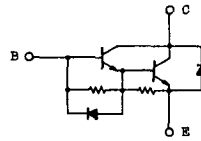


トランジスタ・モジュール (NPN, ダーリントン接続, 1個内蔵)

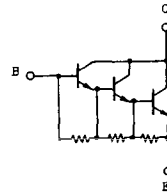
- ダーリントン・トランジスタ1個内蔵
- フリーホイール・ダイオード付
- 電極と金属ケース部が絶縁されている
- 直流電流増幅率は80以上(定格電流にて)

■等価回路

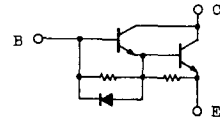
AL-1



BK-1



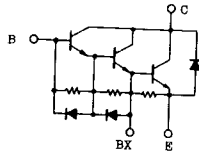
BL-1



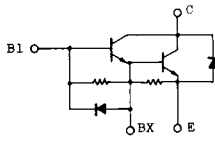
注1. $T_c = 25^\circ\text{C}$ 。 注2. A.C. 1分間。

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

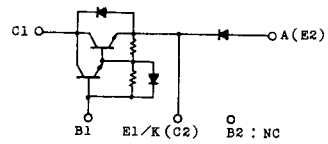
FK-1



FL-1



JL-1



注3. スイッチング時間の*印はtyp.値。

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

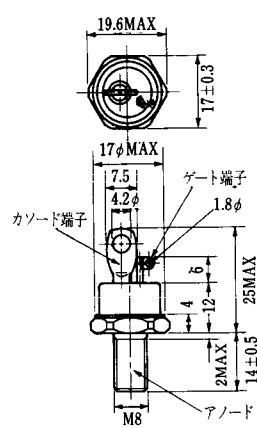
FD-1



FD-2



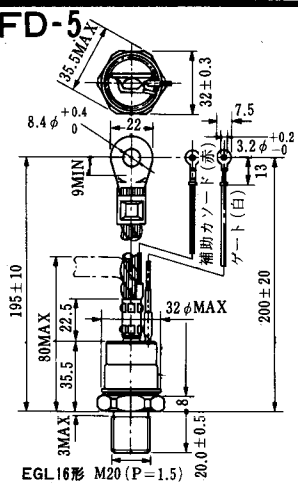
FD-3



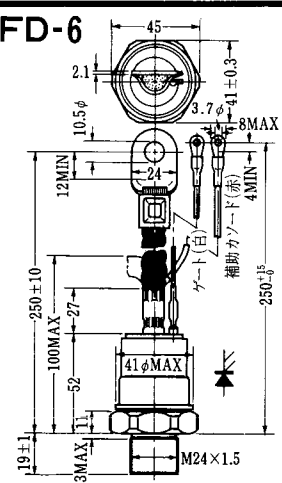
FD-4



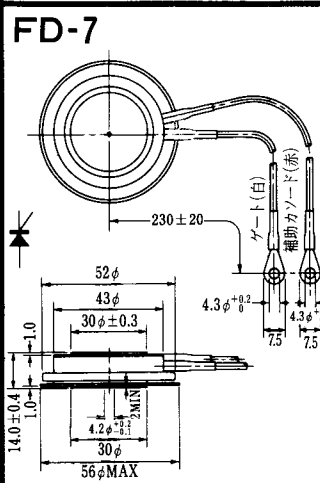
FD-5



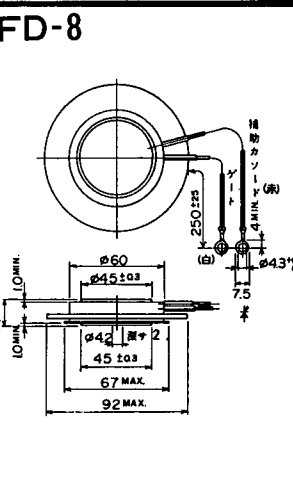
FD-6



FD-7



FD-8



FD-9



FD-10



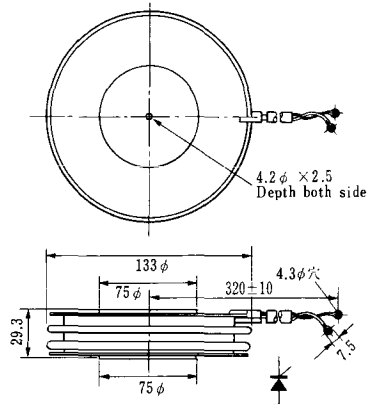
FD-11

FD-12

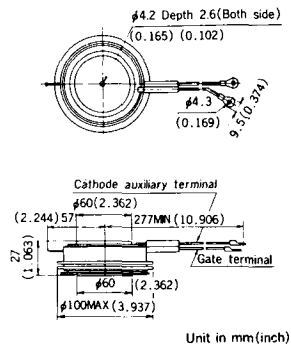




H-17

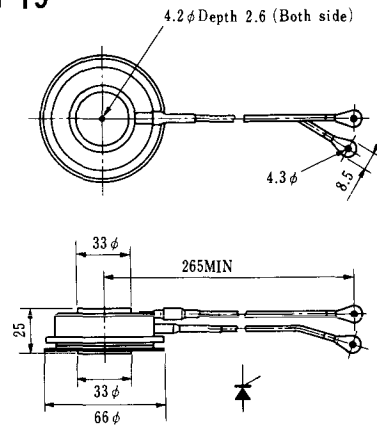


H-18

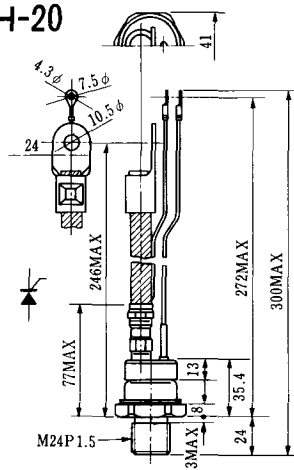


Unit in mm (inch)

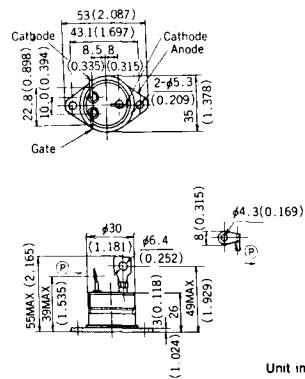
H-19



H-20

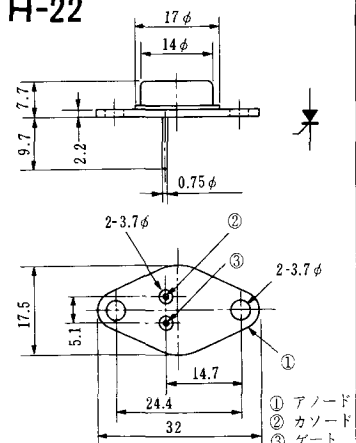


H-21



Unit in mm (inch)

