

SG600^oJ, R_J21, SG800^oJ, R_J21

■外形図番号 T-33 (13-78B1A)

○ピーク繰返しオフ電圧 600V/1300V, 実効オン電流 400A

■最大定格

*1 スナバ回路, R_s=20Ω, C_s=2μF

記号	SG600R21	SG800R21	単位
V _{RRM}	650	650	V
V _{DRM}	1300	1300	V
I _{FQRM}	600 *1	800 *1	A
I _{TRMS(S)}	400		A
I _{TSM}	6000/6600 (50Hz/60Hz, 正弦半波 1 サイクル高値)		
I ² t			A ² S
di/dt	100 (V _D =½V _{DRM} , I _G =5A, t _r ≤1μs, f=50Hz)		
P _{GFM}	20		W
P _{GRM}	8000		W
P _{GFAV}	4		W
V _{GRM}	10		V
I _{GFM}	10		A
T _J	115		°C
T _{MB}	-40~115		

■電気的特性

*2 R_{GK}=20Ω

記号	測定条件	Min	Typ	Max	単位
I _{RRM}	T _J =115°C, V _D =V _{RRM} *2			50	mA
I _{DRM}	T _J =115°C, V _D =V _{DRM} *2			50	mA
V _{TM}	T _c =25°C, I _{TM} =600A			2.0	V
V _{GT}	T _c =25°C, V _D =12V,	0.65	2.0		V
I _{GT}	R _L =2Ω	120	350		mA
V _{GD}	T _c =115°C, V _D =½V _{DRM}	0.3			V
I _{GD}		10			mA
V _{GQ}	I _T =600A, V _D =⅔V _{DRM}		25		V
I _{GQ}	dv/dt=100V/μs, T _c =110°C		180		A
dv/dt	T _J =115°C, V _D =⅔V _{DRM} *2	350			V/μs
t _H	T _c =25°C, R _L =2Ω *2		2		A
t _s	T _c =110°C, I _{TM} =600A			15	μs
t _{rr}	I _{GR} =200A, V _D =⅔V _{DRM} dig/dt=30A/μs *1			18	μs
R _{th}	接合部~フェイス間, DC			0.04	°C/W

SG700^oR, U, W, EX11

■外形図番号 T-44 (13-36A1A)

○チョップパ、インバータ用

■最大定格

記号	SG700R11	SG700U11	SG700W11	SG700EX11	単位
V _{RRM}	15				V
V _{DRM}	1300	1600	1800	2500	V
I _{FQRM}	700 (V _D =½V _{DRM} , V _{DM} =⅔V _{DRM} , C _s =2μF, R _s =20Ω, T _J =125°C)				
I _{TRMS(S)}	200 (T _J =70°C)				
I _{TSM}	4000/4400 (50Hz/60Hz, 正弦半波 1 サイクル)				
I ² t					A ² S
di/dt	200 (I _{GP} =12A, t _r =1μs, V _D =½V _{DRM} , I _{TM} =700A, f=50Hz, T _J =125°C)				
I _{GFM}	30 (パルス幅: max. 20μs, duty: max. 20%)				
P _{GFAV}	6				W
I _{GRRMS(S)}	35				A
P _{GRM}	4000 (パルス幅: max. 20μs, duty: max. 2%)				
V _{GRM}	15				V
T _J	125				°C
T _{th}	-40~125				

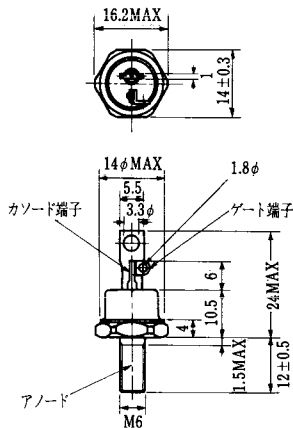
■電気的特性

記号	測定条件	Min	Typ	Max	単位
I _{RRM}	T _J =125°C, V _D =V _{RRM}			10	mA
I _{DRM}	T _J =125°C, V _D =V _{DRM} , R _{GK} =20Ω			10	mA
I _{GRM}	T _J =125°C, V _D =V _{GRM}			10	mA
V _{TM}	T _c =25°C, I _{TM} =700A			2.4	V
V _{GT}	T _c =25°C, V _D =12V	0.75	1.0		V
I _{GT}	R _L =0.5Ω	350	700		mA
V _{GD}	T _c =125°C, V _D =½V _{DRM}	0.3			V
I _{GD}		4			mA
t _d	T _c =25°C, V _D =½V _{DRM}			2.0	μs
t _{st}	I _{TM} =700A, di/dt=200A/μs I _{GP} =12A, t _r =1μs			6.0	μs
dv/dt	T _J =125°C, V _D =⅔V _{DRM} V _{GK} =-2V	600			V/μs
t _H	T _c =25°C, R _L =0.5Ω		20		A
t _s	T _c =120°C, I _{TM} =700A			14	μs
t _{tr}	V _D =½V _{DRM}			16	μs
t _{tot}	V _{DM} =⅔V _{DRM}			75	μs
	C _s =2μF	SG700R11		73	
	R _s =20Ω	SG700U11		70	
	dig/dt=-20A/μs	SG700W11		65	
I _{GR}		160	190		A
R _{th}	接合部~ケース間, DC			0.09	°C/W

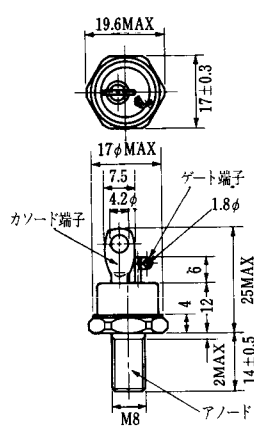
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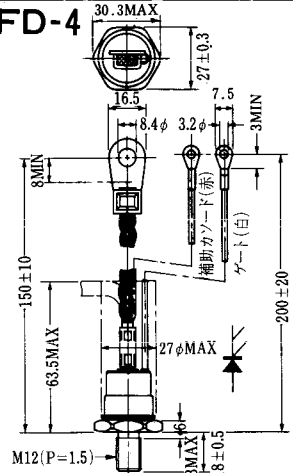
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FD-3



FD-4



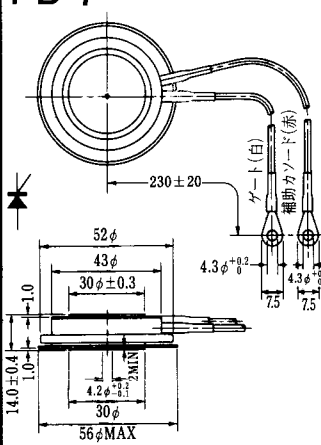
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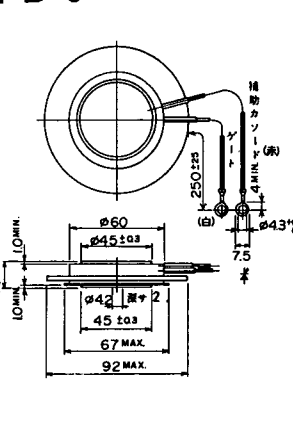
FD-6



FD-7



FD-8



FD-9



FD-10



FD-11

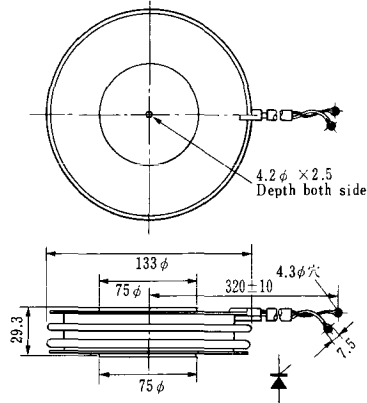
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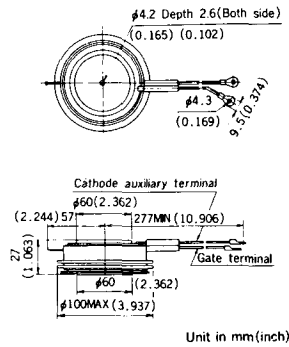


《寸法図単位：mm》

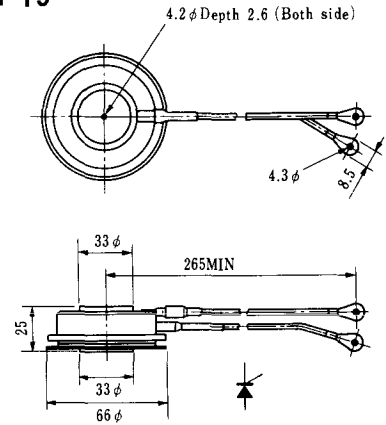
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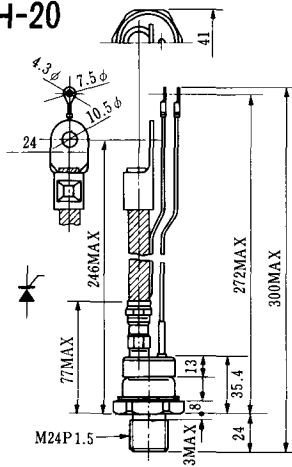
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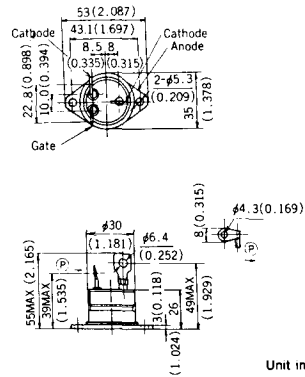
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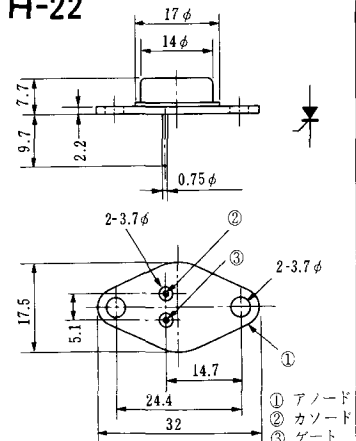
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H-21



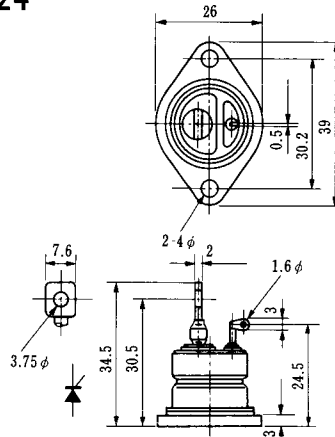
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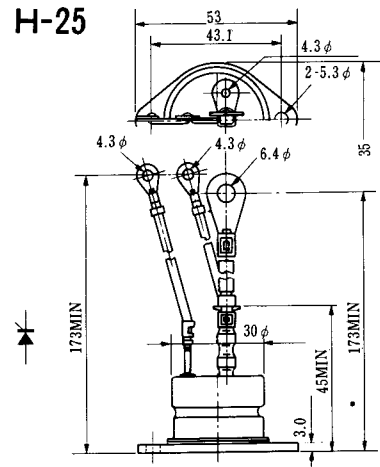
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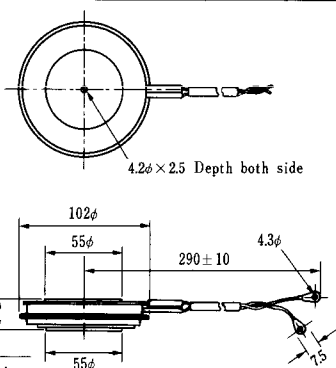
H-24



H-25



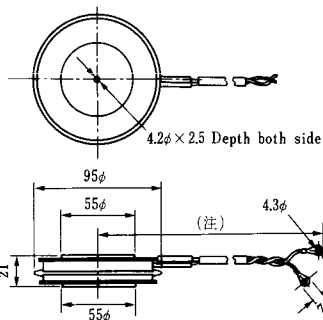
H-26



Type	Direction of polarity
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CA12	
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H-27

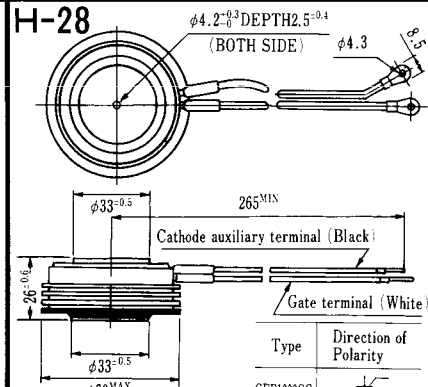


Type	Direction of polarity
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CF11V	
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(注) CC11V : 400 ± 10
CF11V : 250 ± 10

H-28



Type	Direction of Polarity
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GFP100GG	
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Weight: 360(g)

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

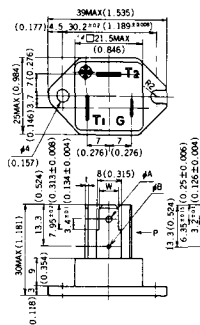


Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



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

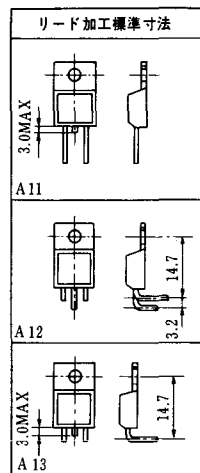
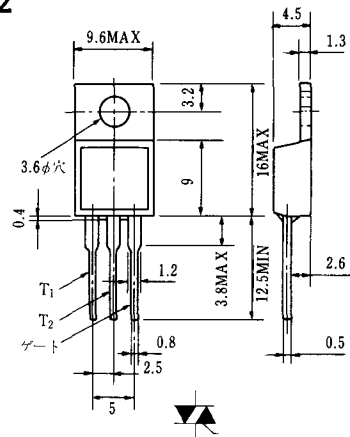
HT-1



