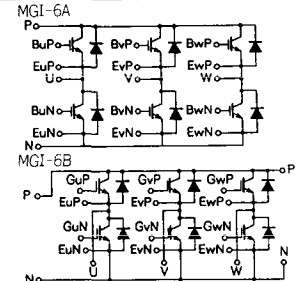
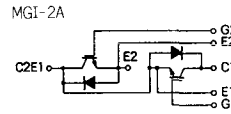
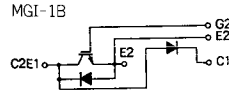
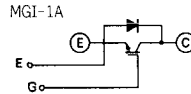


トランジスタ・モジュール (シリコンNチャネル IGBT)

- フリーホイール・ダイオード付
- 絶縁形

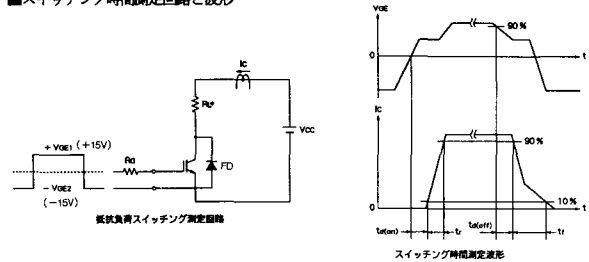
■等価回路



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

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

■スイッチング時間測定回路と波形



注3. スwitching時間は抵抗負荷時の値。

注4. FD: フリーホイール・ダイオード。

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

FD-1



FD-2



FD-3



FD-4



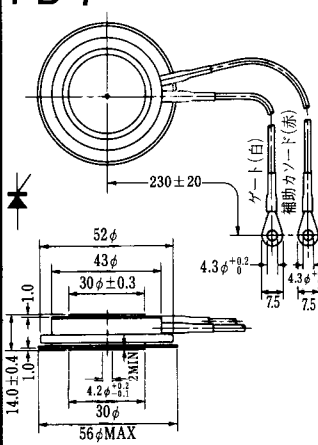
FD-5



FD-6



FD-7



FD-8



FD-9



FD-10



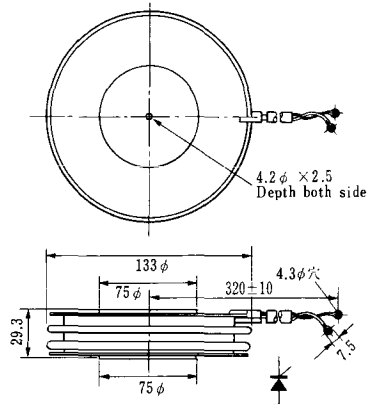
FD-11

FD-12

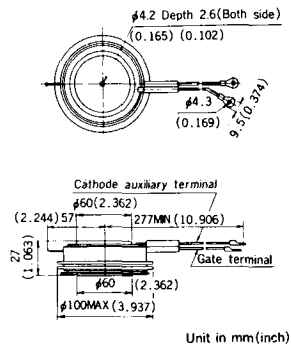




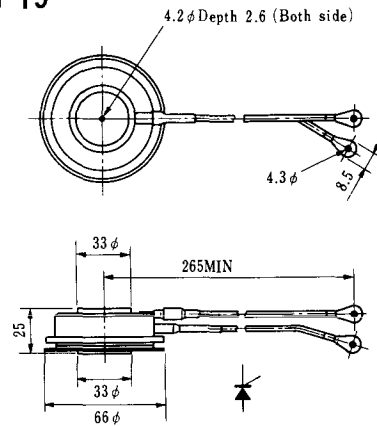
H-17



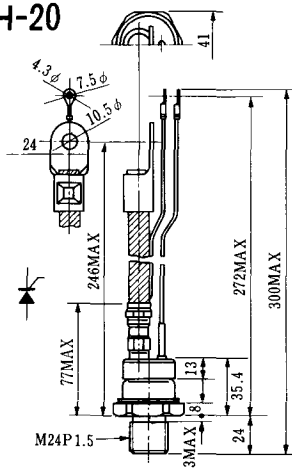
H-18



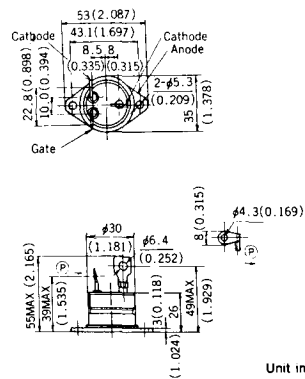
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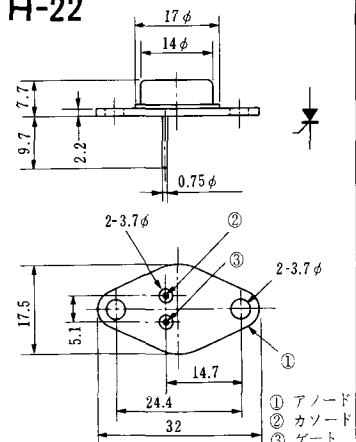
H-20



H-21



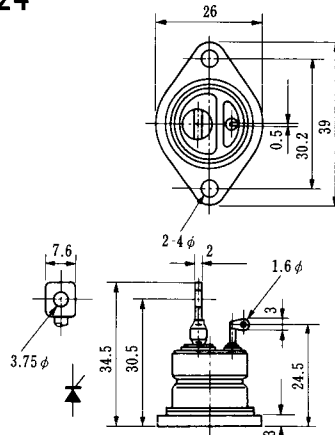
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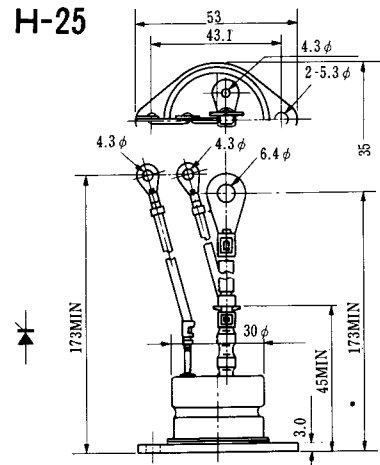
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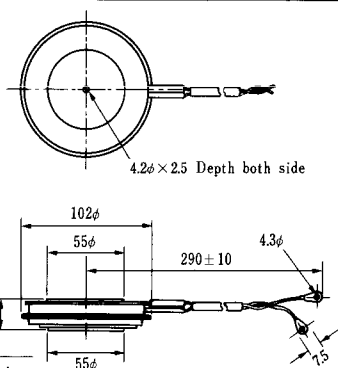
H-24