H-22



H-23

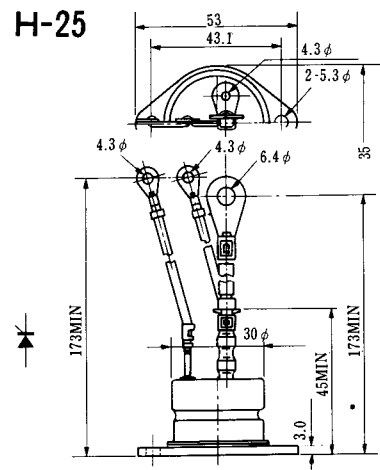


① アノード
② カソード
③ ゲート

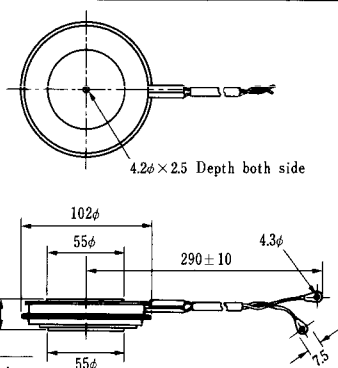
H-24



H-25



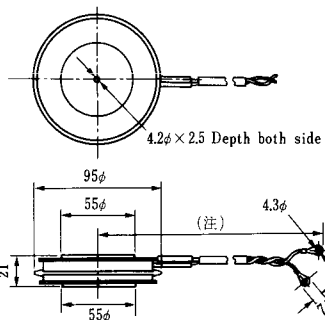
H-26



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

CA12	
------	--

H-27

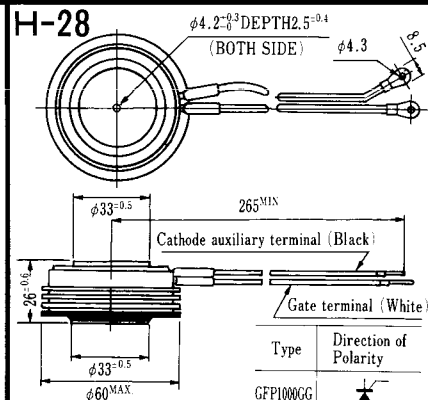


Type	Direction of polarity
------	-----------------------

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

H-28



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

GFP100GG	
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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)