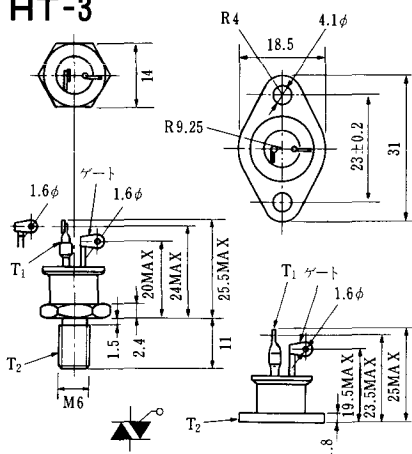
TERMINAL	t	W	φA	φB
T ₁	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 ^{+0.1} ₀ (0.079±0.004)	1.3 (0.051)
T ₂	0.8±0.025 (0.031±0.001)	6.35±0.1 (0.250±0.004)	2.00 ^{+0.1} ₀ (0.079±0.004)	1.3 (0.051)
G	0.5±0.025 (0.020±0.001)	4.75±0.1 (0.187±0.004)	1.55 ^{+0.1} ₀ (0.061±0.004)	1.3 (0.051)

Unit in mm (inch)

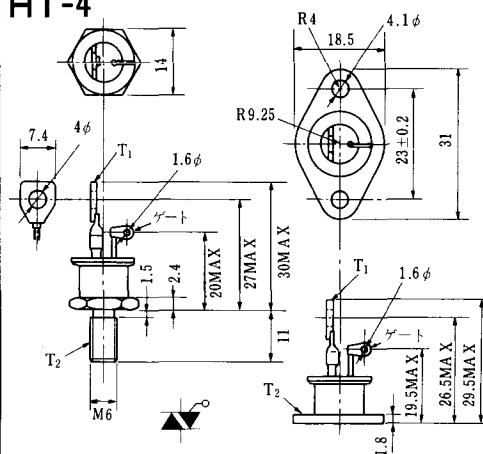
HT-2



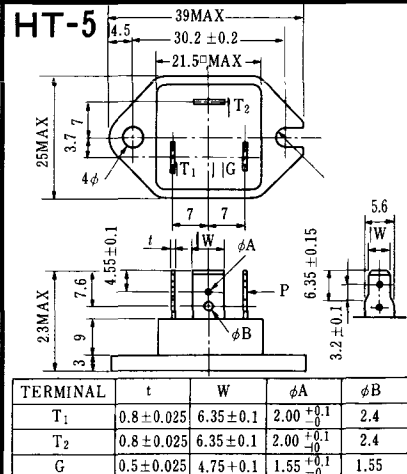
HT-3



HT-4



HT-5



TERMINAL	t	W	φA	φB
T ₁	0.8±0.025	6.35±0.1	2.00 ^{+0.1} ₀	2.4
T ₂	0.8±0.025	6.35±0.1	2.00 ^{+0.1} ₀	2.4
G	0.5±0.025	4.75±0.1	1.55 ^{+0.1} ₀	1.55

《寸法図単位：mm》

M-1



M-2



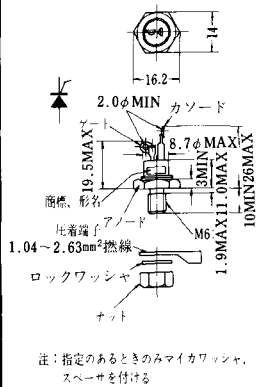
M-3



M-4



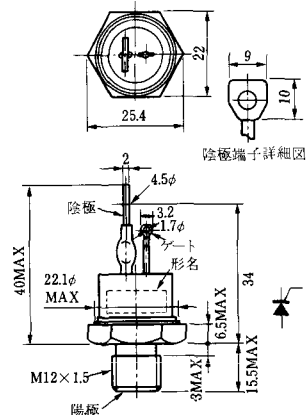
M-5



M-6



M-7



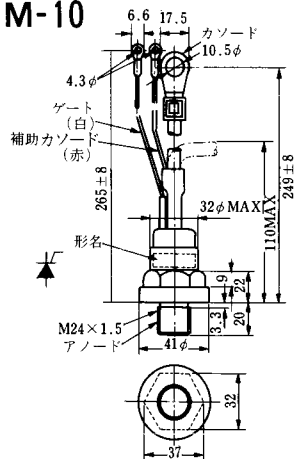
M-8



M-9



M-10



M-11



M-12



M-13



M-14



M-15

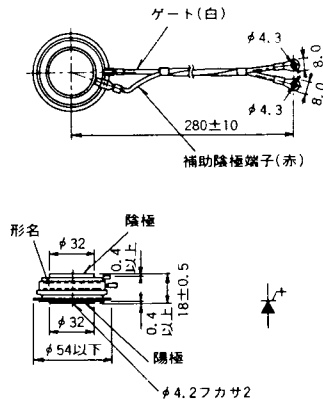


M-16

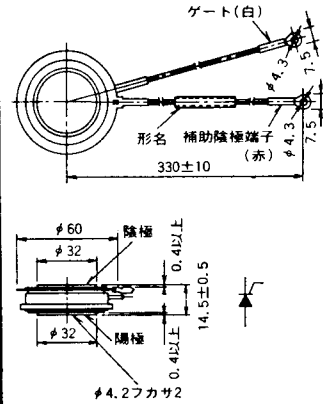




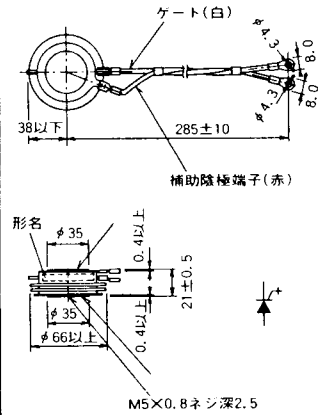
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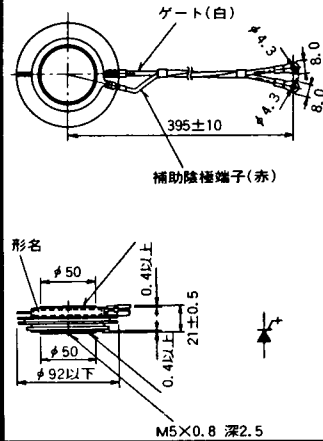
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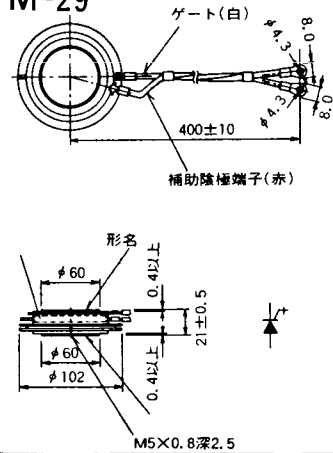
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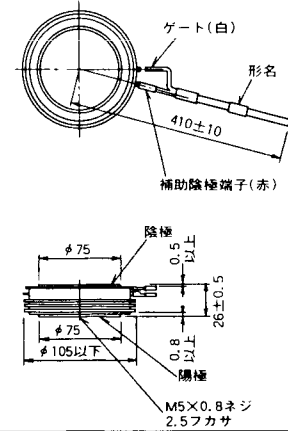
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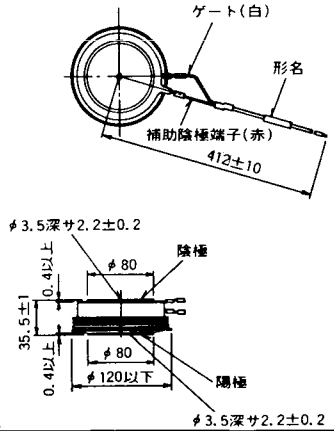
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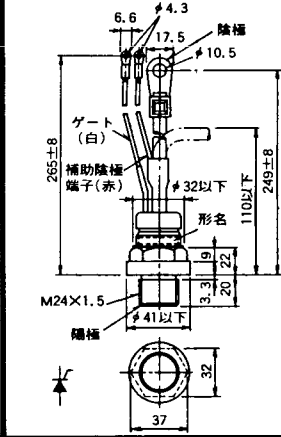
M-30



M-31



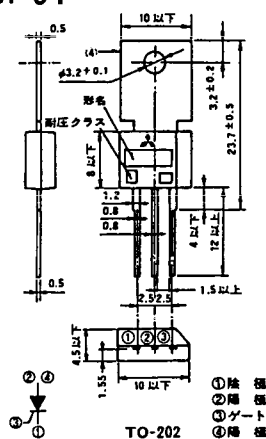
M-32



M-33



M-34



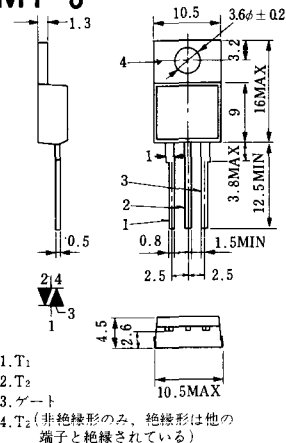
MT-1



MT-2



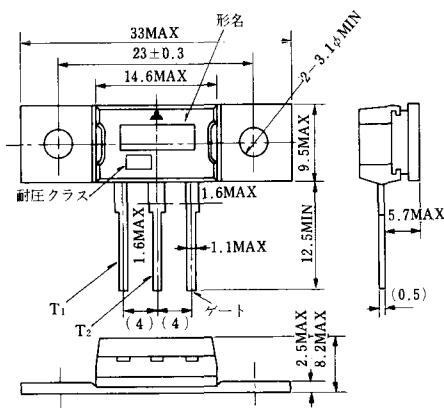
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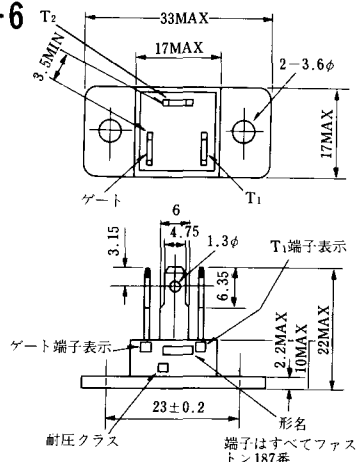
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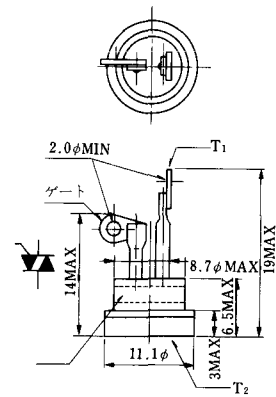
MT-5



MT-6



MT-7

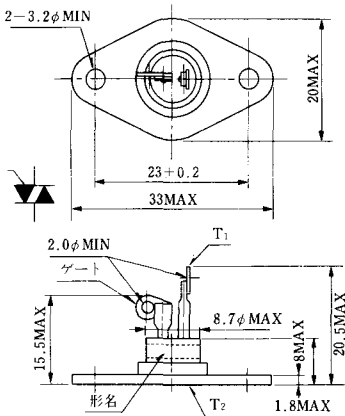


1. T₁
2. T₂
3. ゲート
4. T₂ (非絶縁形のみ、絶縁形は他の端子と絶縁されている)

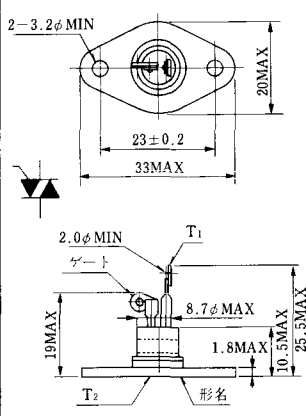
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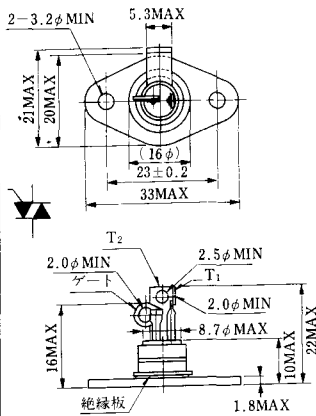
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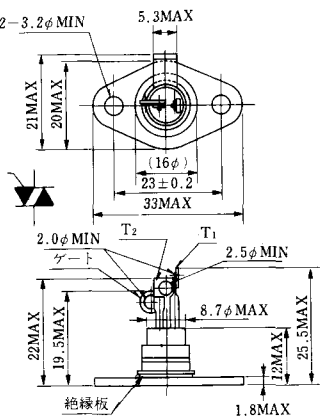
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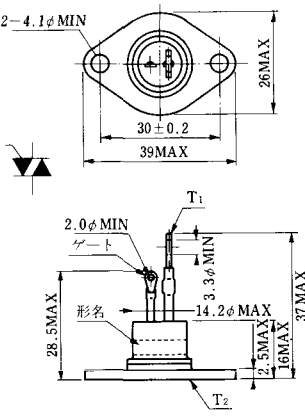
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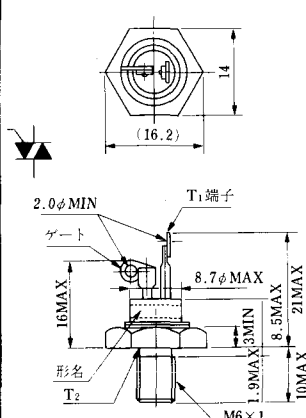
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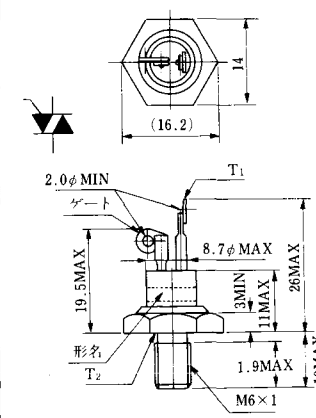
MT-13