H-25



H-26



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

CA12	
------	--

H-27

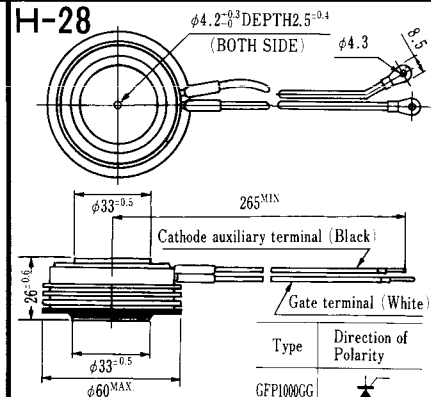


Type	Direction of polarity
------	-----------------------

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

H-28



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

GFP100GG	
----------	--

Weight: 360(g)

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

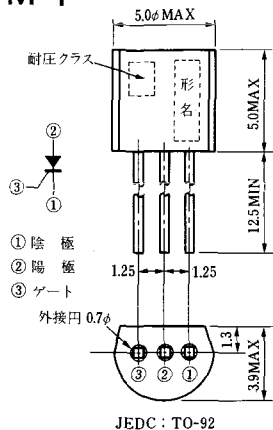


Note: The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



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

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



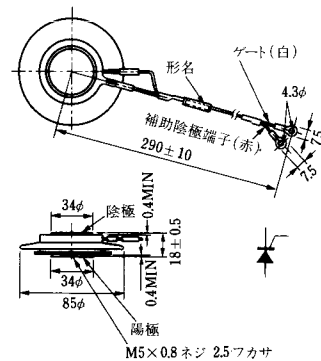
M-14



M-15



M-16





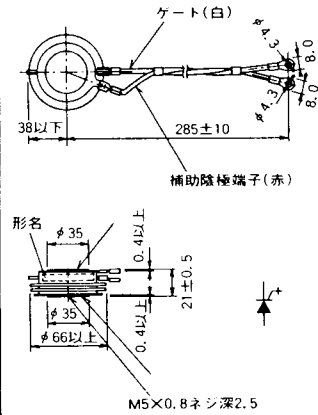
M-25



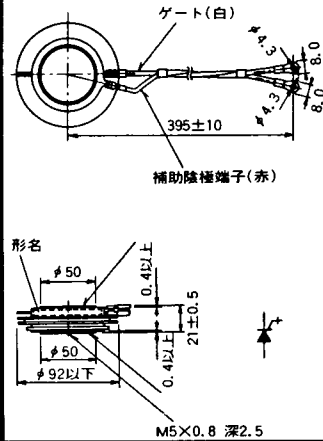
M-26



M-27



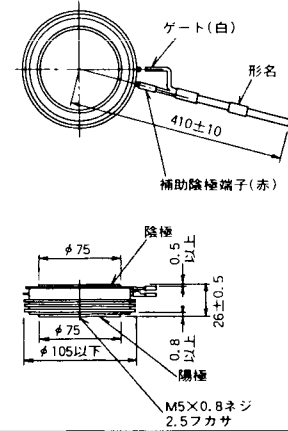
M-28



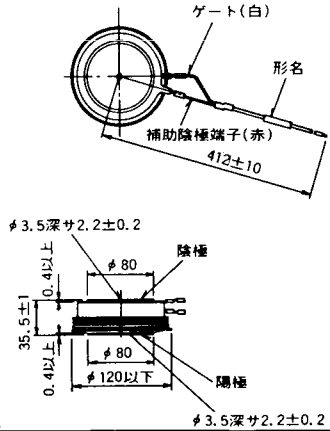
M-29



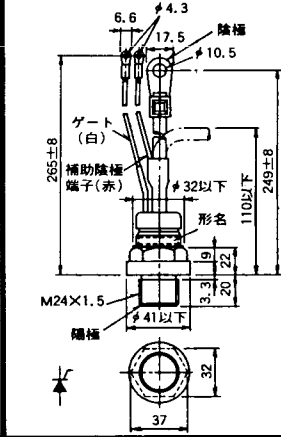
M-30



M-31



M-32



M-33



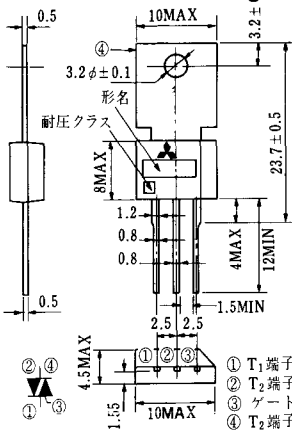
M-34



MT-1



MT-2



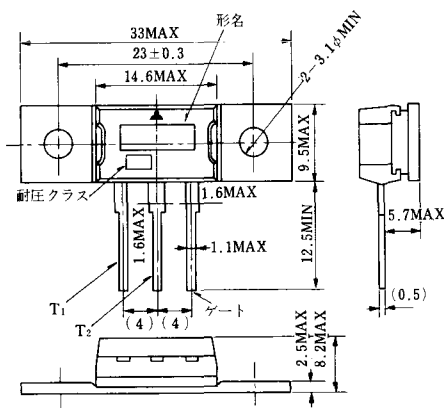
MT-3



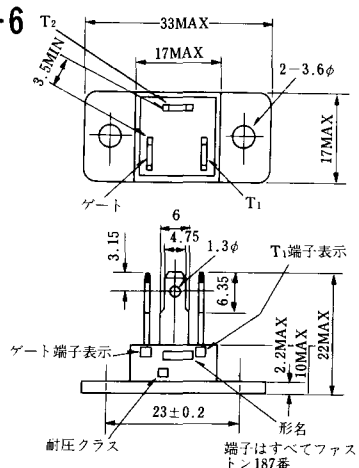
MT-4



MT-5



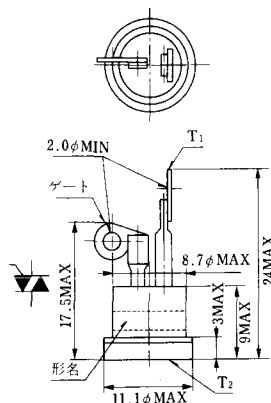
MT-6



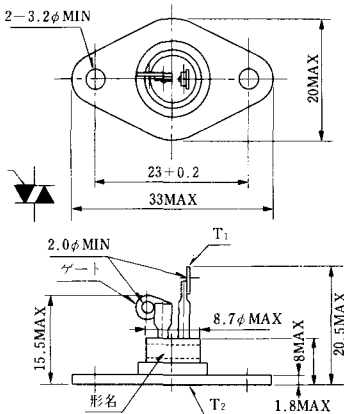
MT-7



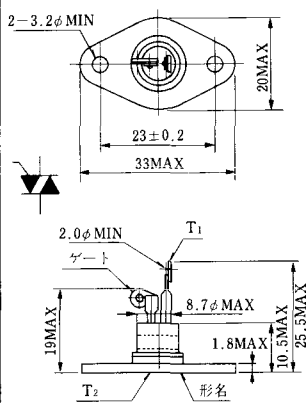
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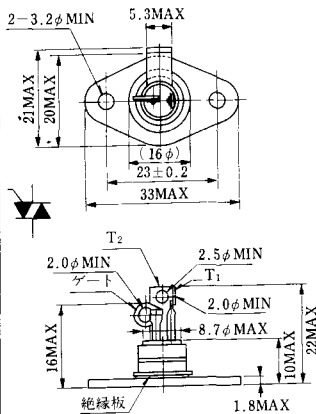
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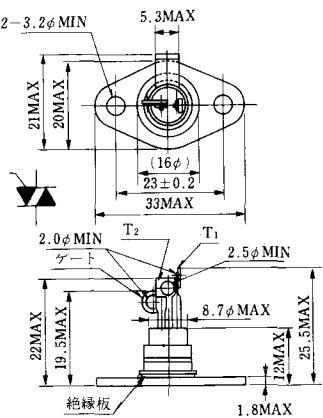
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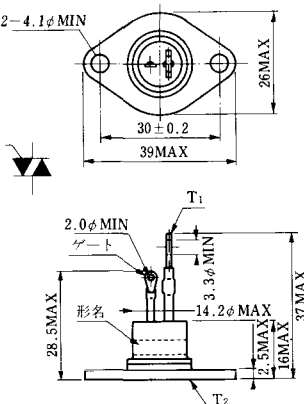
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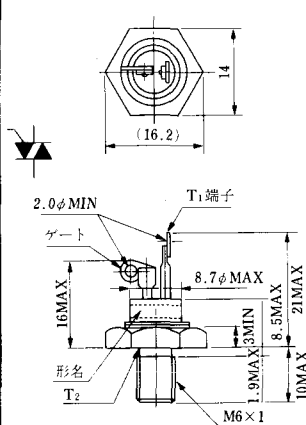
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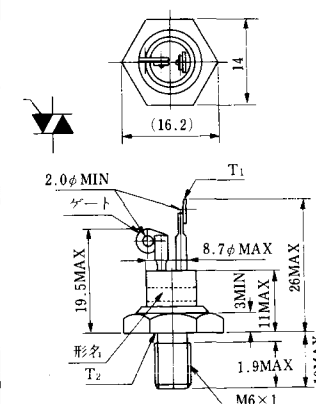
MT-13