M-1



M-2



M-3



M-4



M-5



M-6



M-7



M-8



M-9



M-10



M-11



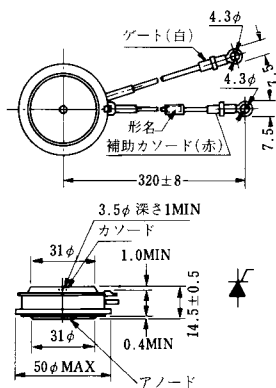
M-12



M-13



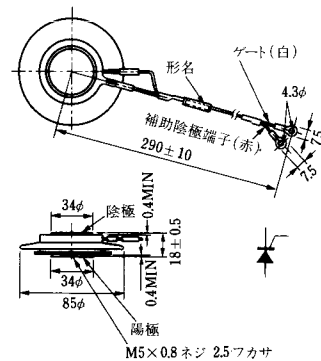
M-14



M-15



M-16





M-25



M-26



M-27



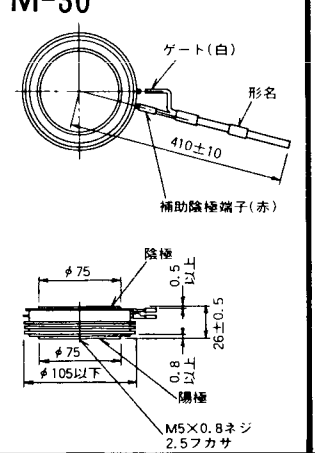
M-28



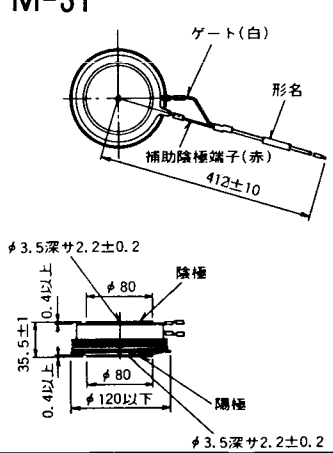
M-29



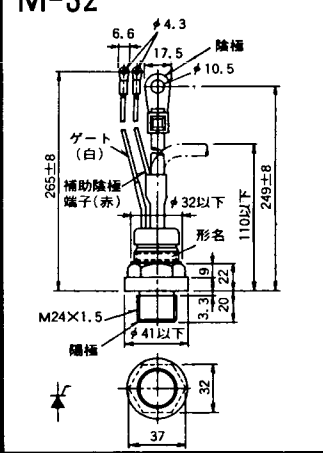
M-30



M-31



M-32



M-33



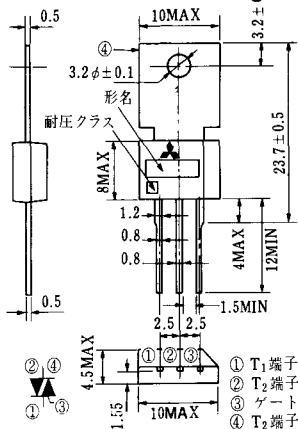
M-34



MT-1



MT-2

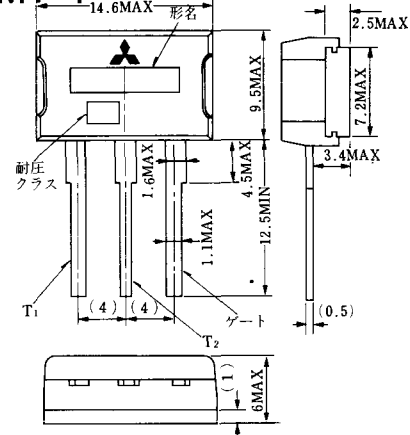


MT-3

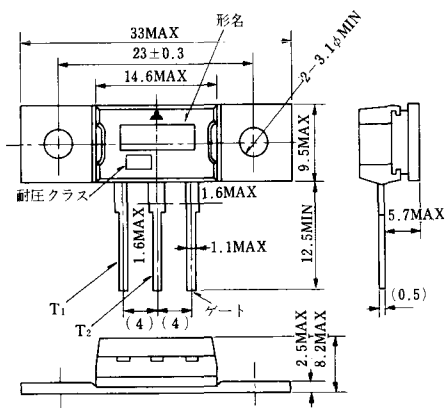


1. T₁
2. T₂
3. ゲート
4. T₂ (非絶縁形のみ、絶縁形は他の端子と絶縁されている)

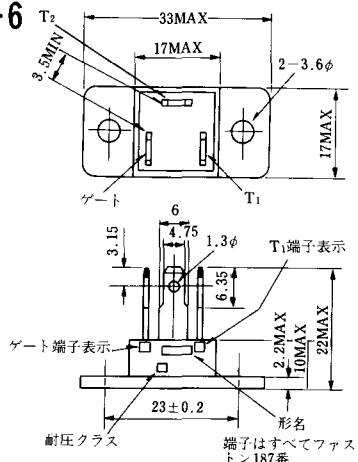
MT-4



MT-5

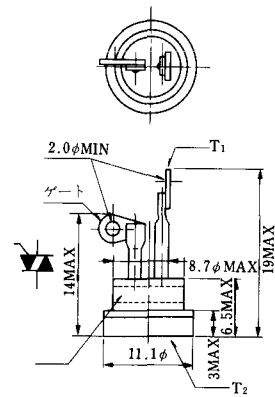


MT-6

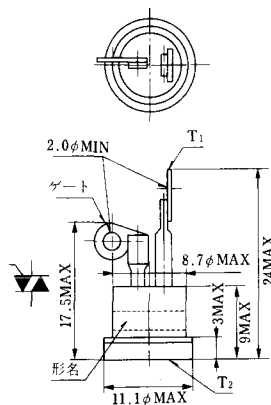


端子はすべてファス
タン187番

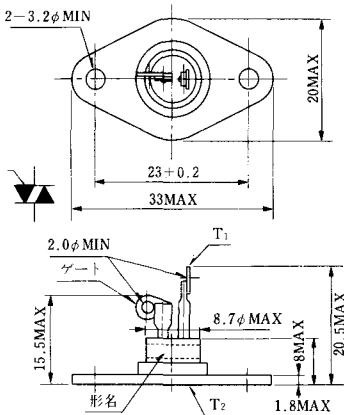
MT-7



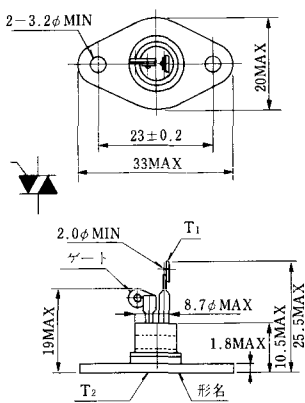
MT-8