MT-14



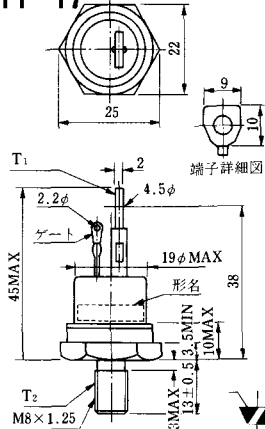
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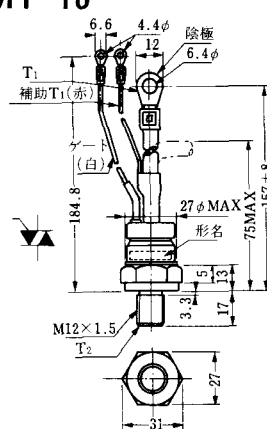
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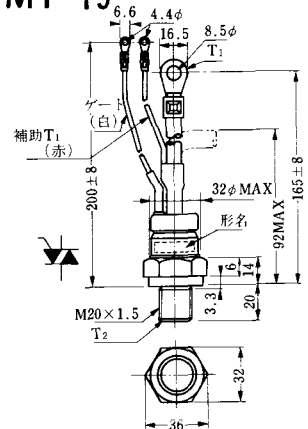
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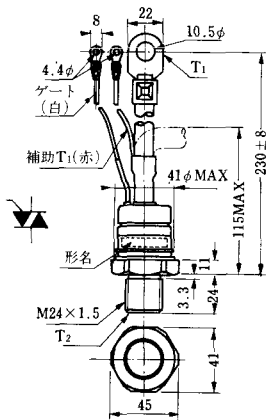
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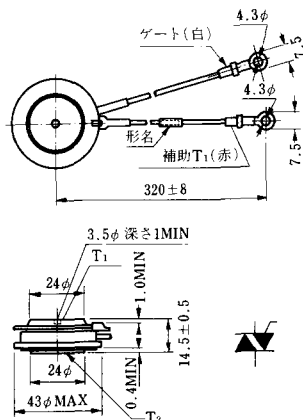
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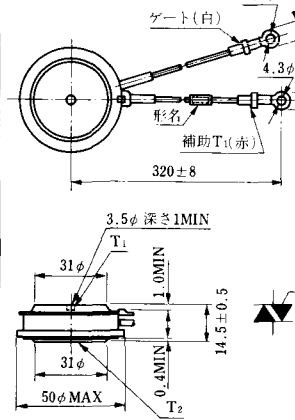
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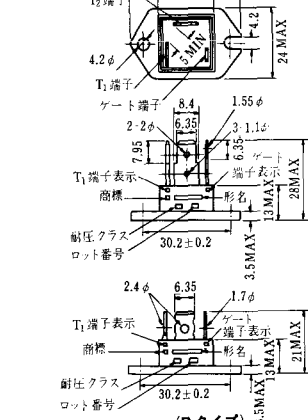
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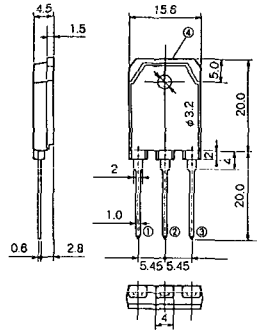
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MT-23

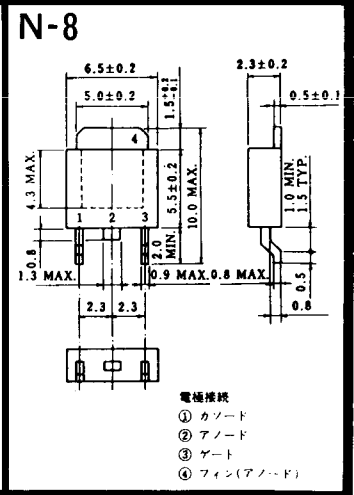
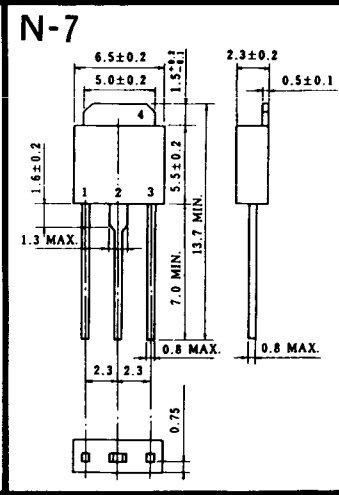
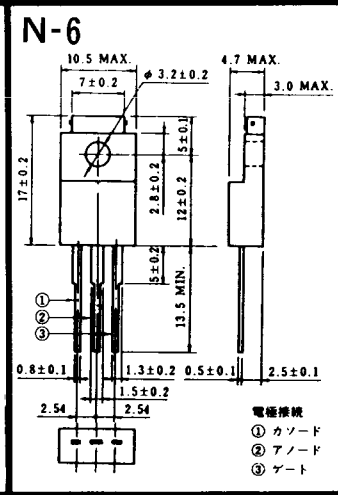
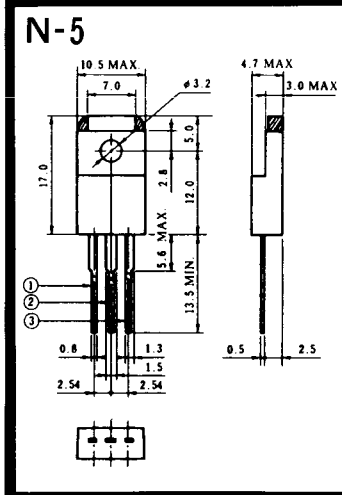
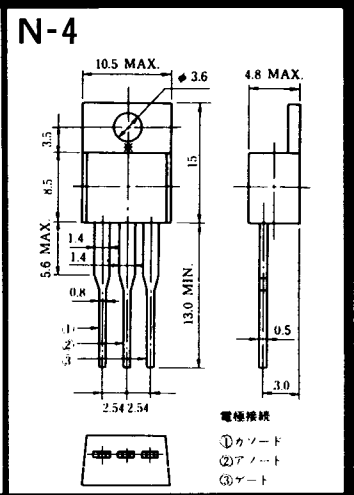
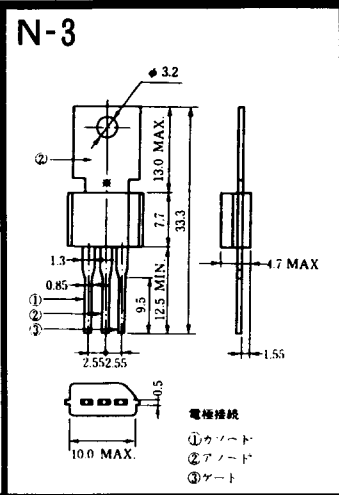
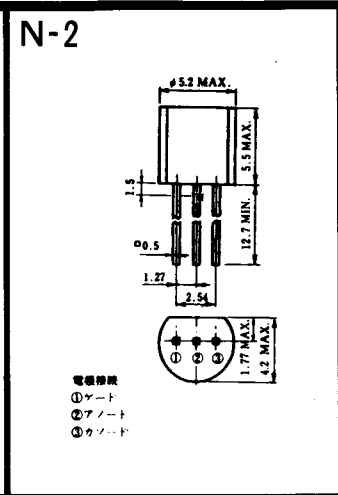
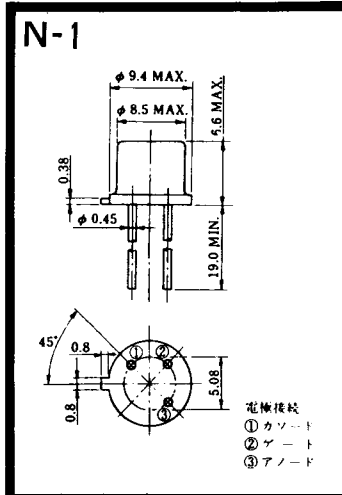


MT-24

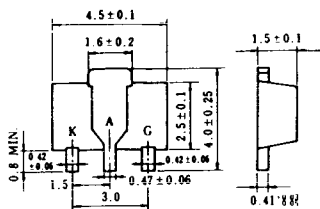


TO - 3P

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



N-9



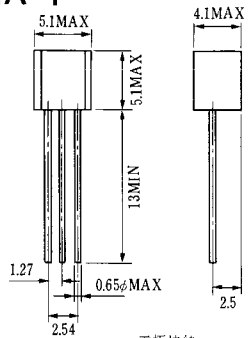
電極接続

K : カソード

A : アノード

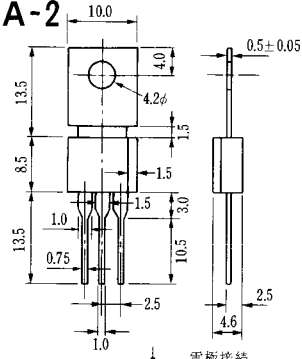
G : ギャート

NA-1



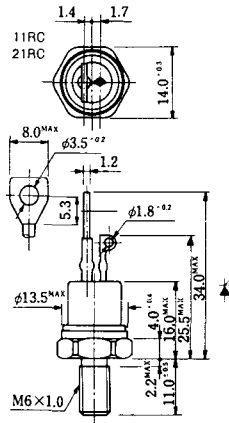
電極接続
 1. ゲート
 2. アノード
 3. カソード
 JEDEC: TO-92

NA-2



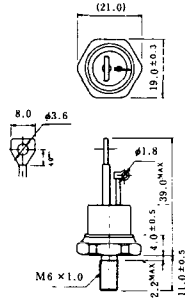
電極接続
 1. カソード
 2. アノード
 3. ゲート
 JEDEC: TO-202AA

NI-1



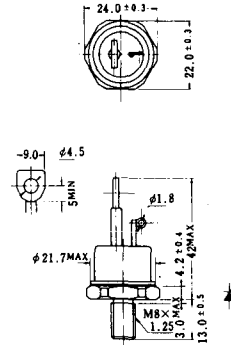
NI-2

29RD



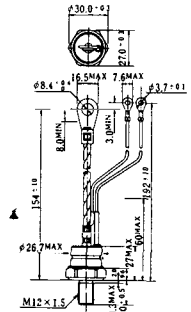
NI-3

39RC
59RC
39RF
59RF



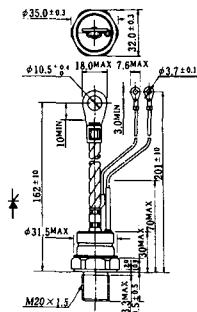
NI-4

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



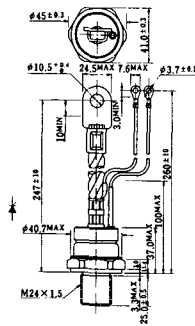
NI-5

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



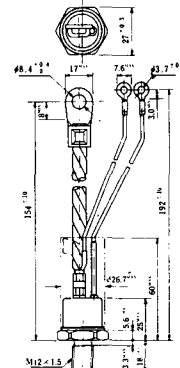
NI-6

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



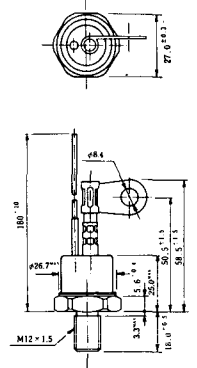
NI-7

89RW_{JL}
129RW_{JL}



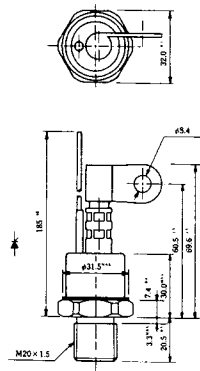
NI-8

89RW
129RW



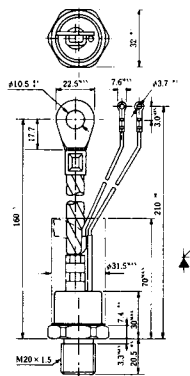
NI-9

259RW
309RW



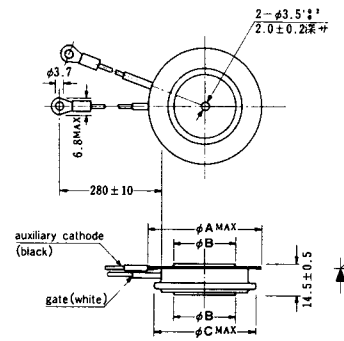
NI-10

259RW_JL
309RW_JL



NI-11

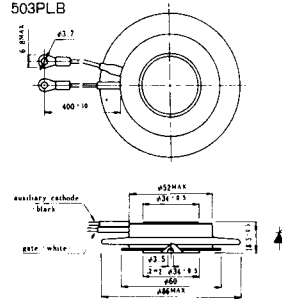
103PA
253PA
503PA
553PA
803PA
103PLE
103PLG
103PLH
203PLG
253PLE
253PLH
353PLG
403PLE
403PLH