MT-14



MT-15



MT-16



MT-17



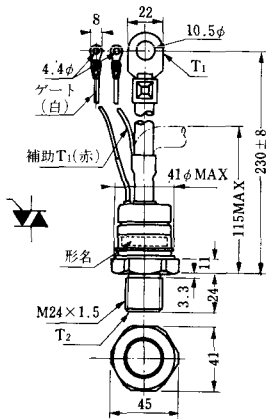
MT-18



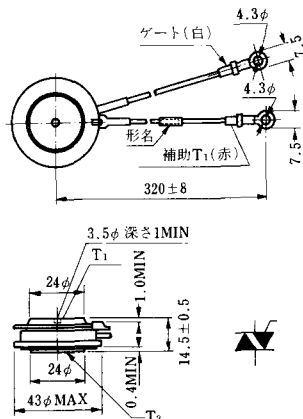
MT-19



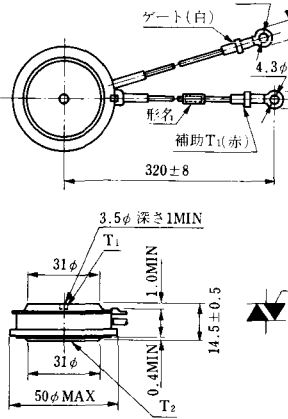
MT-20



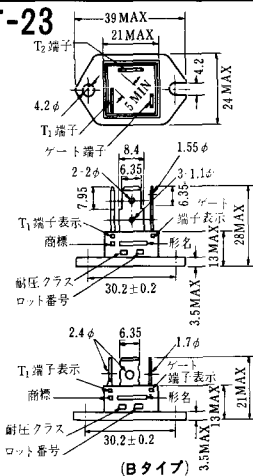
MT-21

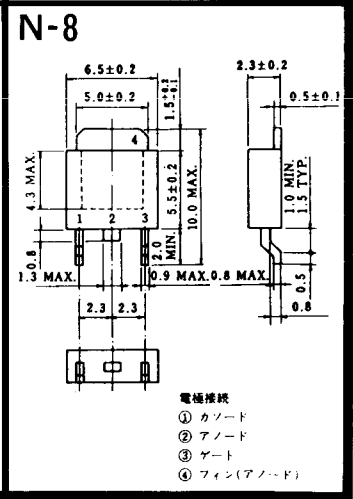
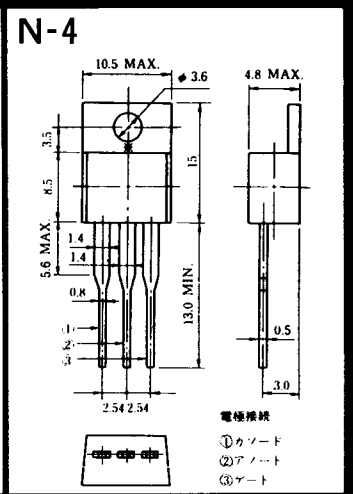
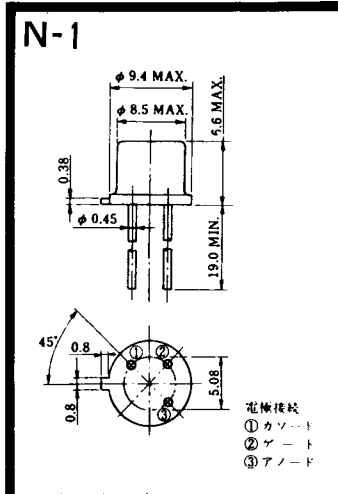