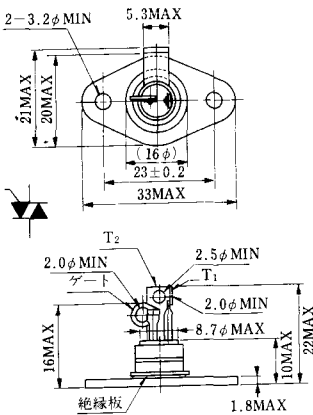
MT-9



MT-10



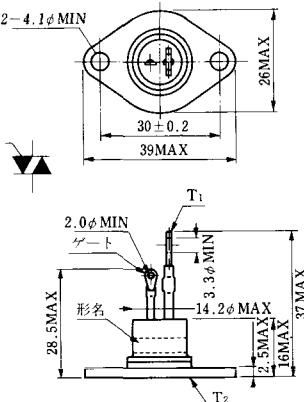
MT-11



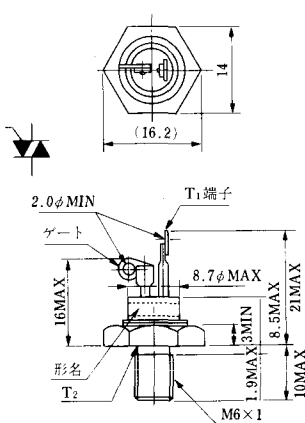
MT-12



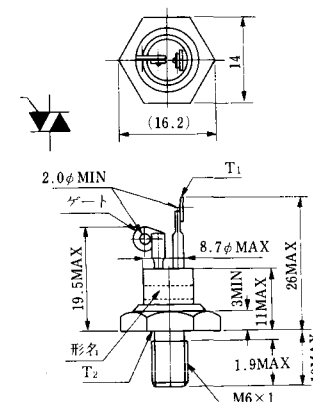
MT-13



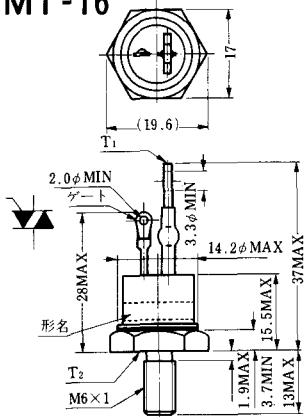
MT-14



MT-15



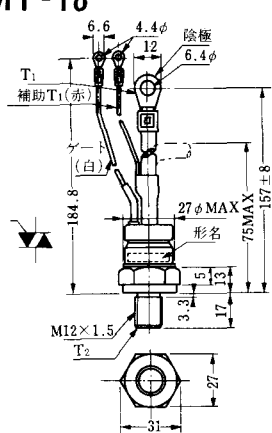
MT-16



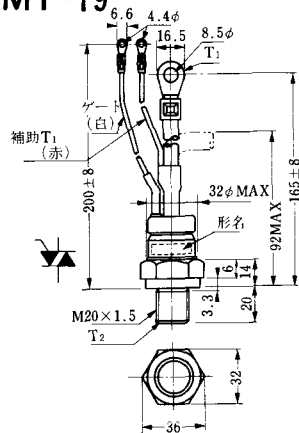
MT-17



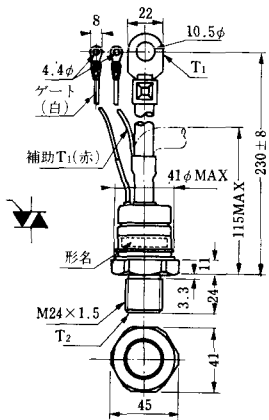
MT-18



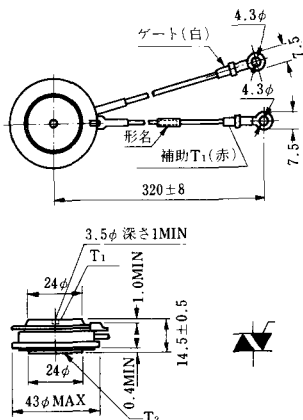
MT-19



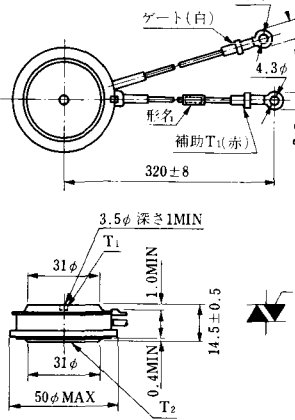
MT-20



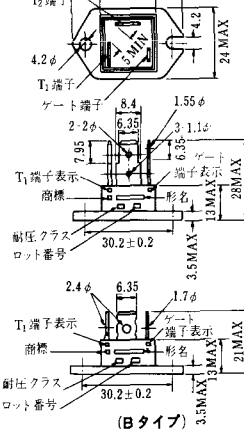
MT-21

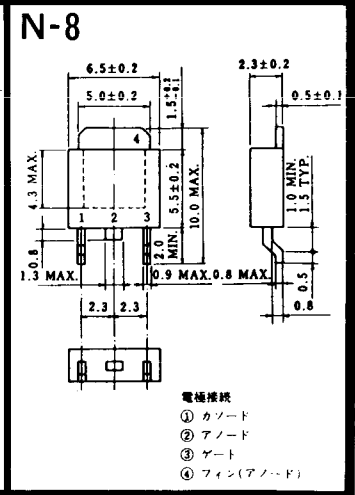
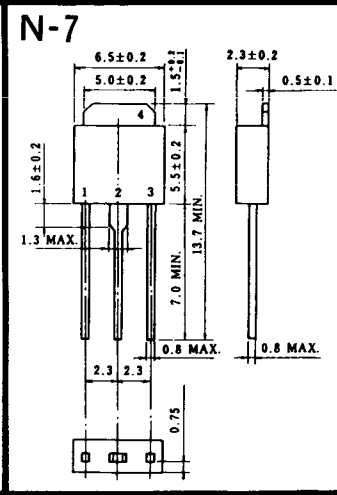
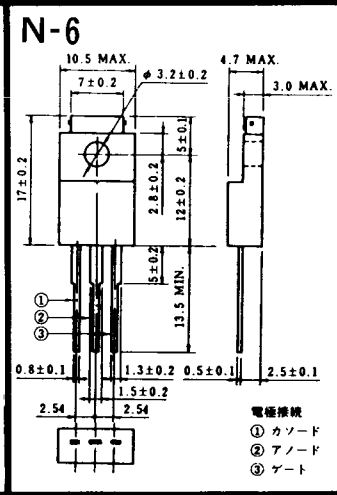
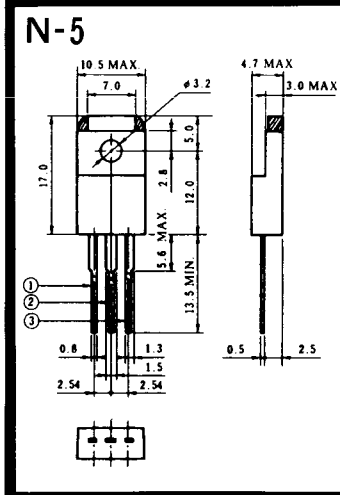
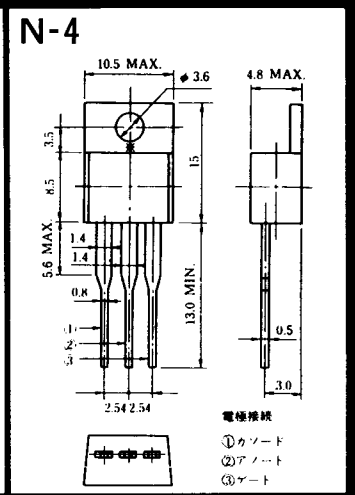
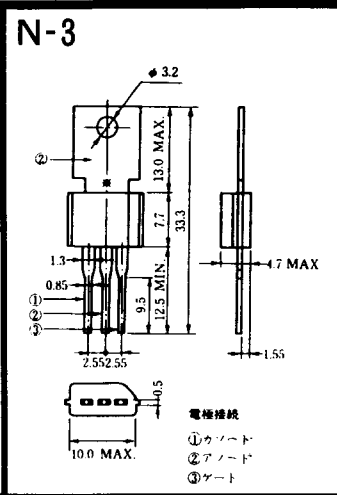
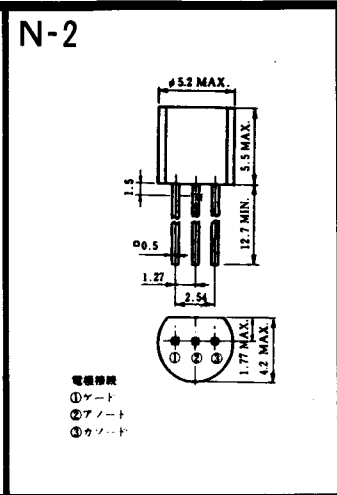
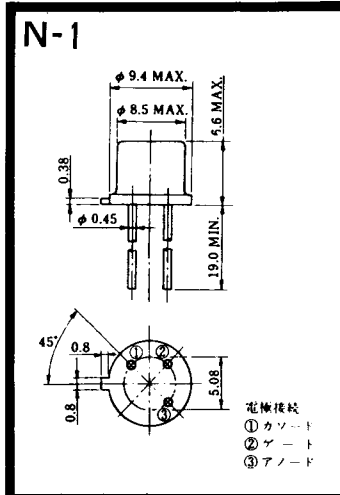


