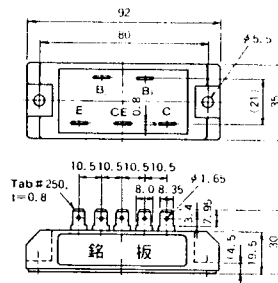
M-2B1A



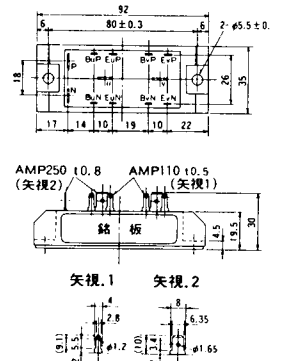
M-2B2A



M-2C2A



M-2D4A







M-3C1A



M-3D6A



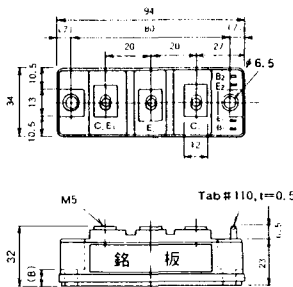
M-3E6A



M-4A1A



M-4A2A



M-4A1B



M-4A2B



M-4B2A



M-5A1A



M-5A1B



M-5A2A



M-5B2A



M-5C2A



M-5D2A



M-6A1A



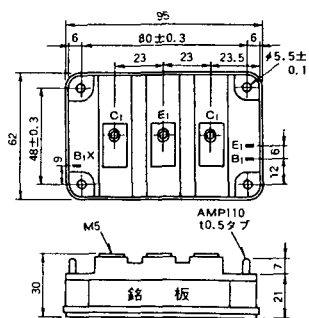
M-7A1A



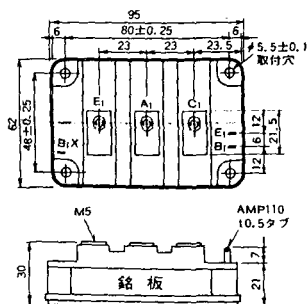
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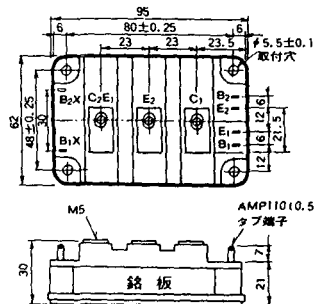
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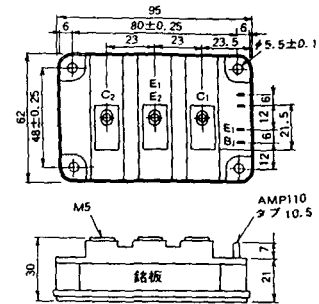
M-8A1B



M-8A2A



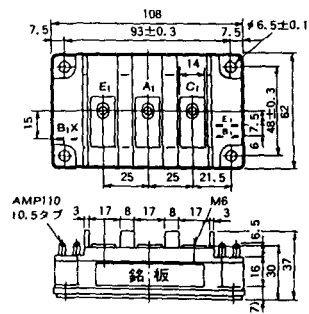
M-8A2B



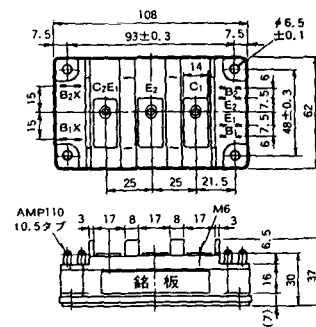
M-8B2A



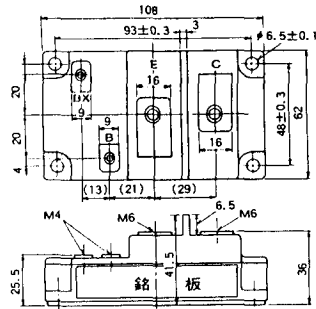
M-9A1A



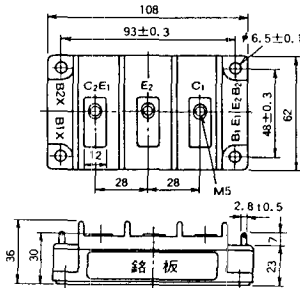
M-9A2A



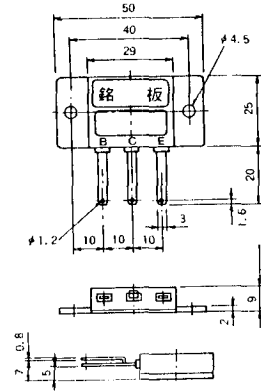
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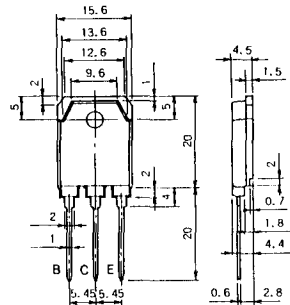
### M-9C2A