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

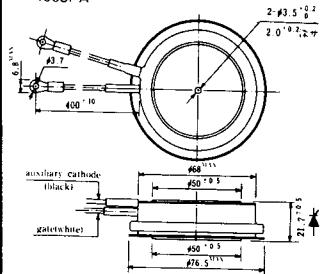
NI-12

403PAB
503PAB
503PLB



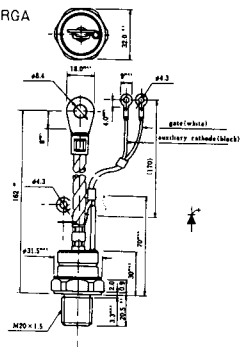
NI-13

1003PA
1003PAB
1003PLF
1003PLH
1503PA



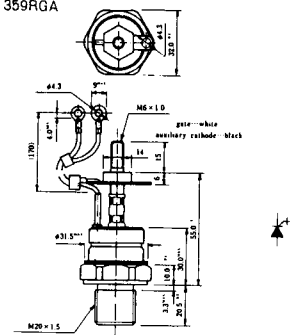
NI-14

358RGA



NI-15

359RGA





NI-24

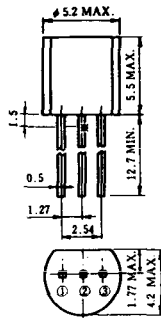
2001PGB^r JE



NI-25

NI-26

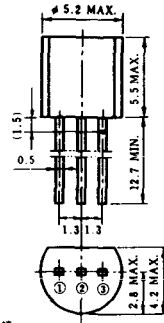
NT-1



電極接続

- ① T₁
- ② ゲート
- ③ T₂

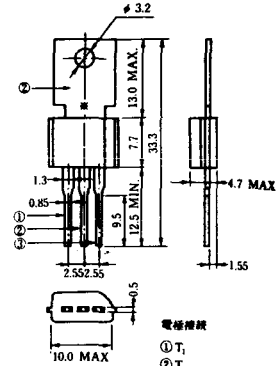
NT-2



電極接続

- ① T₁
- ② ゲート
- ③ T₂

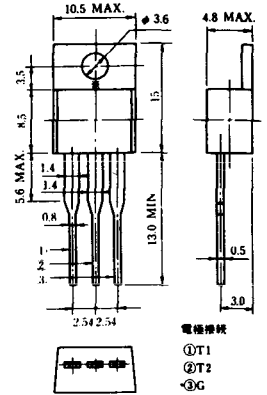
NT-3



電極接続

- ① T₁
- ② T₂
- ③ ゲート

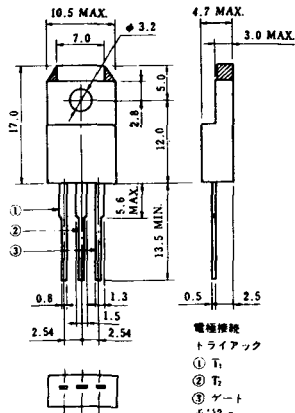
NT-4



電極接続

- ① T₁
- ② T₂
- ③ G

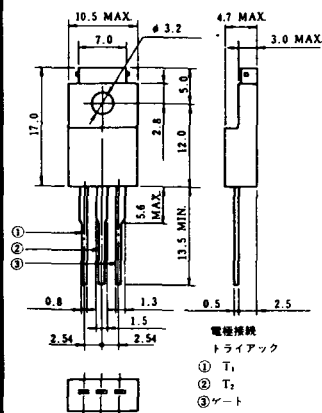
NT-5



電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

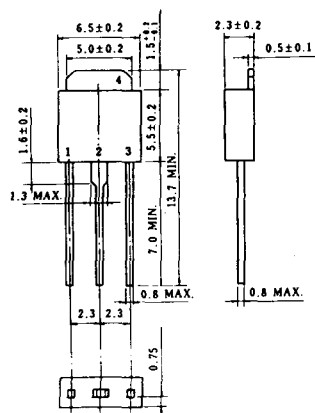
NT-6



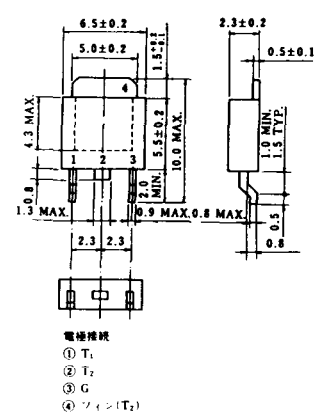
電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

NT-7



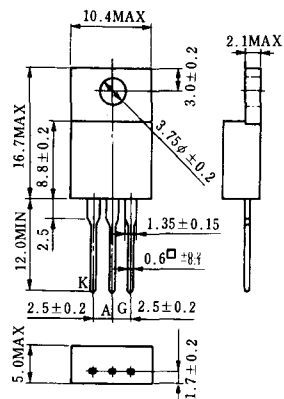
NT-8



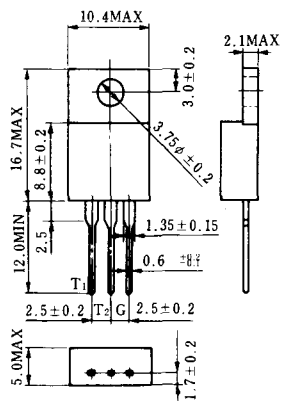
電極接続

- ① T₁
- ② T₂
- ③ G
- ④ シフト(T₂)

S-1



ST-1



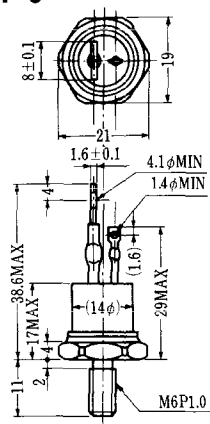
SA-1



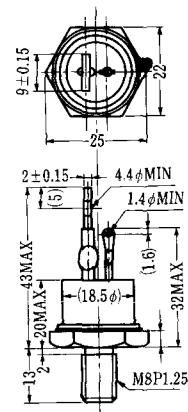
SA-2



SA-3



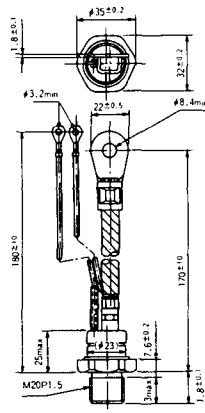
SA-4



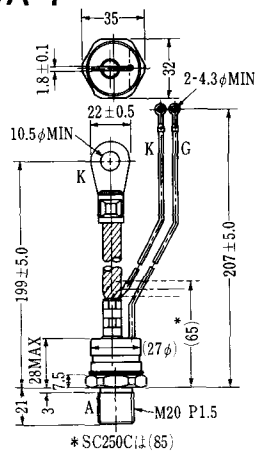
SA-5



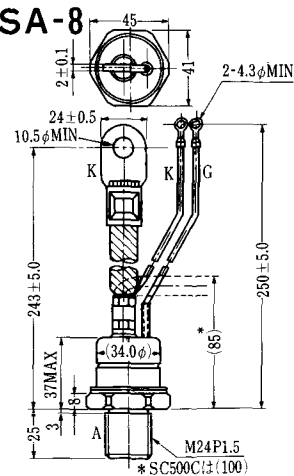
SA-6



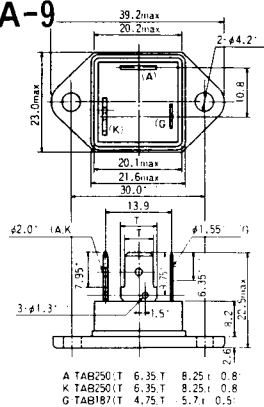
SA-7



SA-8



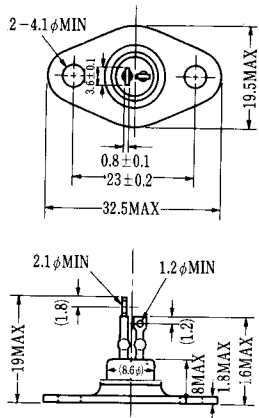
SA-9



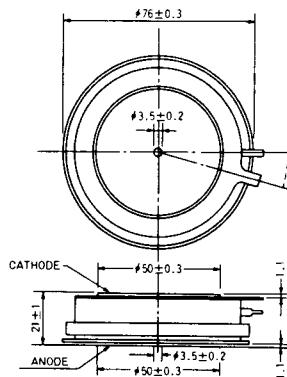
A TAB250(T) 6.35 T 8.25 I 0.8
 K TAB250(T) 6.35 T 8.25 I 0.8
 G TAB187(T) 4.75 T 5.7 I 0.5



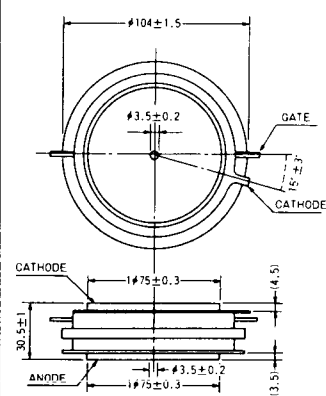
SA-10



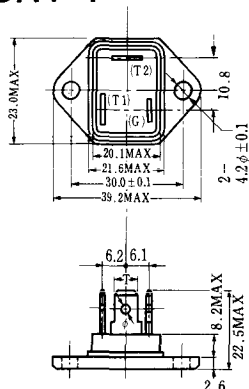
SA-11



SA-12



SAT-1



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

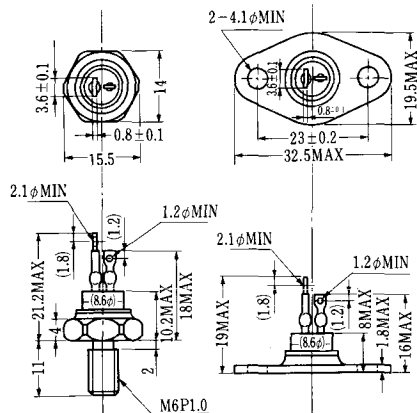
SAT-2



SAT-3



SAT-4



SAT-5



SAT-6



SAT-7



SAT-8



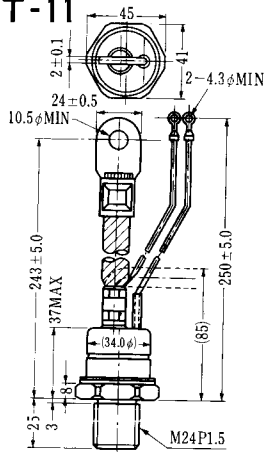
SAT-9



SAT-10



SAT-11

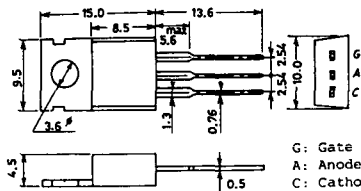


SY-1 (1096A)



C: Cathode
A: Anode
G: Gate

SY-2 (1151)



G: Gate
A: Anode
C: Cathode

SY-3 (1104)



G: Gate
A: Anode
C: Cathode

SY-4 (1150)



G: Gate
A: Anode
C: Cathode

1097A



G: Gate

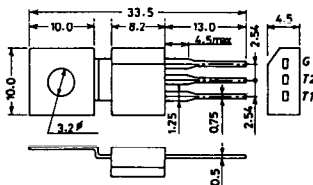
1102



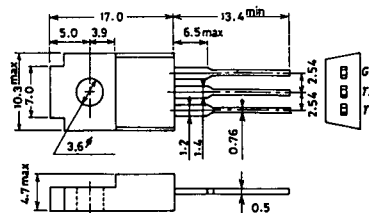
1141



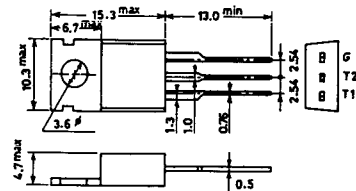
1142



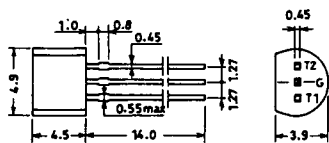
1144



1155

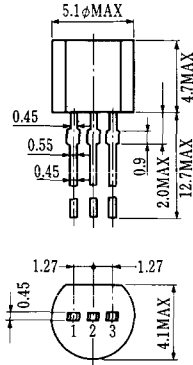


1192A



G: Gate

T-1 (13-5A1A)



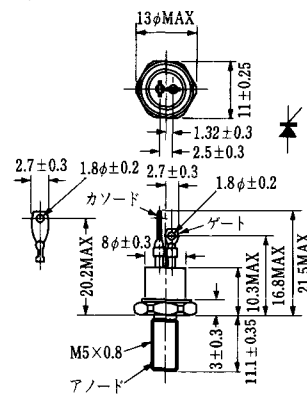
- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



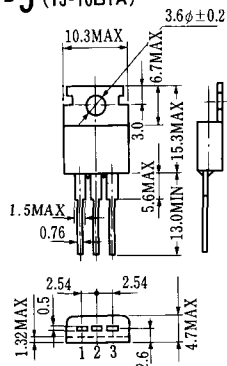
1. カソード
2. ゲート
3. アノード(ケース)

T-3 (13-8C1A)