MT-22



MT-23



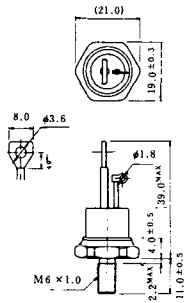


NI-1



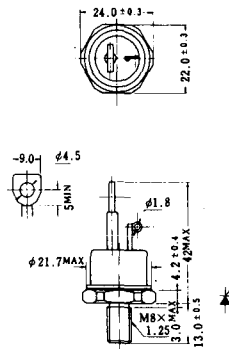
NI-2

29RD



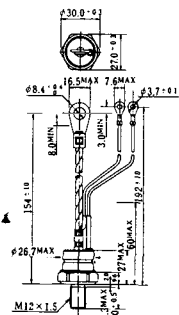
NI-3

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



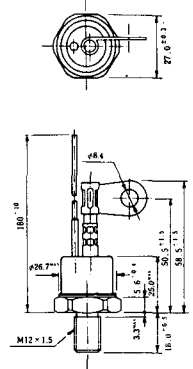
NI-7

89RW_{JL}
129RW_{JL}



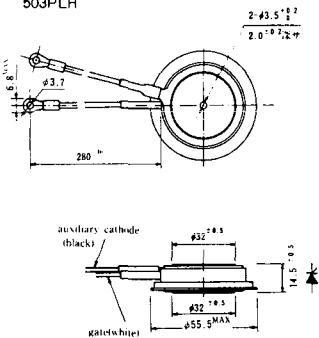
NI-8

89RW
129RW



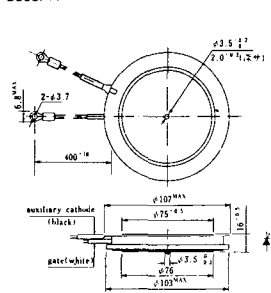
NI-16

503PLF
503PLH



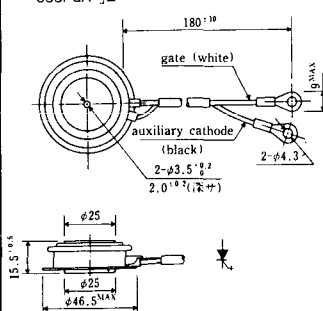
NI-17

3003PA



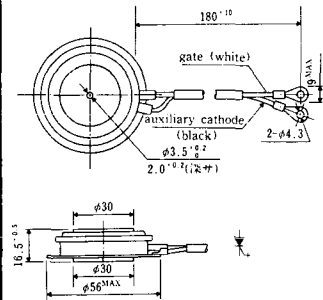
NI-18

353PGA「E



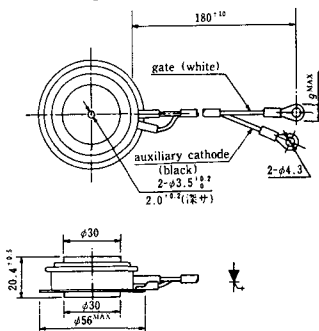
NI-19

603PGA, 603PGA「A, 803PGA



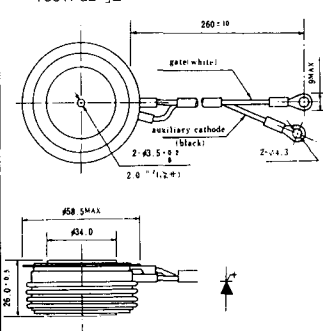
NI-20

603PGA「E



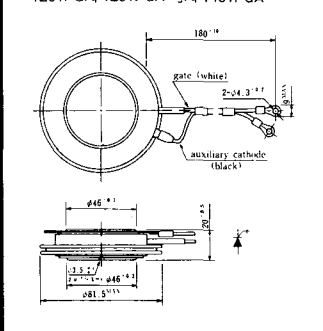
NI-21

1001PGB「E



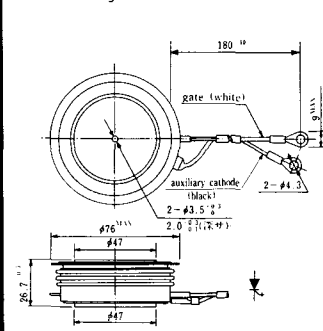
NI-22

1201PGA, 1201PGA「A, 1401PGA



NI-23

1201PGA「E



NI-24

2001PGB^r JE



NI-25

NI-26

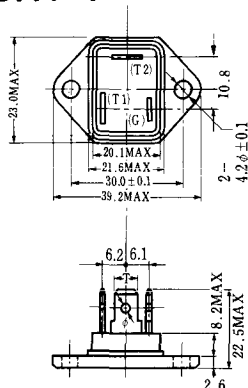
S-1



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)

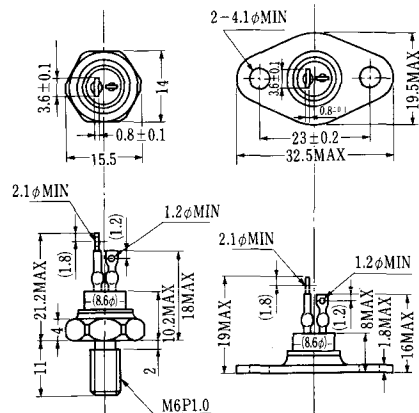
SAT-2