MT-22



MT-23





N-9

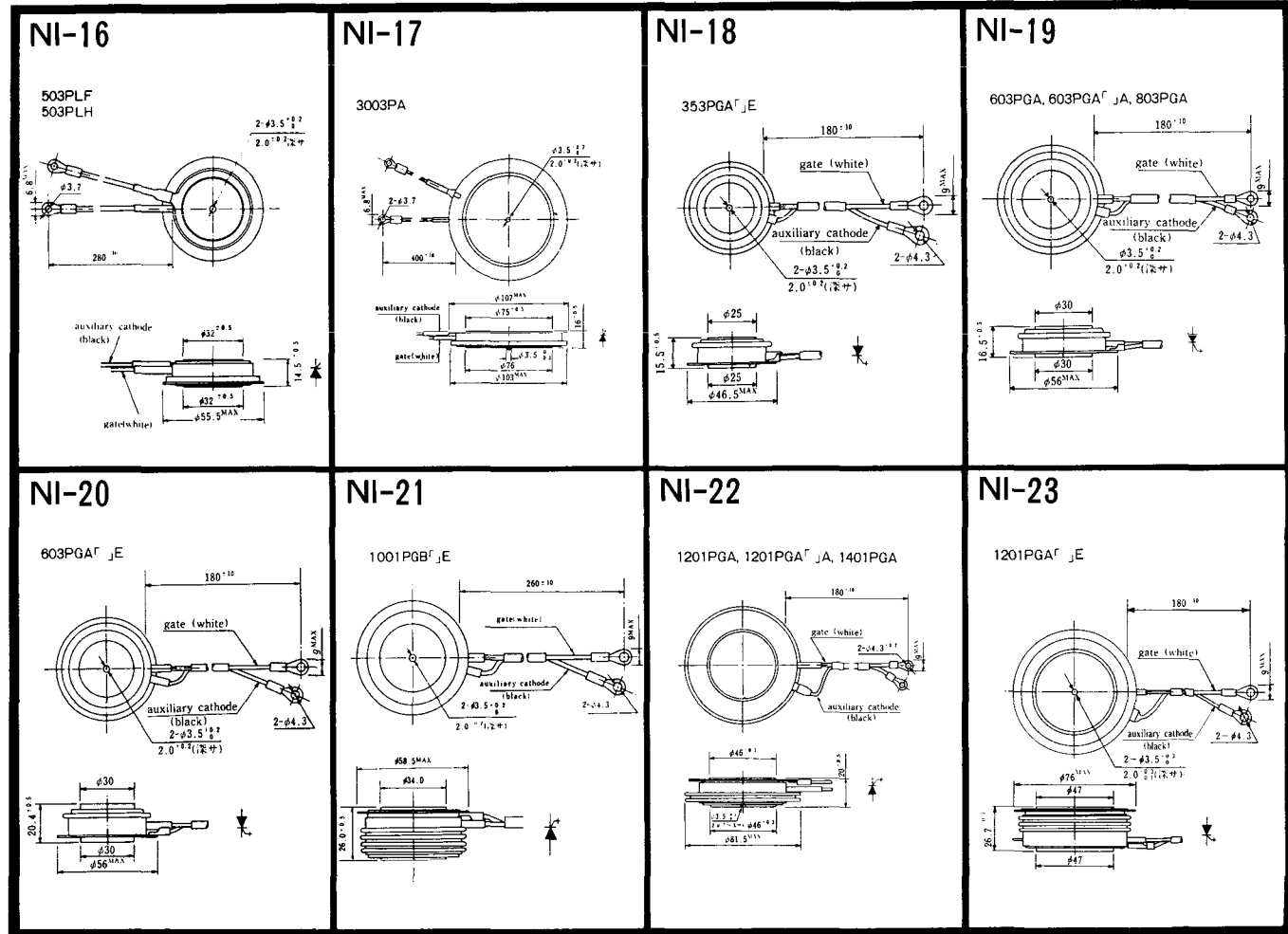


電極接続

K: カソード

A: アノード

G: ギャート



NI-24

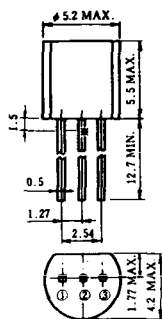
2001PGB^r JE



NI-25

NI-26

NT-1



電極接続
① T₁
② ゲート
③ T₂

NT-2



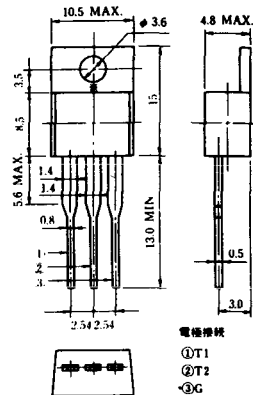
電極接続
① T₁
② ゲート
③ T₂

NT-3



電極接続
① T₁
② T₂
③ ゲート

NT-4



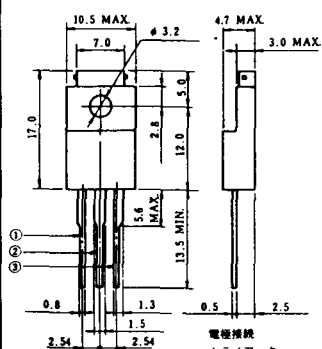
電極接続
① T₁
② T₂
③ G

NT-5



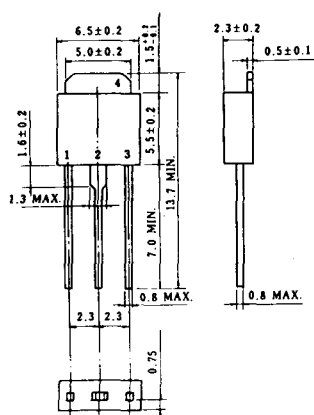
電極接続
トライアック
① T₁
② T₂
③ ゲート
φ 2g

NT-6

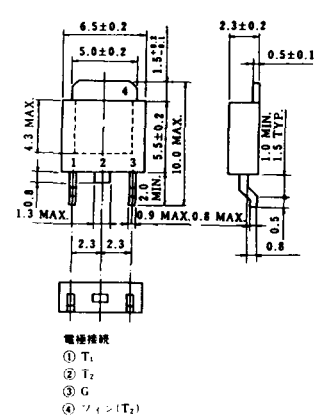


電極接続
トライアック
① T₁
② T₂
③ ゲート
φ 2k

NT-7



NT-8



電極接続
① T₁
② T₂
③ G
④ シェン(T₂)

S-1



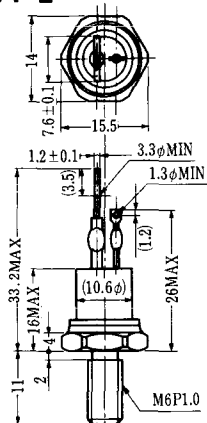
ST-1



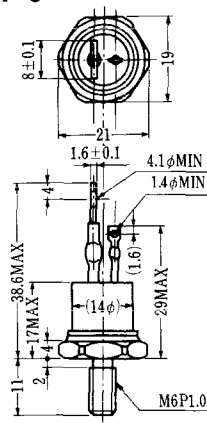
SA-1



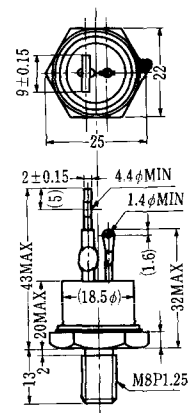
SA-2



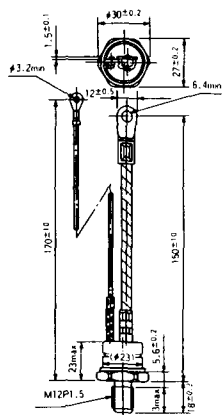
SA-3



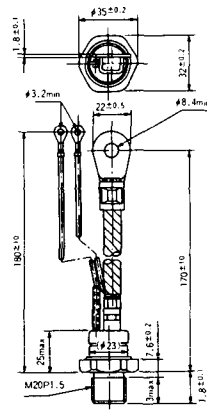
SA-4



SA-5



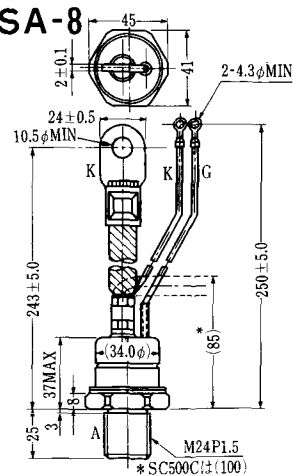
SA-6



SA-7



SA-8



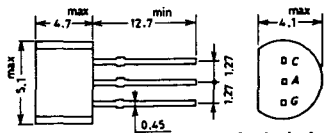
SAT-10



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



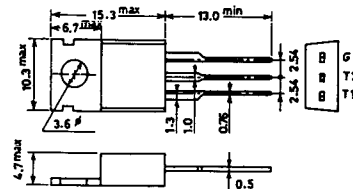
1142



1144



1155



1192A



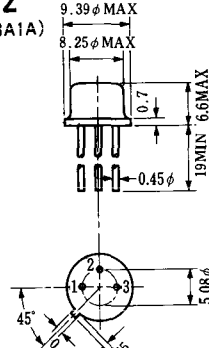
G: Gate

T-1 (13-5A1A)



- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



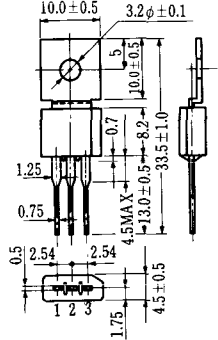
1. カソード
2. ゲート
3. アノード(ケース)

T-3 (13-8C1A)



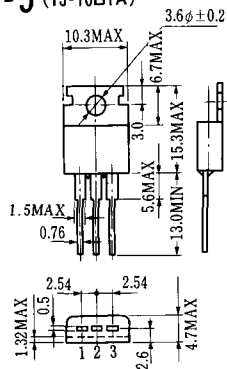
アノード

T-4 (13-10A1A)