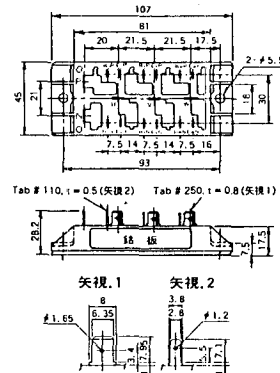
### M-1A1B



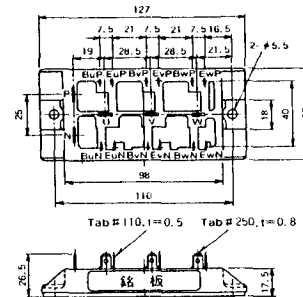
### M-1A1C



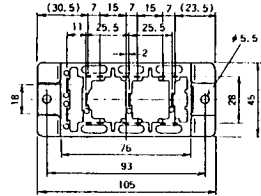
### M-2E6B



### M-2E6C



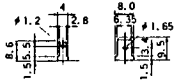
M-2G6B



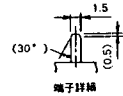
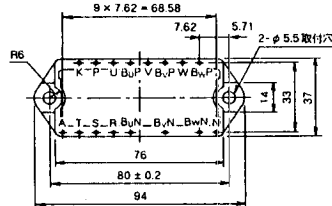
Tab# 250, l=0.8 (矢視 1) Tab# 110, l=0.5 (矢視 2)