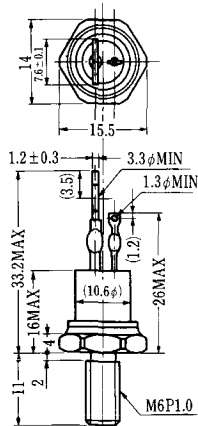
SAT-3



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



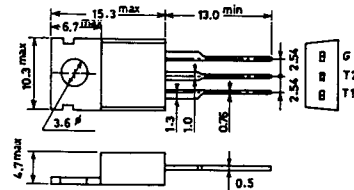
1142



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)



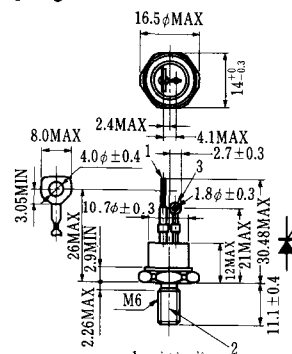
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



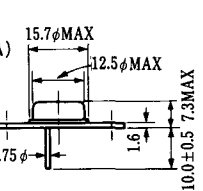
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



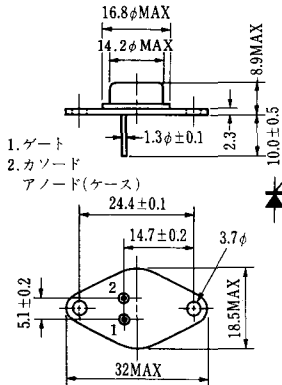
- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



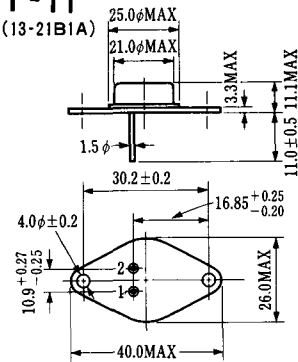
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



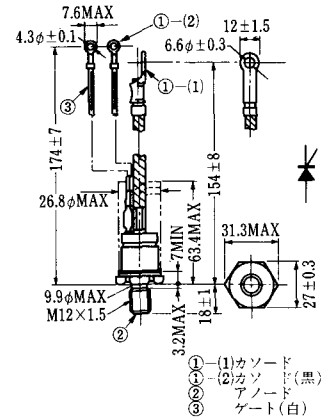
1. カソード
2. アノード
3. ゲート

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)



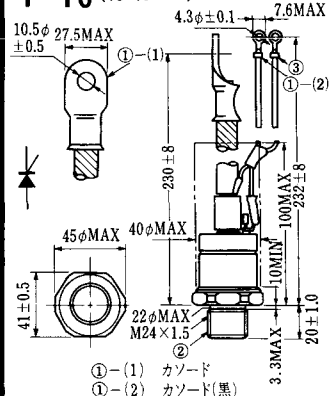
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

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)



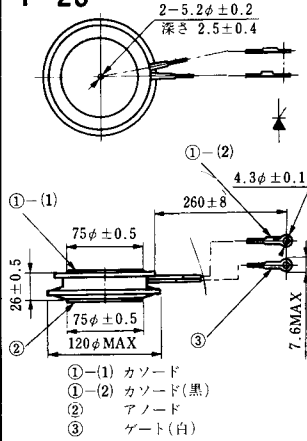
T-23 (13-78A1A)



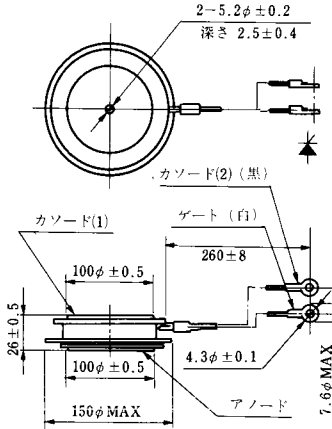
T-24 (13-100C1A)



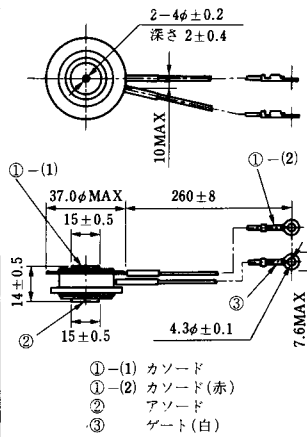
T-25 (13-120A2A)