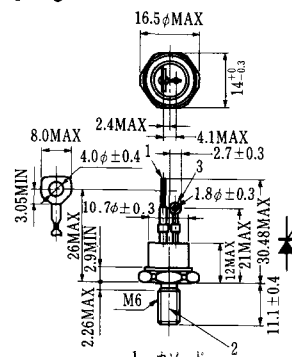
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



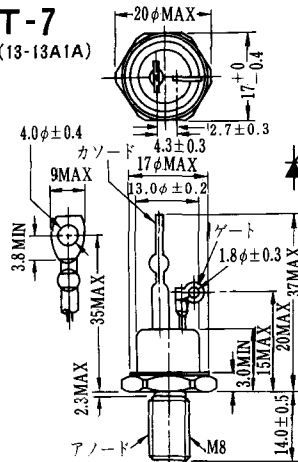
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



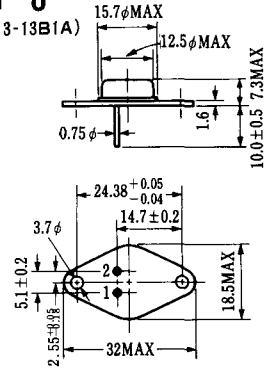
- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



アノード

T-8 (13-13B1A)



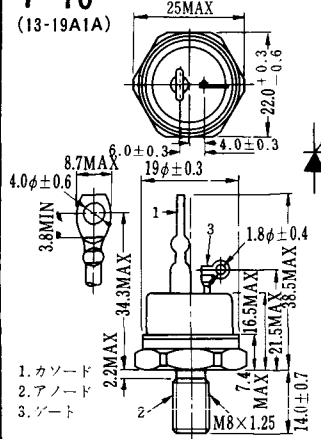
1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



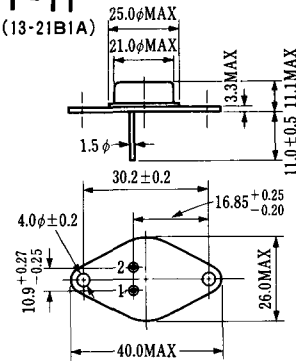
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



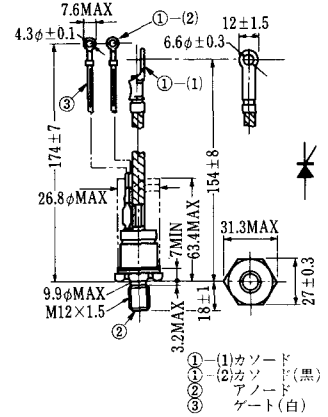
1. カソード
2. アノード
3. ゲート

T-11 (13-21B1A)



1. ゲート
2. カソード
- アノード(ケース)

T-12 (13-27B1B)



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

T-13 (13-27C1A)



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

T-14 (13-32A1A)



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

T-15 (13-35C1B)



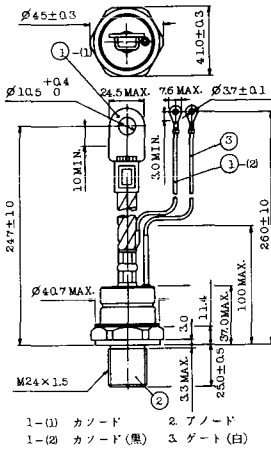
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-16 (13-40B1A)

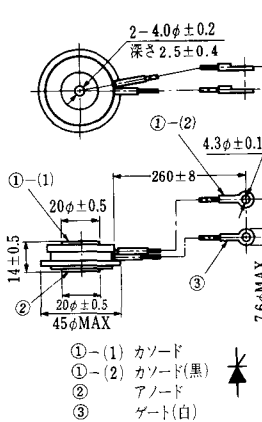


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

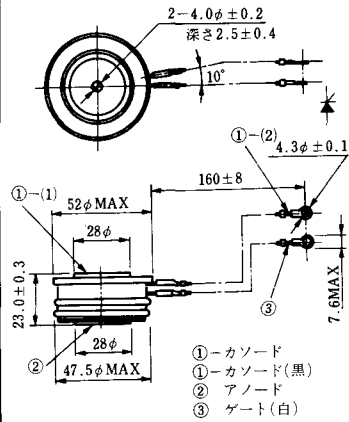
T-17 (13-42A1A)



T-18 (13-45D1A)



T-19 (13-52B1A)



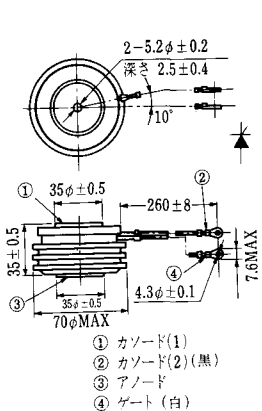
T-20 (13-52C1A)



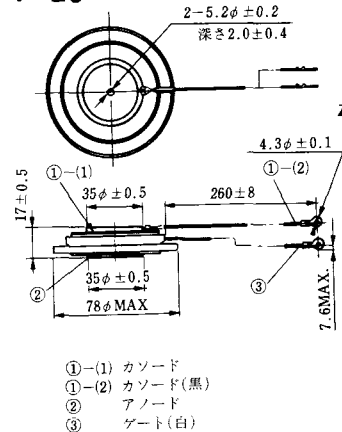
T-21 (13-60A1A)



T-22 (13-70C1A)



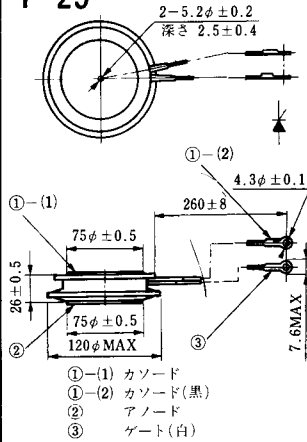
T-23 (13-78A1A)



T-24 (13-100C1A)



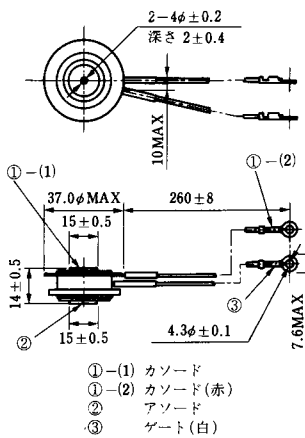
T-25 (13-120A2A)



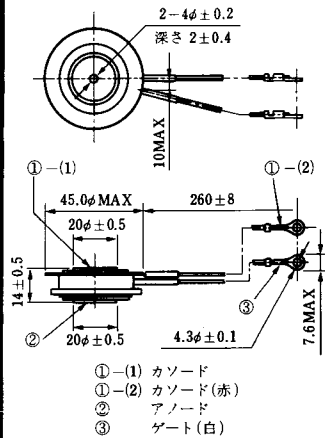
T-26 (13-150A1A)



T-27 (13-37A1A)



T-28 (13-45E1A)



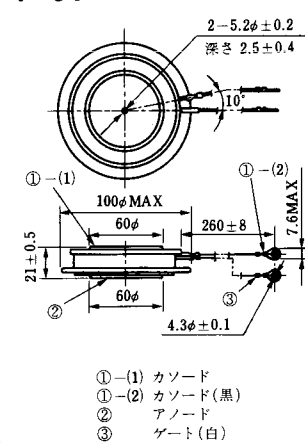
T-29 (13-51A1A)