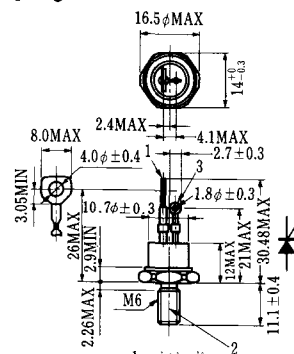
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



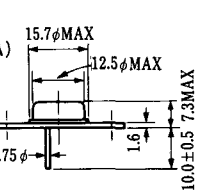
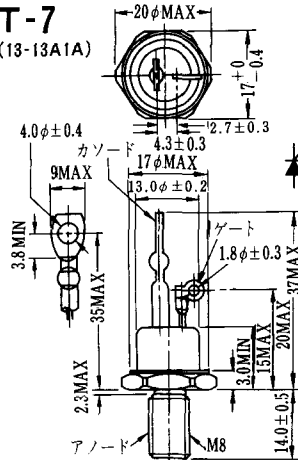
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



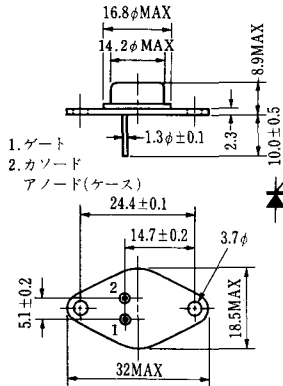
- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



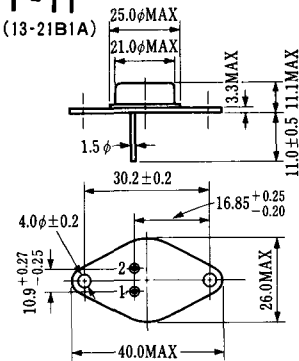
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



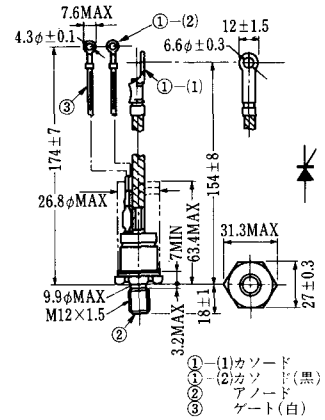
1. カソード
2. アノード
3. ゲート

T-11 (13-21B1A)



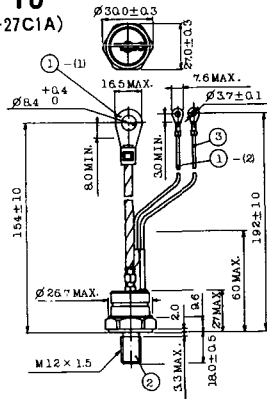
1. ゲート
2. カソード
- アノード(ケース)

T-12 (13-27B1B)



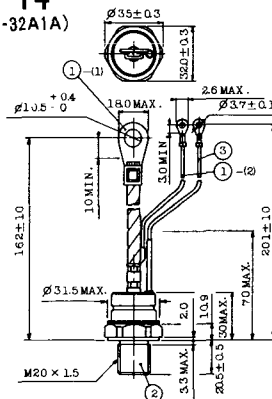
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-13 (13-27C1A)



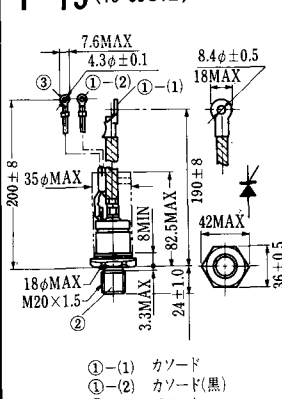
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-14 (13-32A1A)



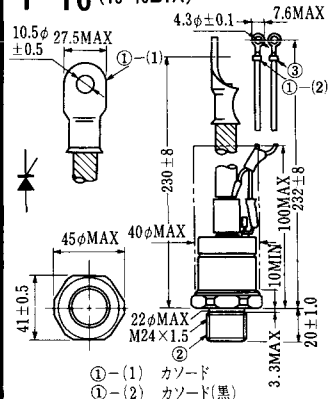
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-15 (13-35C1B)



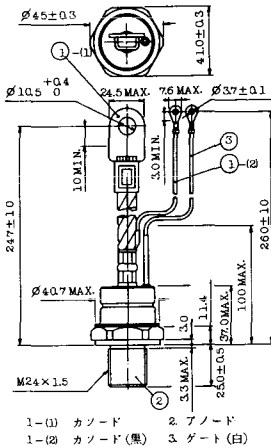
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-16 (13-40B1A)

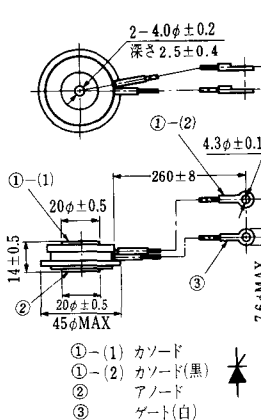


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-17 (13-42A1A)



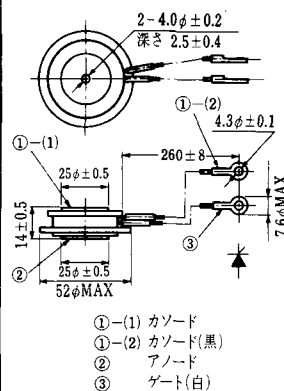
T-18 (13-45D1A)



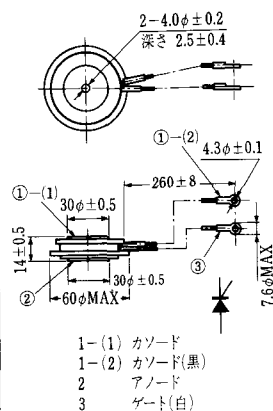
T-19 (13-52B1A)



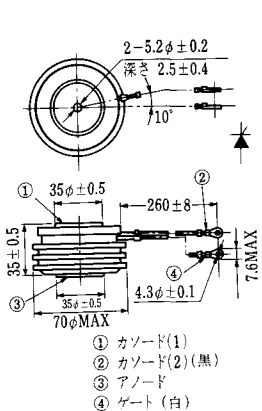
T-20 (13-52C1A)



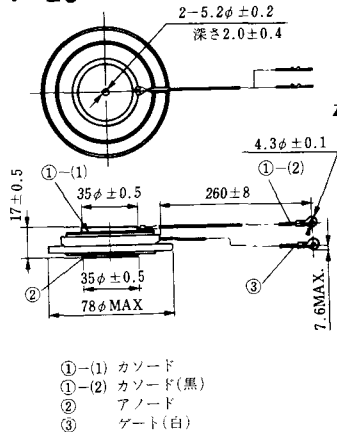
T-21 (13-60A1A)



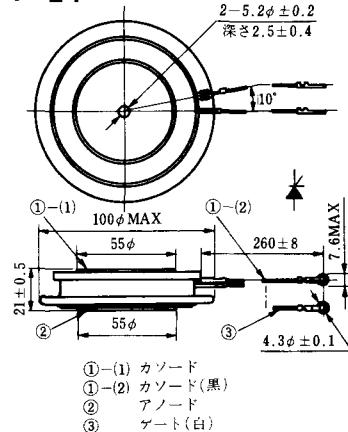
T-22 (13-70C1A)



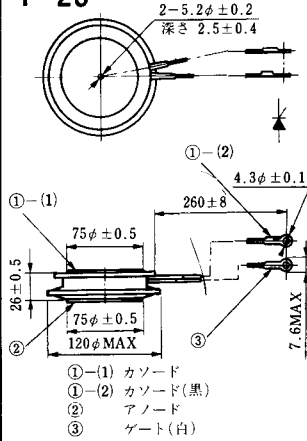
T-23 (13-78A1A)



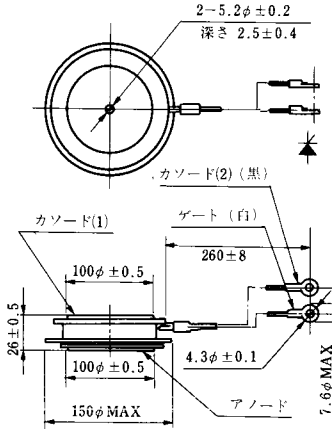
T-24 (13-100C1A)



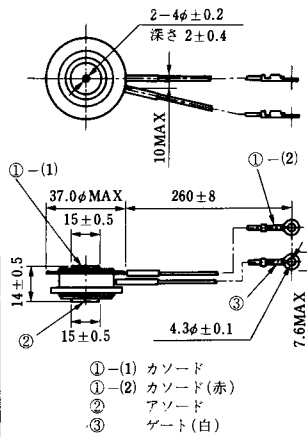
T-25 (13-120A2A)



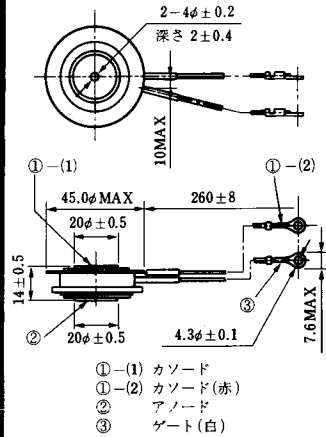
T-26 (13-150A1A)



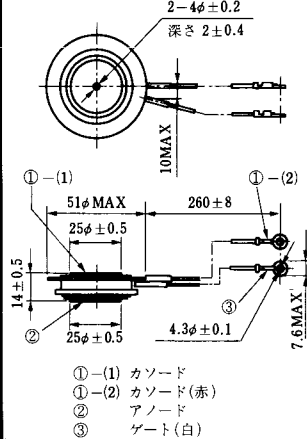
T-27 (13-37A1A)



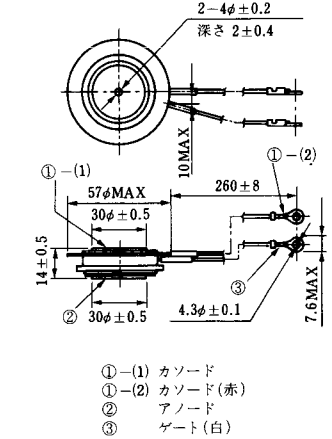
T-28 (13-45E1A)



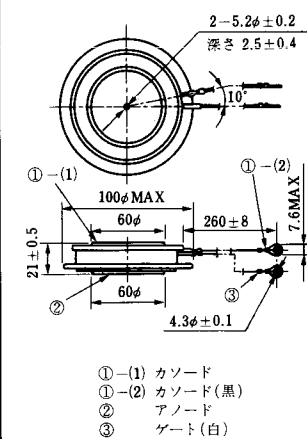
T-29 (13-51A1A)



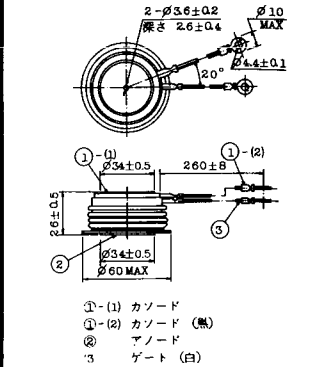
T-30 (13-57A1A)



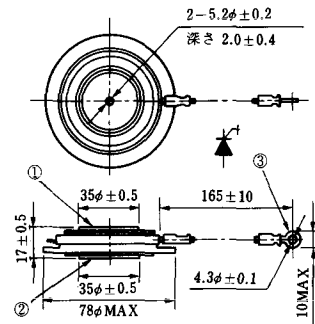
T-31 (13-100E1A)



T-32 (13-60E3A)

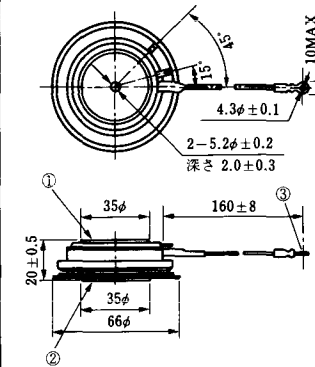


T-33 (13-78B1A)



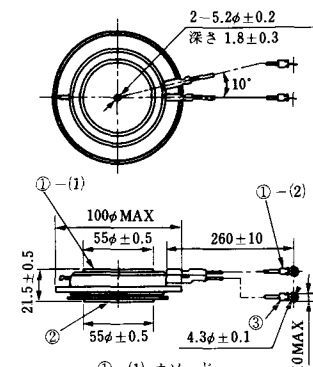
- ① カソード
- ② アノード
- ③ ゲート

T-34 (13-66A1A)



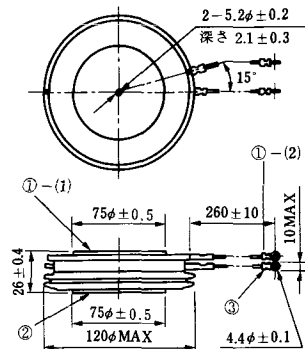
- ① カソード
- ② アノード
- ③ ゲート

T-35 (13-100D1A)



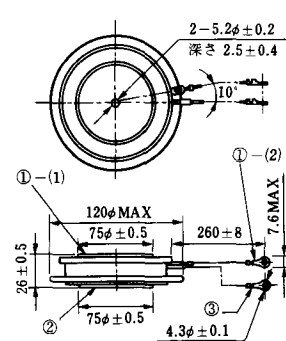
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-36 (13-120E1A)



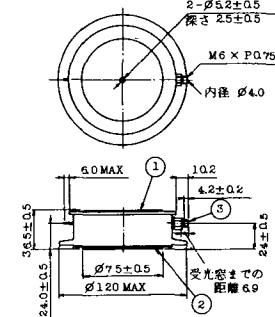
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-37 (13-120A1A)