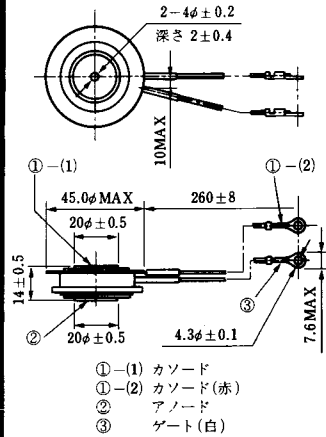
T-26 (13-150A1A)



T-27 (13-37A1A)



T-28 (13-45E1A)



T-29 (13-51A1A)



T-30 (13-57A1A)



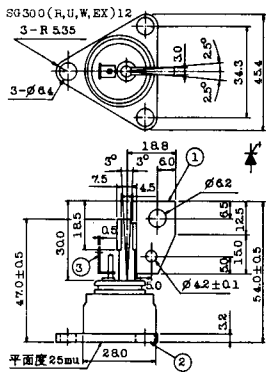
T-31 (13-100E1A)



T-32 (13-60E3A)

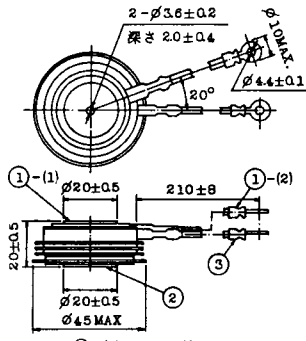


T-41 (13-28A2A)



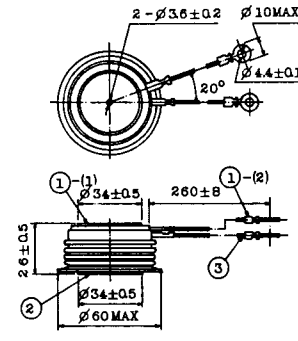
- 1 カソード
- 2 アノード
- 3 ゲート

T-42 (13-45F1A)



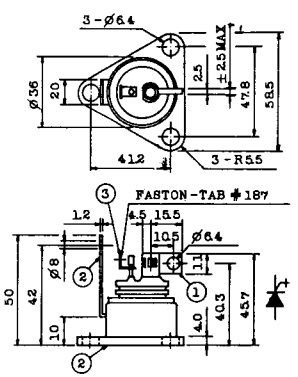
- ①-①) カソード
- ①-②) カソード(黒)
- ②) アノード
- ③) ゲート(白)

T-43 (13-60E2A)



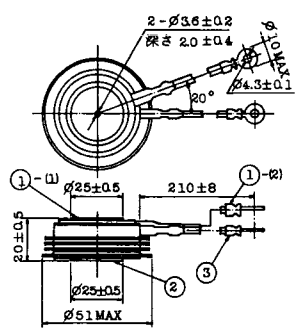
- ①-①) カソード
- ①-②) カソード(黒)
- ②) アノード
- ③) ゲート(白)

T-44 (13-36A1A)



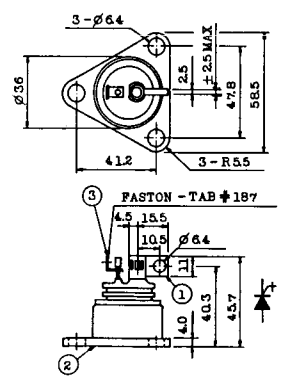
- 1 カソード
- 2 アノード
- 3 ゲート

T-45 (13-51B1A)



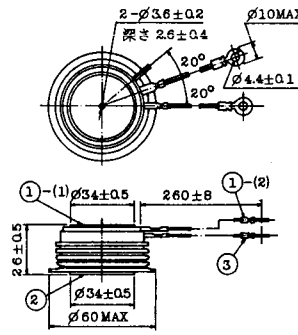
- ①-①) カソード
- ①-②) カソード(黒)
- ②) アノード
- ③) ゲート(白)

T-46 (13-36B1A)



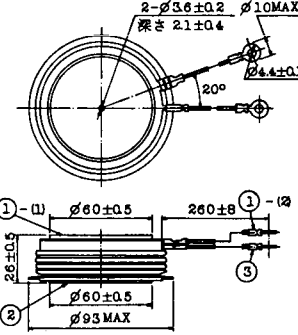
- 1 カソード
- 2 アノード
- 3 ゲート

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-57 (12-16C1A)



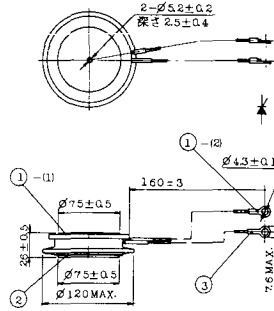
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

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



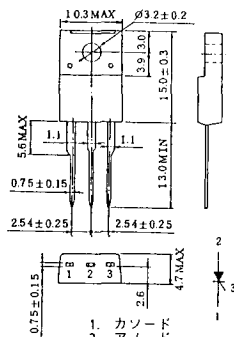
1. カソード
2. アノード
3. ゲート

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)