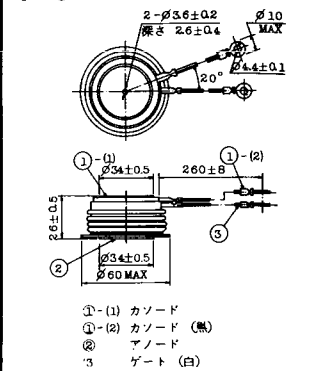
T-30 (13-57A1A)



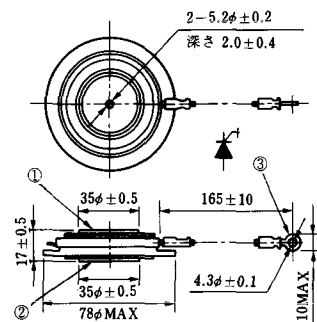
T-31 (13-100E1A)



T-32 (13-60E3A)

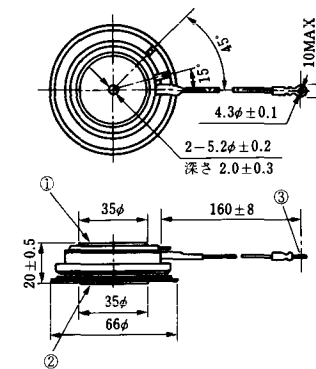


T-33 (13-78B1A)



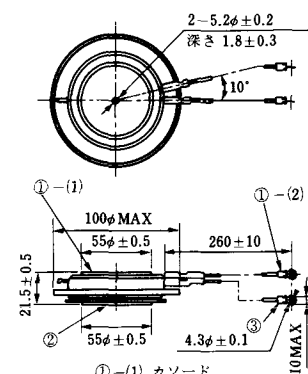
- ① カソード
- ② アノード
- ③ ゲート

T-34 (13-66A1A)



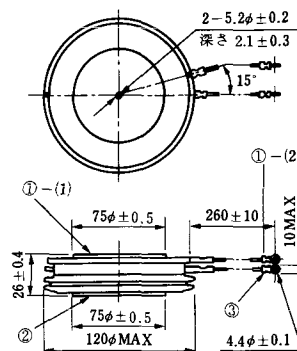
- ① カソード
- ② アノード
- ③ ゲート

T-35 (13-100D1A)



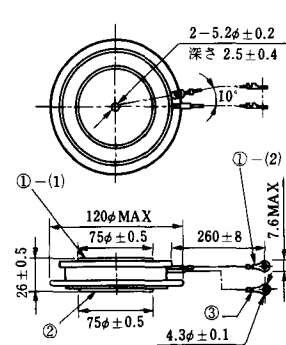
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-36 (13-120E1A)



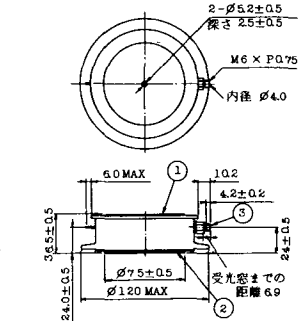
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-37 (13-120A1A)



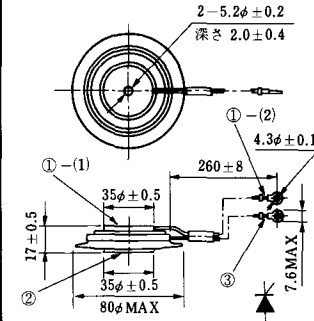
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-38 (13-120C1A)



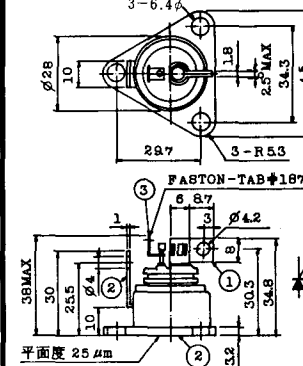
- ① カソード
- ② アノード
- ③ ゲート

T-39 (13-80B1A)



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

T-40 (13-28A1A)



- 1. カソード
- 2. アノード
- 3. ゲート

T-41 (13-28A2A)



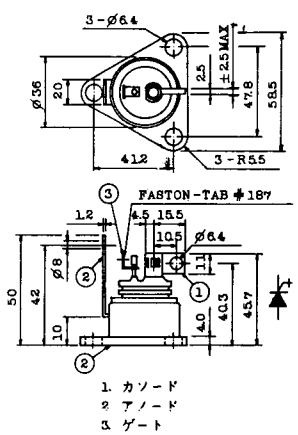
T-42 (13-45F1A)



T-43 (13-60E2A)



T-44 (13-36A1A)



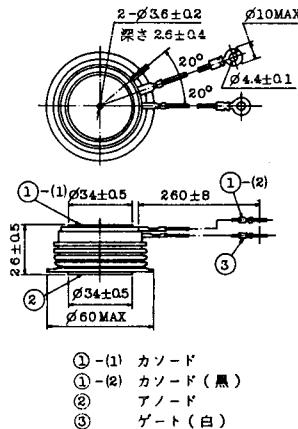
T-45 (13-51B1A)



T-46 (13-36B1A)



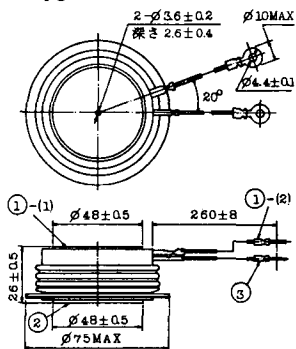
T-47 (13-60E1A)



T-48 (13-93C1A)

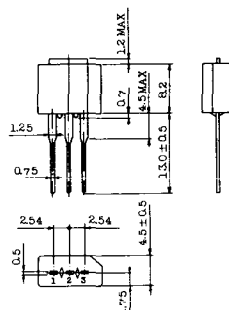


T-49 (13-75A1A)



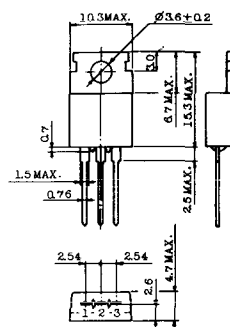
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-50 (13-10A3A)



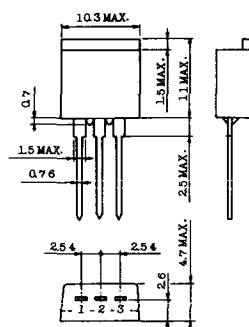
- 1 カソード
- 2 アノード
- 3 ゲート

T-51 (13-10D1A)



- 1 カソード
- 2 アノード
- 3 ゲート

T-52 (13-10D2A)



- 1 カソード
- 2 アノード
- 3 ゲート

T-53 (13-10E1B)



- 1 カソード
- 2 アノード
- 3 ゲート

T-54 (13-10F1B)



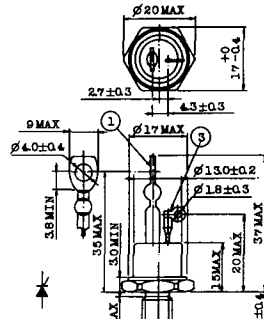
- 1 カソード
- 2 アノード
- 3 ゲート

T-55 (13-5A1D)