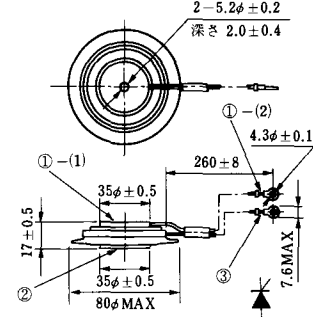
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-38 (13-120C1A)



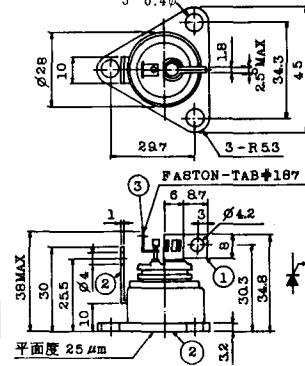
- ① カソード
- ② アノード
- ③ ゲート

T-39 (13-80B1A)



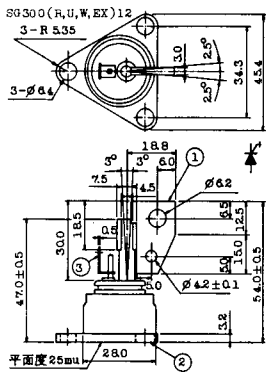
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-40 (13-28A1A)



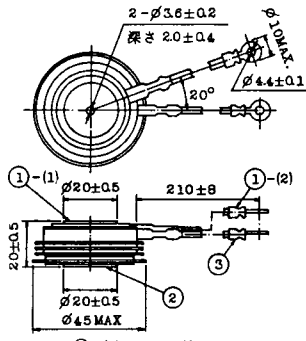
- 1. カソード
- 2. アノード
- 3. ゲート

T-41 (13-28A2A)



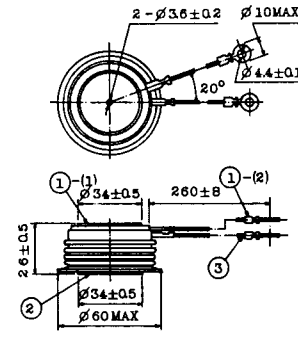
- 1 カソード
- 2 アノード
- 3 ゲート

T-42 (13-45F1A)



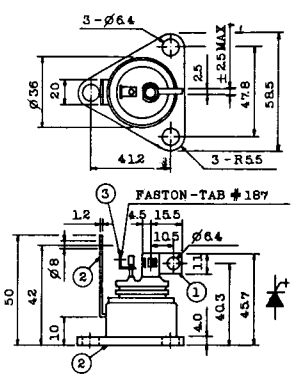
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-43 (13-60E2A)



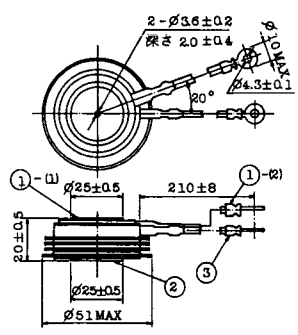
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-44 (13-36A1A)



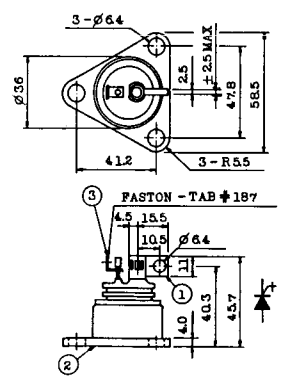
- 1 カソード
- 2 アノード
- 3 ゲート

T-45 (13-51B1A)



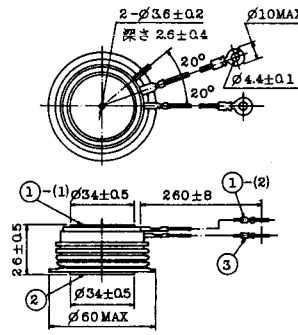
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-46 (13-36B1A)



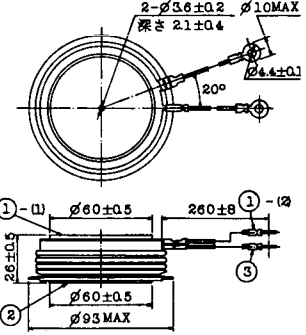
- 1 カソード
- 2 アノード
- 3 ゲート

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)



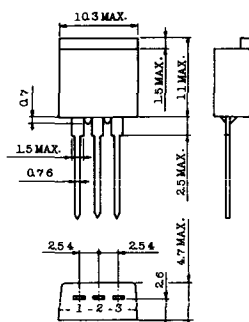
- 1 カソード
- 2 アノード
- 3 ゲート

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)



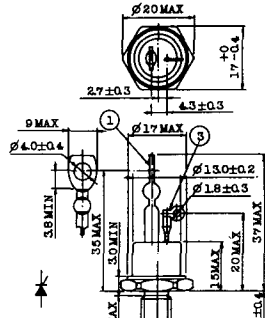
- 1 カソード
- 2 アノード
- 3 ゲート

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)



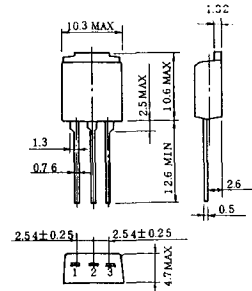
1. カソード
2. アノード
3. ゲート

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)



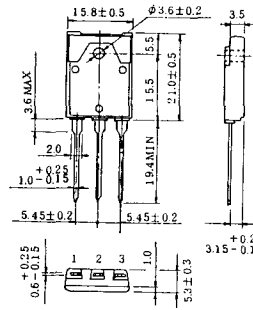
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



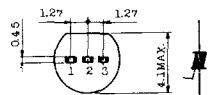
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



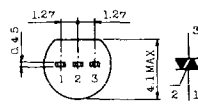
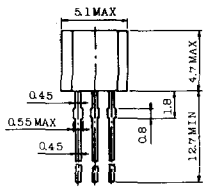
1. カソード
2. アノード
3. ゲート

TT-1



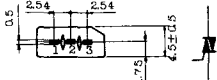
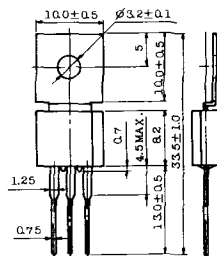
- 1 ゲート
- 2 T₂
- 3 T₁

TT-2



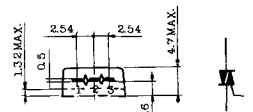
- 1 T₁
- 2 ゲート
- 3 T₂

TT-3



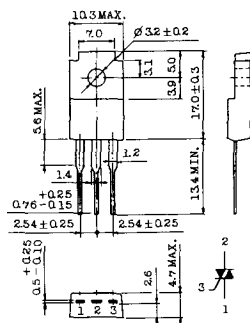
- 1 T₁
- 2 T₂
- 3 ゲート

TT-4



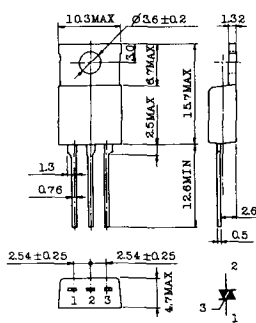
- 1 T₁
- 2 T₂
- 3 ゲート

TT-5



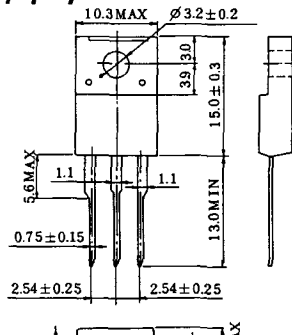
- 1 T₁
- 2 T₂
- 3 ゲート

TT-6



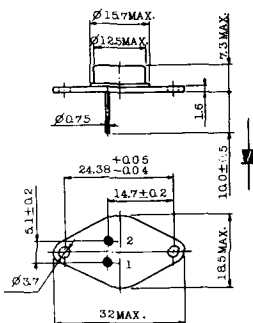
- 1 T₁
- 2 T₂ (放熱板)
- 3 ゲート

TT-7



- 1 T₁
- 2 T₂
- 3 ゲート

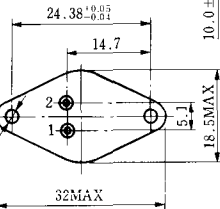
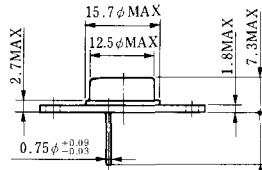
TT-8



- 1 ゲート
- 2 T₁
- T₂ (ケース)

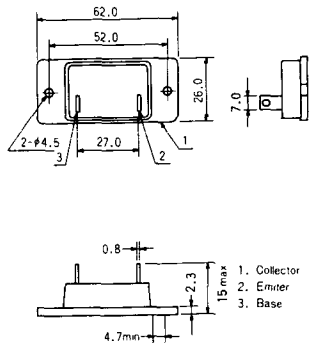


TS-8

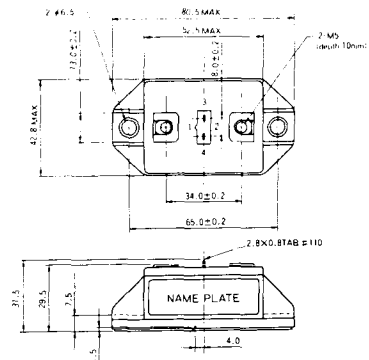


- 1. ベース
- 2. エミッタ
コレクタ
(ケース)