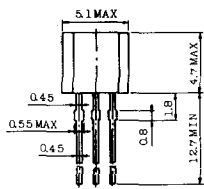
1. カソード
2. アノード
3. ゲート

TT-1



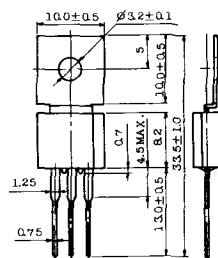
- 1 ゲート
- 2 T₂
- 3 T₁

TT-2



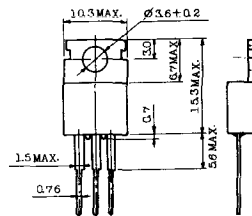
- 1 T₁
- 2 ゲート
- 3 T₂

TT-3



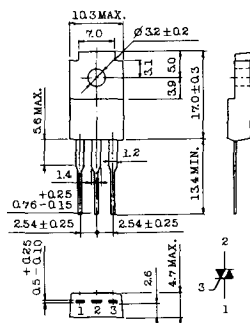
- 1 T₁
- 2 T₂
- 3 ゲート

TT-4



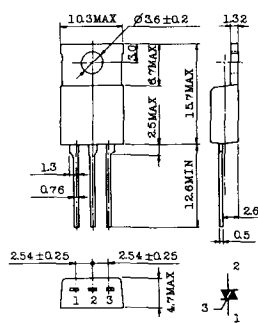
- 1 T₁
- 2 T₂
- 3 ゲート

TT-5



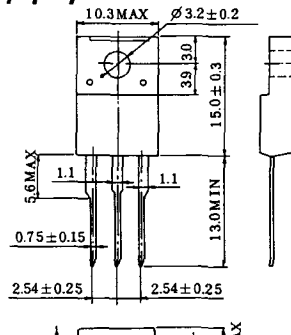
- 1 T₁
- 2 T₂
- 3 ゲート

TT-6



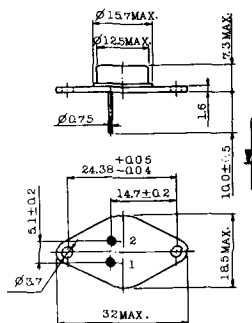
- 1 T₁
- 2 T₂ (放熱板)
- 3 ゲート

TT-7



- 1 T₁
- 2 T₂
- 3 ゲート

TT-8



- 1 ゲート
- 2 T₁
- T₂ (ケース)



TS-8

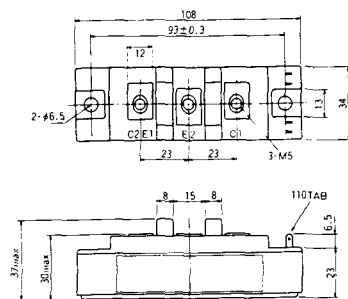


- 1. ベース
- 2. エミッタ
コレクタ
(ケース)