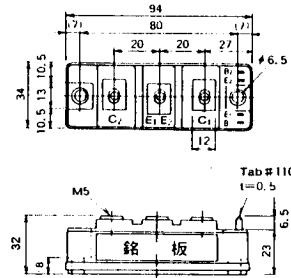
矢視 1 矢視 2



M-3D6B

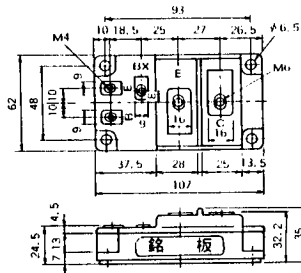


M-4A2C

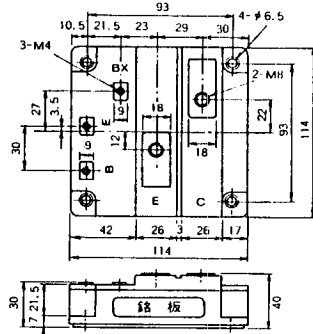


Tab# 110, l=0.5

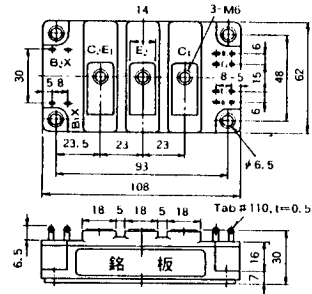
M-7A1B



M-7C1A



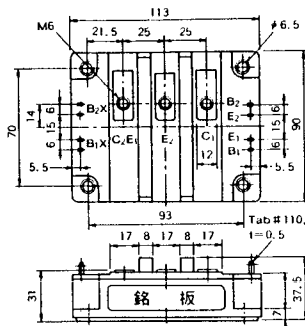
M-8A2C



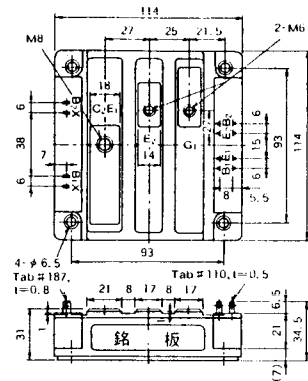
M-10A2A



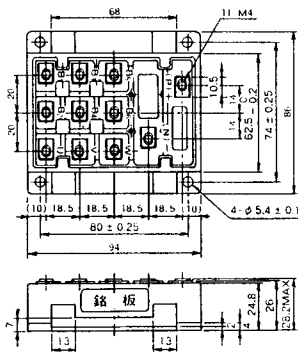
M-10A2B



M-11A2A



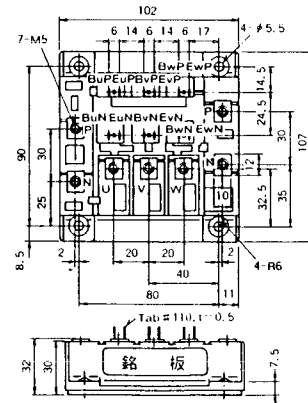
M-12A6A



M-12B6A

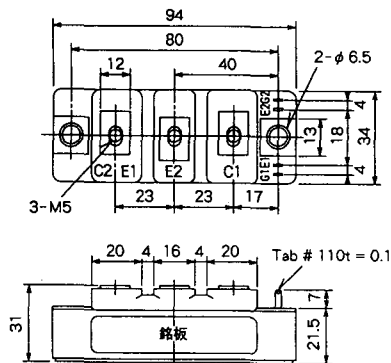


M-12B6B

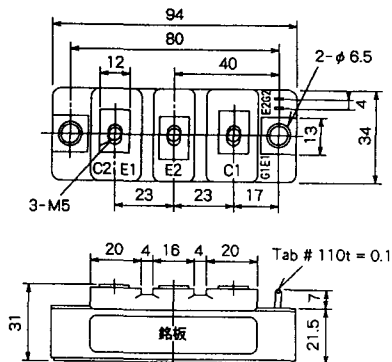




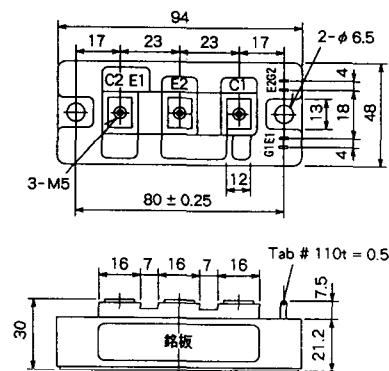
**M-4A2D**



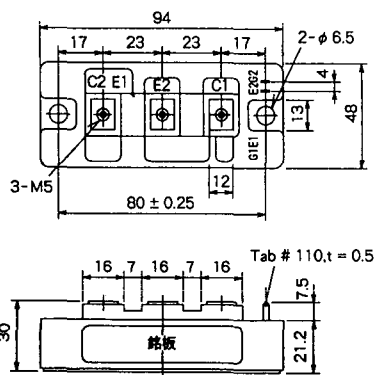
**M-4A2E**



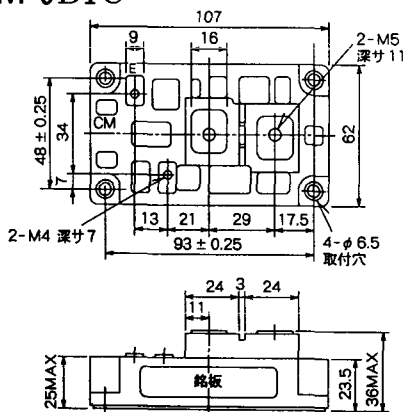
**M-4C2A**



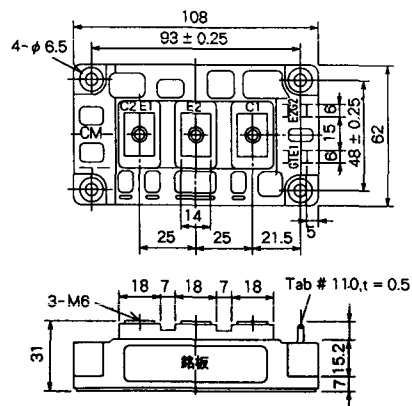
**M-4C2B**



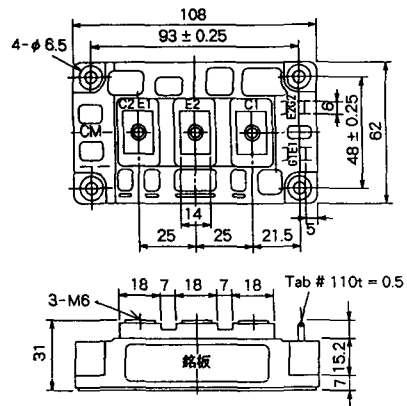
**M-9B1C**



**M-9D2A**



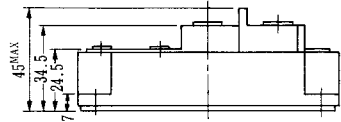
M-9D2B



M-10A2C

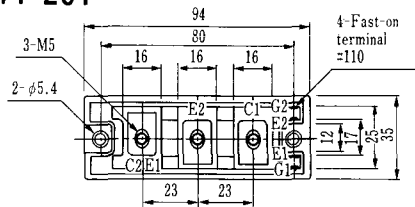


H-101



Weight :480g

### H-201



Weight: 200g

### H-202



Weight: 360g

### LF-J



### LF-K