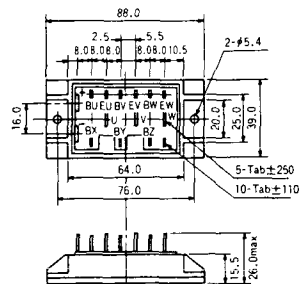
S-62A1A



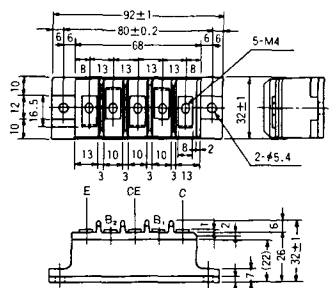
S-80A1A



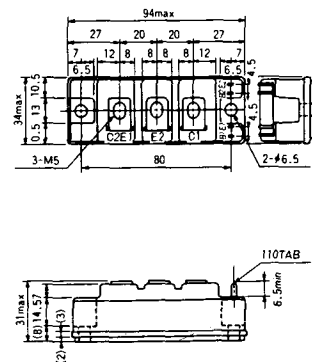
S-88D1A



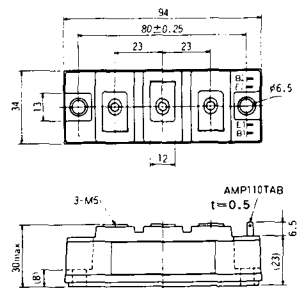
S-92B1A



S-94B1A



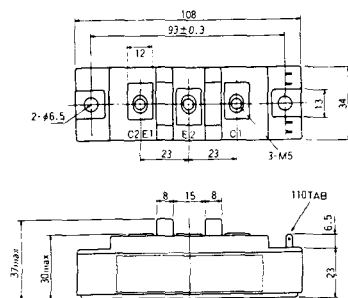
S-94B1B



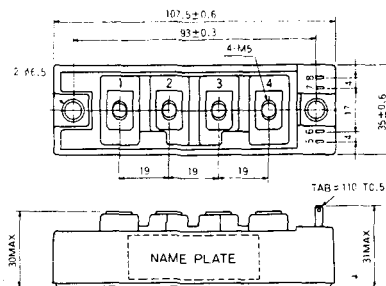
S-108B1A



S-108B1B



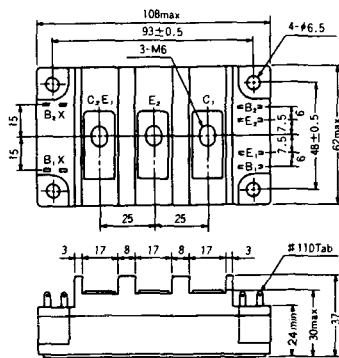
S-108B1C



S-108B2A



S-108B2B



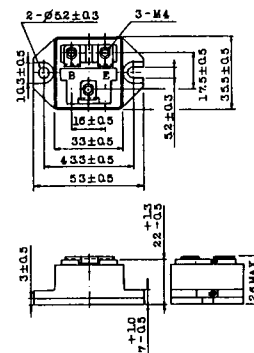
2-22B1A



2-27A4A



2-33C1A



2-33D1A



2-33F1A



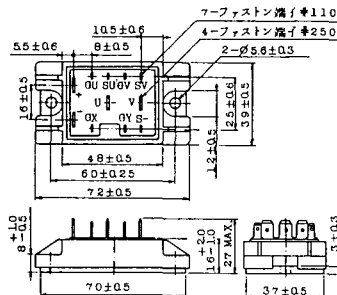
2-37A1A



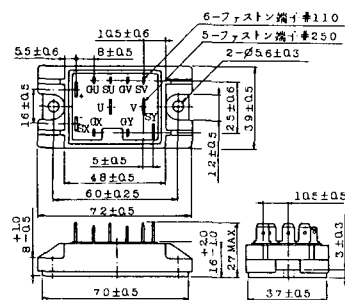
2-48A3A



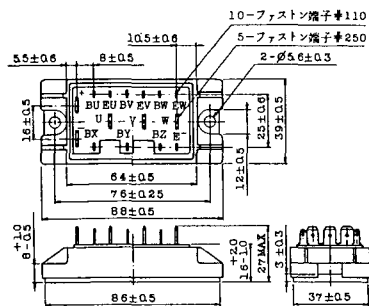
2-48A3B



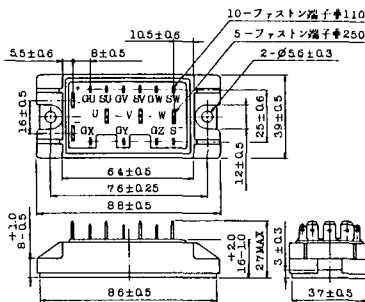
2-48A4A



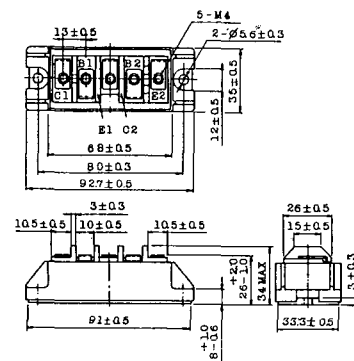
2-64A2A



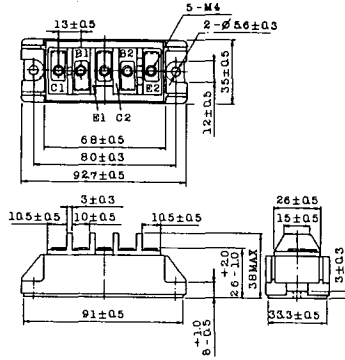
2-64A2B



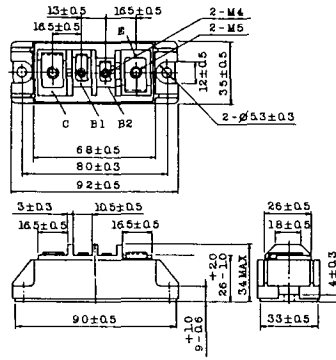
2-68A2A



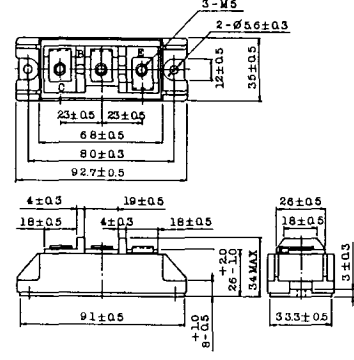
2-68B2A



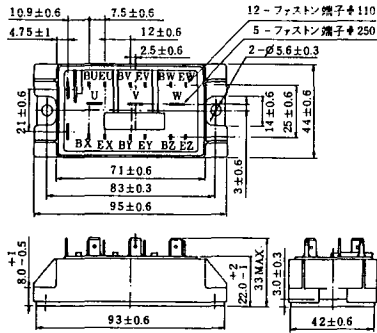
2-68C1A



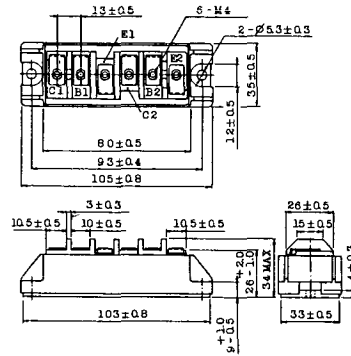
2-68D2A



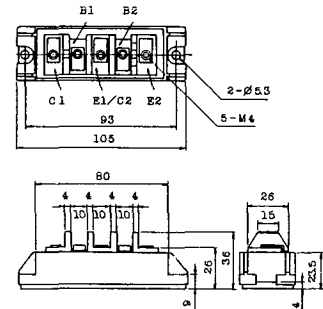
2-72A3A



2-80A1A



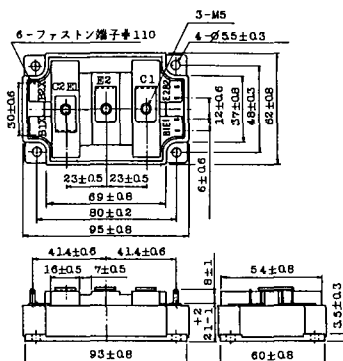
2-80B1A



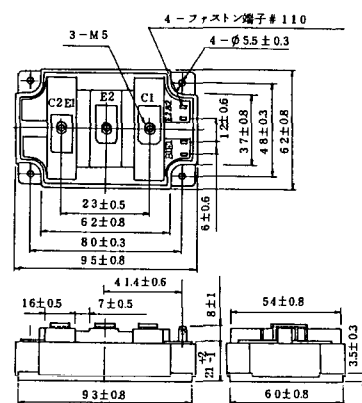
2-94D1A



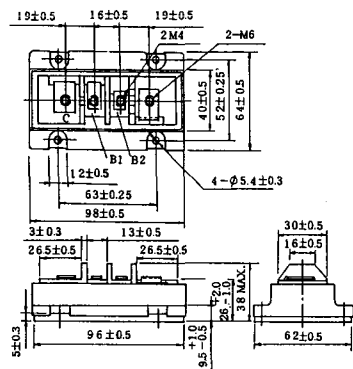
2-96A3A



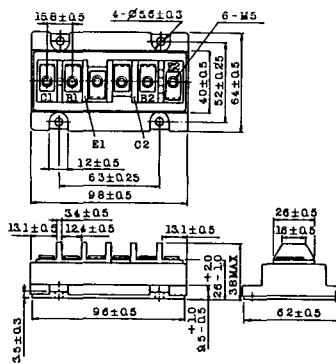
2-96A4A



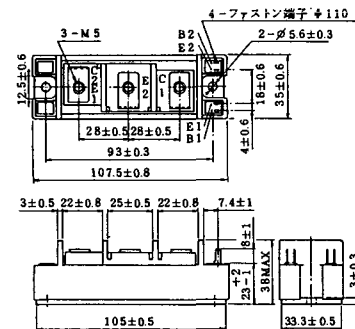
2-98B1A



2-98C2A



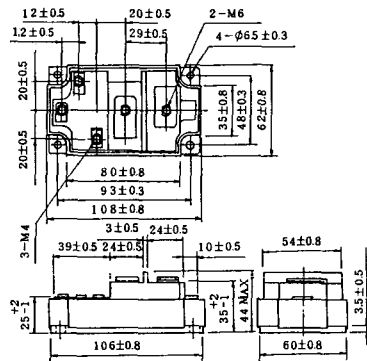
2-108A2A



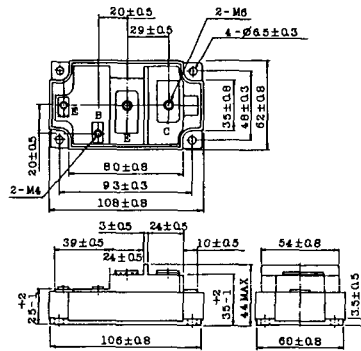
2-108B1A



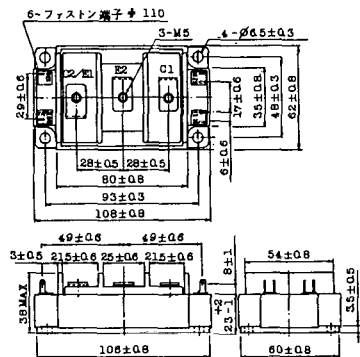
2-109A3A



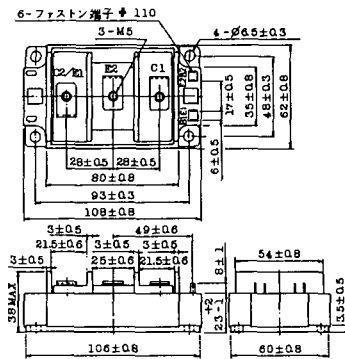
2-109A4A



2-109B3A

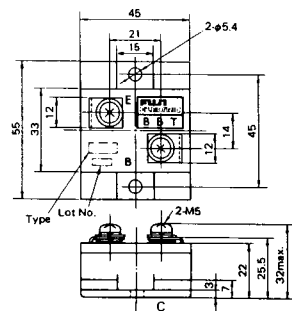


2-109B4A



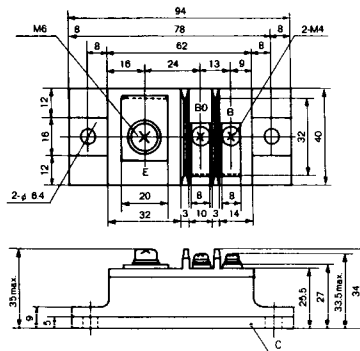
BBT-II

BBTII
1D200A-020



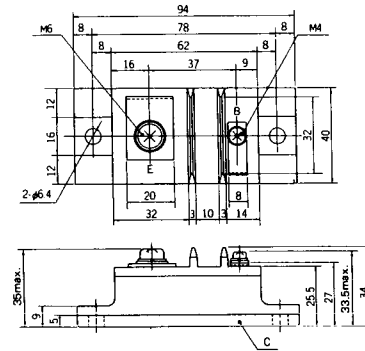
BBT-III

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



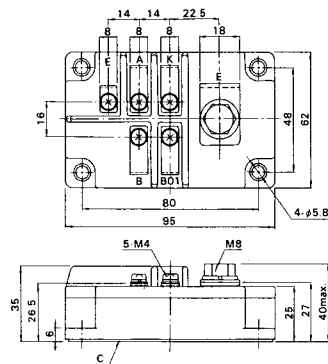
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BBTIII
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ET1257

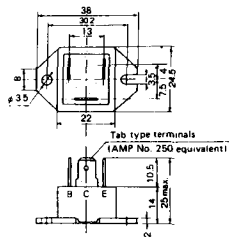


BBT-IV

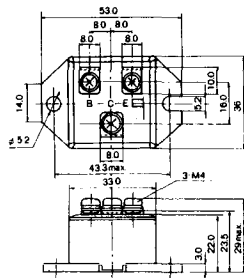
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M-101



M-102



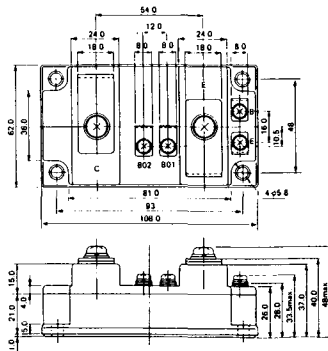
M-103



M-104



M-105



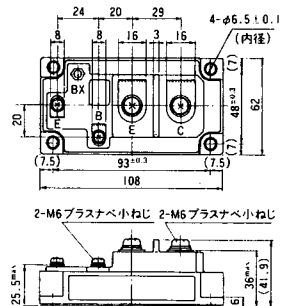
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M-107



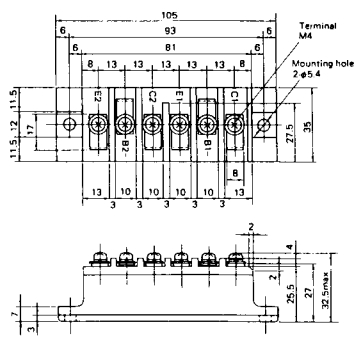
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M-201



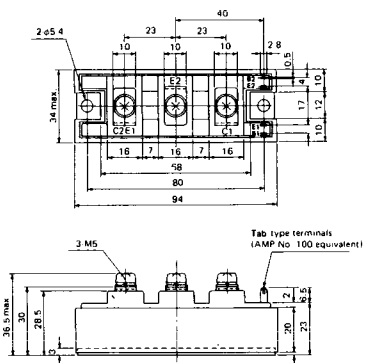
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M-203



M-204



M-205



M-206



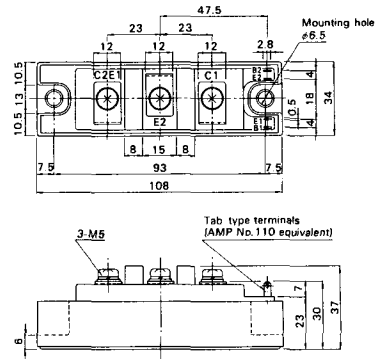
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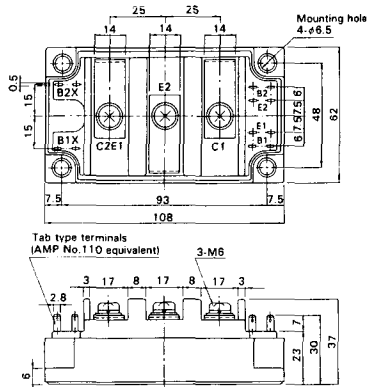
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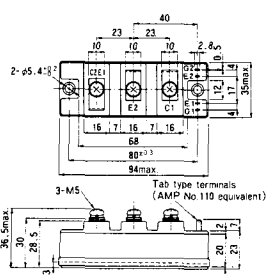
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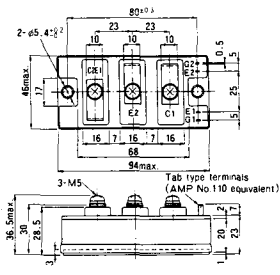
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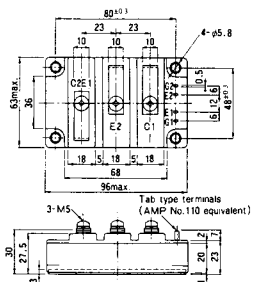
M-211