S-108B1A



S-108B1B



S-108B1C



S-108B2A



S-108B2B



2-22B1A



2-27A4A



2-33C1A



2-33D1A



2-33F1A



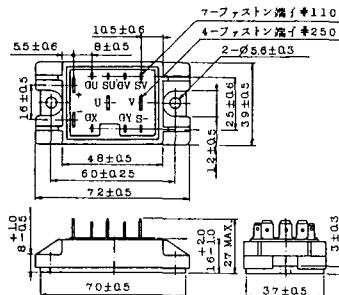
2-37A1A



2-48A3A



2-48A3B



2-48A4A



2-64A2A



2-64A2B



2-68A2A



2-94D1A



2-96A3A



2-96A4A



2-98B1A



2-98C2A



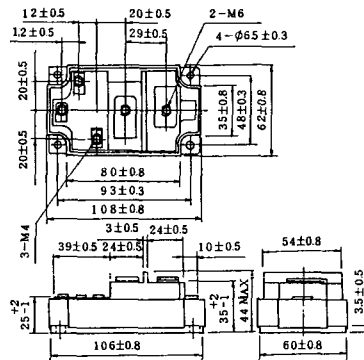
2-108A2A



2-108B1A



2-109A3A



2-109A4A



2-109B3A



2-109B4A



M-107



M-116



M-201



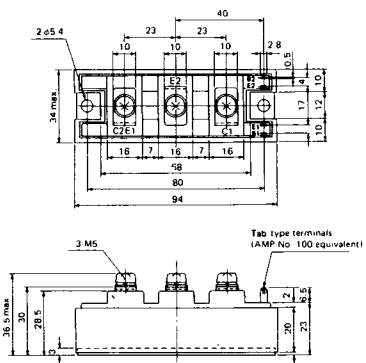
M-202



M-203



M-204



M-205



M-206



M-207



M-208



M-209



M-210



M-211



M-212



M-213



M-214

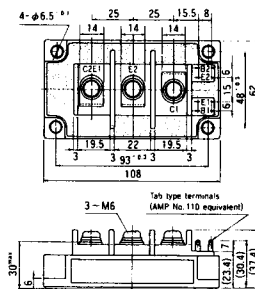
M-215



M-216



M-217



M-218



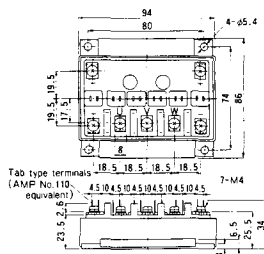
M-219



M-607



M-608



M-609



M-610



M-616



M-3C1A



M-3D6A



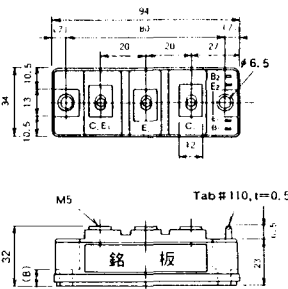
M-3E6A



M-4A1A



M-4A2A



M-4A1B



M-4A2B



M-4B2A



M-5A1A



M-5A1B



M-5A2A



M-5B2A



M-5C2A



M-5D2A



M-6A1A



M-7A1A



M-7B1A



M-8A1A



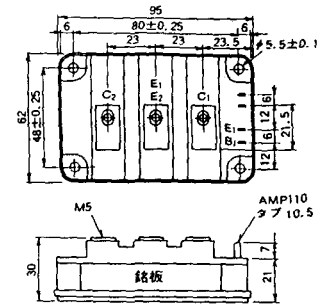
M-8A1B



M-8A2A



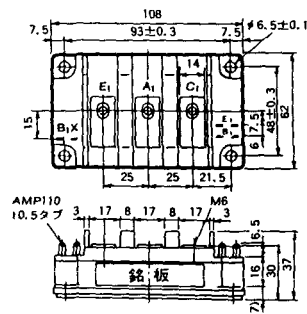
M-8A2B



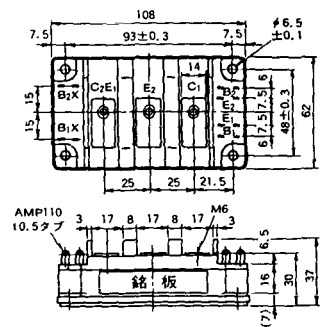
M-8B2A



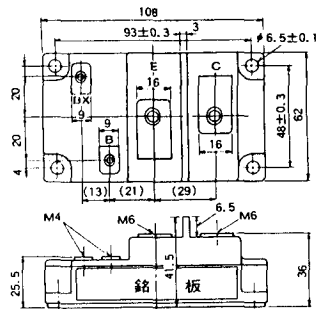
M-9A1A



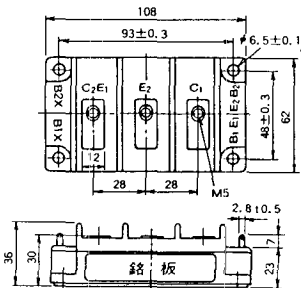
M-9A2A



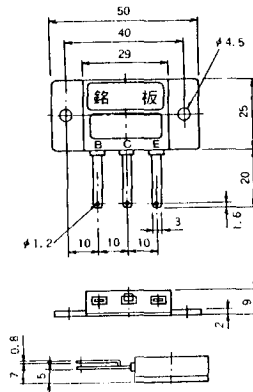
M-9B1A



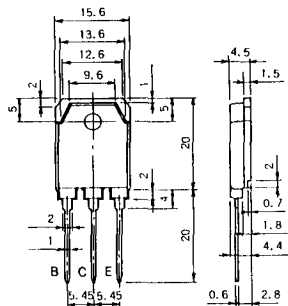
M-9C2A



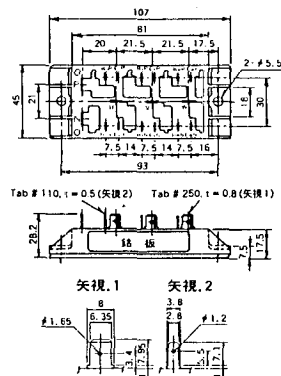
M-1A1B



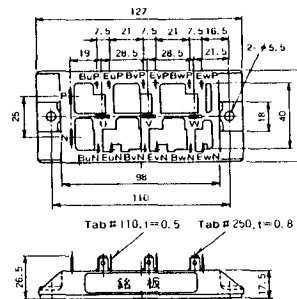
M-1A1C



M-2E6B



M-2E6C



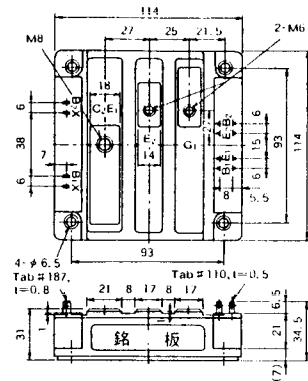
M-10A2A



M-10A2B



M-11A2A



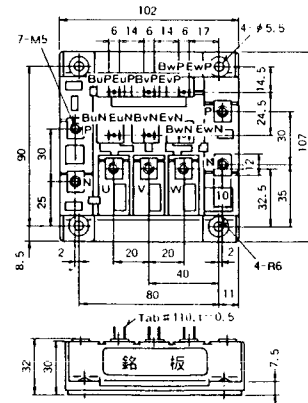
M-12A6A



M-12B6A



M-12B6B



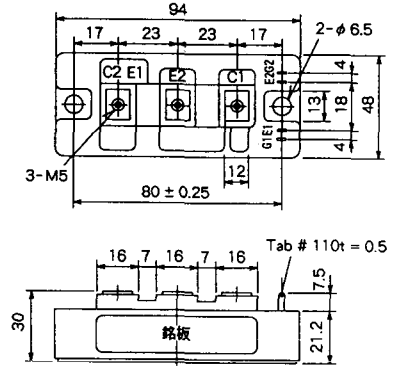
M-4A2D



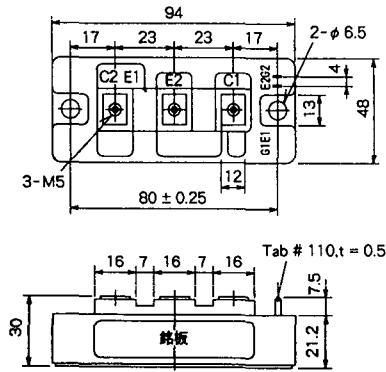
M-4A2E



M-4C2A



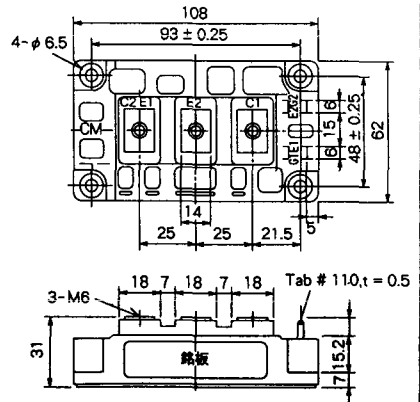
M-4C2B



M-9B1C



M-9D2A



M-9D2B



M-10A2C



H-101



Weight :480g

H-201



Weight: 200g

H-202



Weight: 360g

LF-J



LF-K