M-212

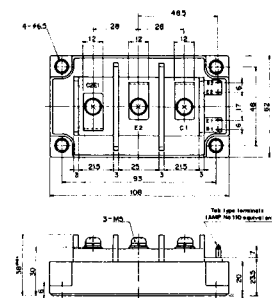


M-213

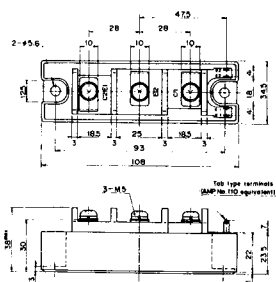


M-214

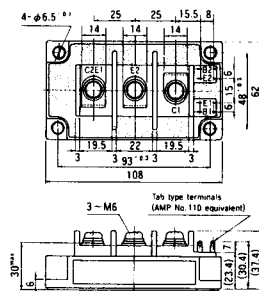
M-215



M-216



M-217



M-218



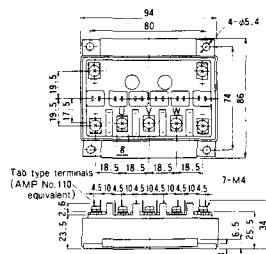
M-219



M-607



M-608



M-609



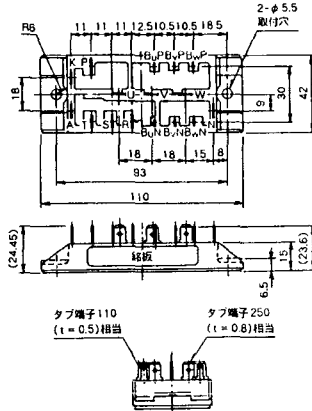
M-610



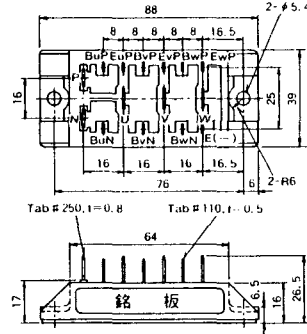
M-616



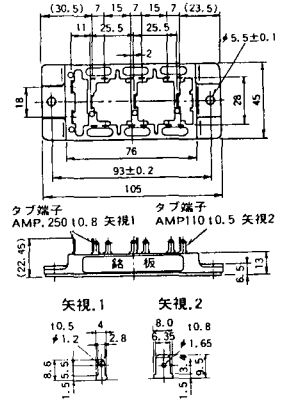
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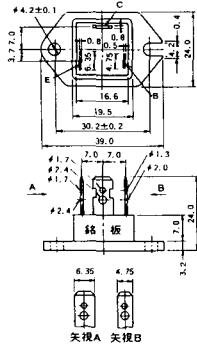
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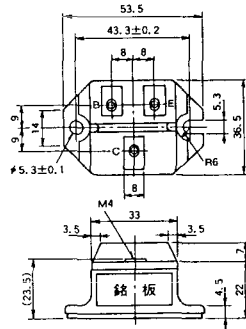
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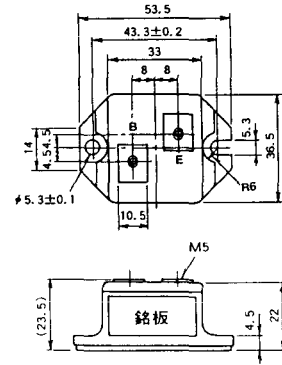
M-3A1A



M-3B1A



M-3B1B



M-3C1A



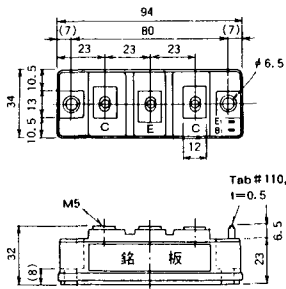
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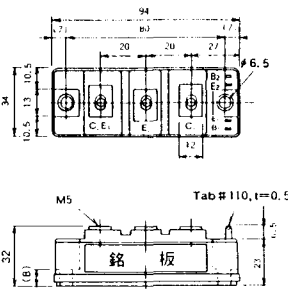
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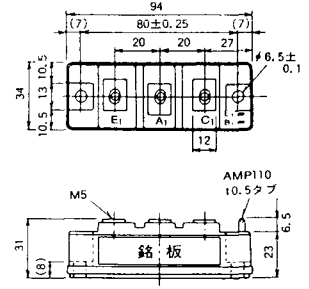
M-4A1A



M-4A2A



M-4A1B



M-4A2B



M-4B2A



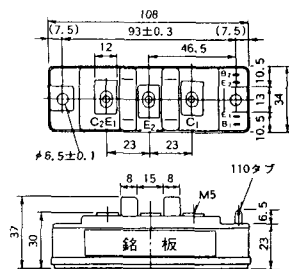
M-5A1A



M-5A1B



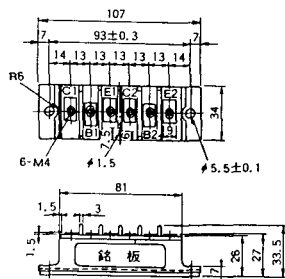
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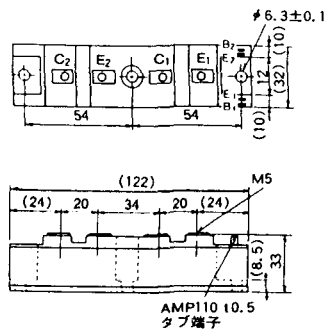
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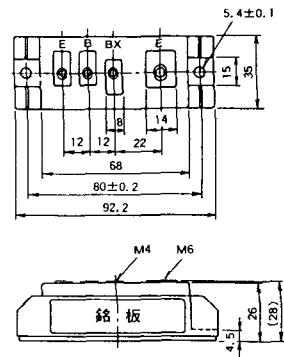
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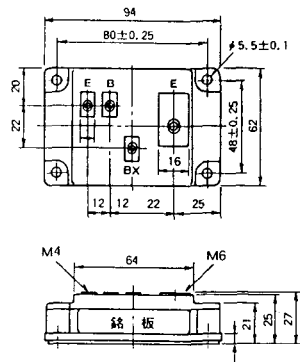
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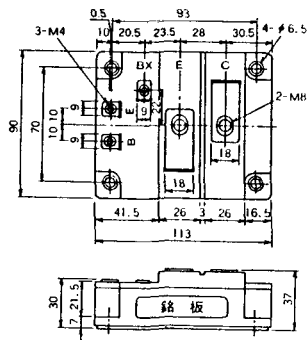
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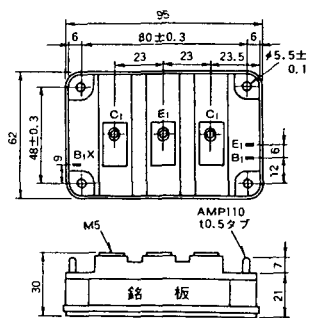
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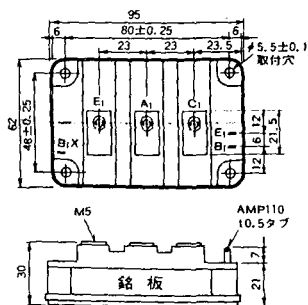
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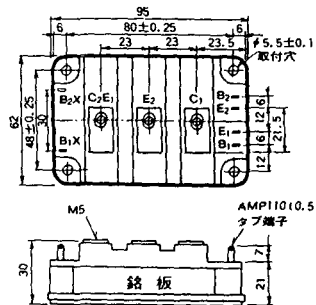
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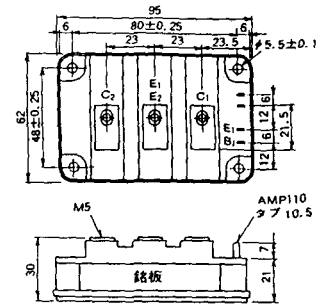
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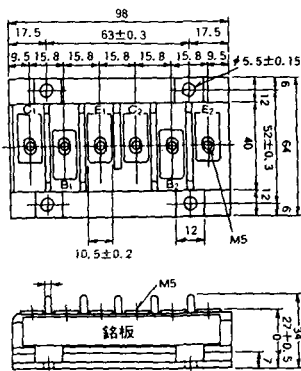
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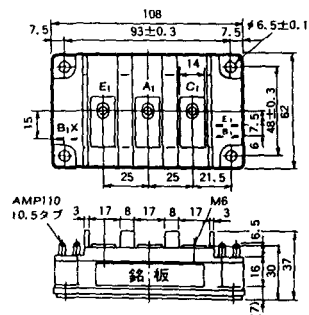
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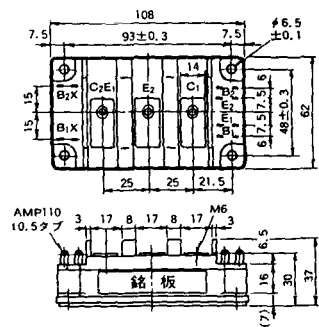
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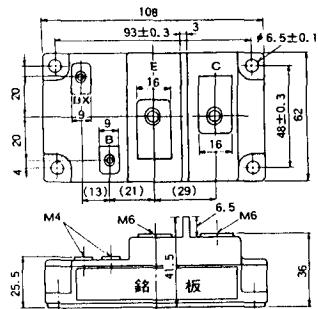
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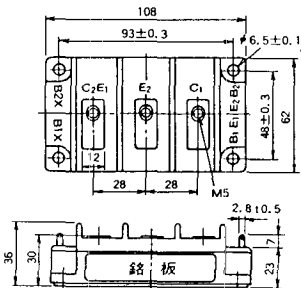
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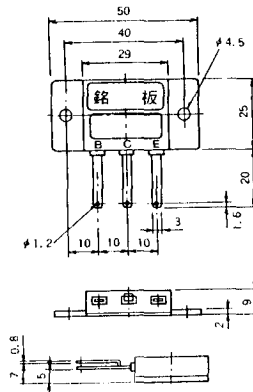
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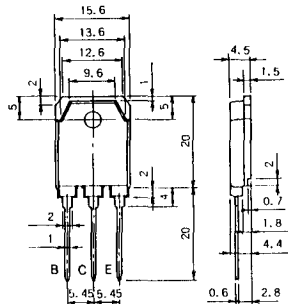
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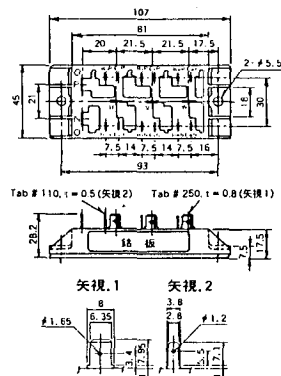
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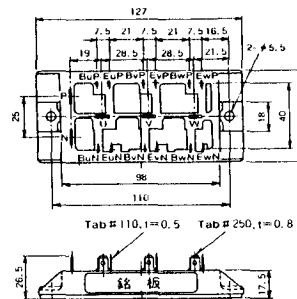
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M-2E6B



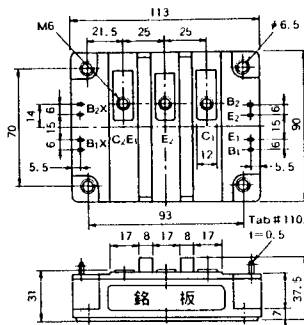
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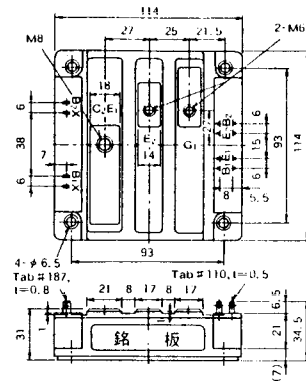
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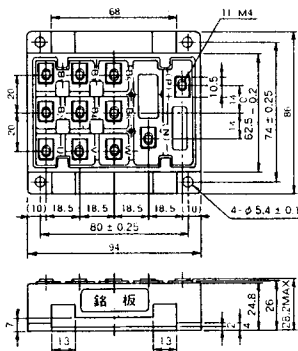
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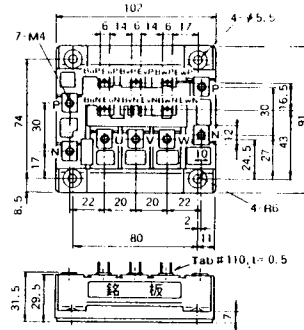
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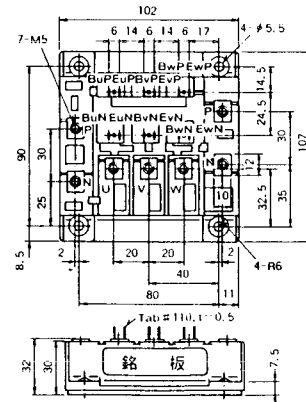
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M-12B6A



M-12B6B



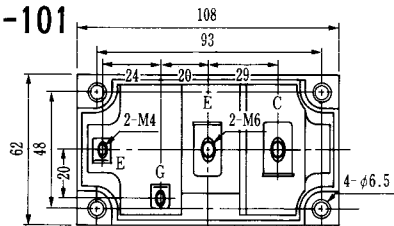
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M-10A2C

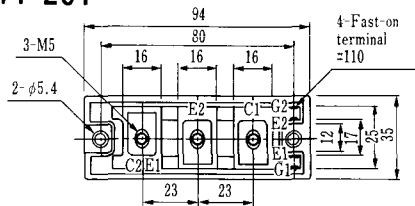


H-101



Weight :480g

H-201



Weight: 200g

H-202



Weight: 360g

LF-J



LF-K