- 1 カソード
- 2 アノード
- 3 アノード

T-56 (13-13C1A)



- 1 カソード
- 2 アノード
- 3 ゲート

T-57 (12-16C1A)



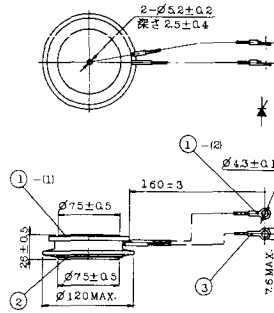
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



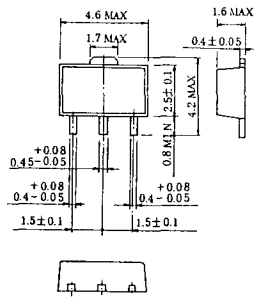
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



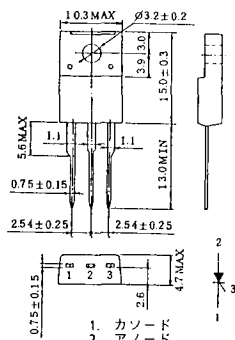
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



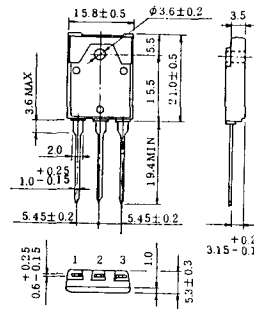
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



1. カソード
2. アノード
3. ゲート

TT-1



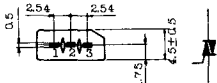
- 1 ゲート
- 2 T₂
- 3 T₁

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-94B2A



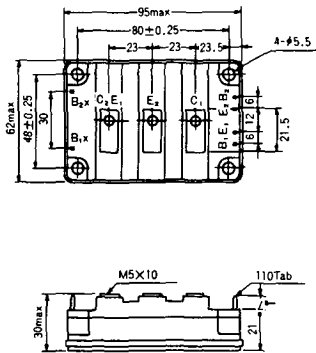
S-94D1A



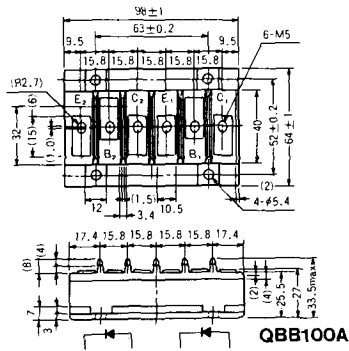
S-95A1A



S-95B1A



S-98B1B



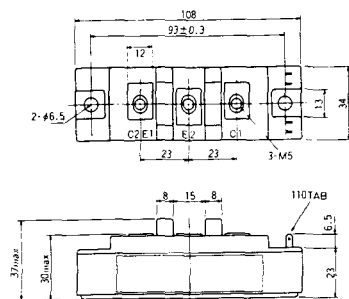
S-108A2A



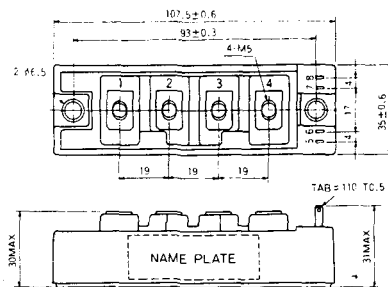
S-108B1A



S-108B1B



S-108B1C



S-108B2A



S-108B2B



2-68B2A



2-68C1A



2-68D2A



2-72A3A



2-80A1A



2-80B1A



2-94D1A



2-96A3A



2-96A4A



2-98B1A



2-98C2A



2-108A2A



2-108B1A



2-109A3A



2-109A4A



2-109B3A

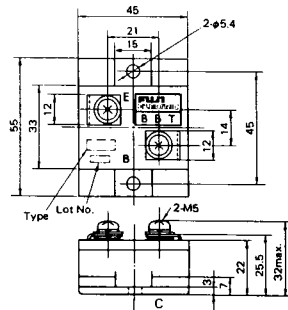


2-109B4A



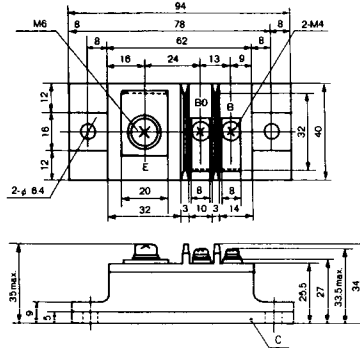
BBT-II

BBTII
1D200A-020



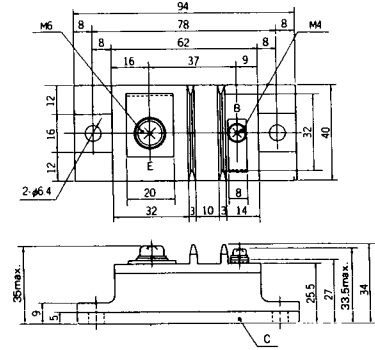
BBT-III

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



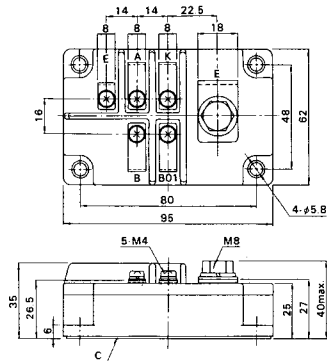
BBT-III

BBTIII
ETN01-055
ET1257



BBT-IV

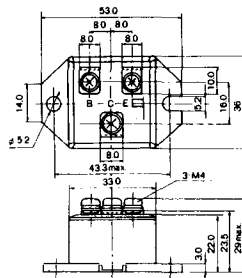
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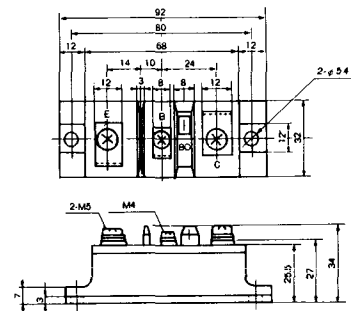
M-101



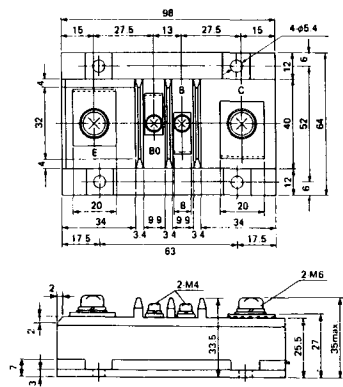
M-102



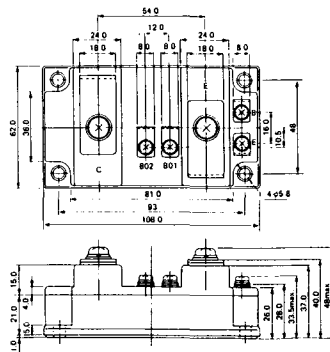
M-103



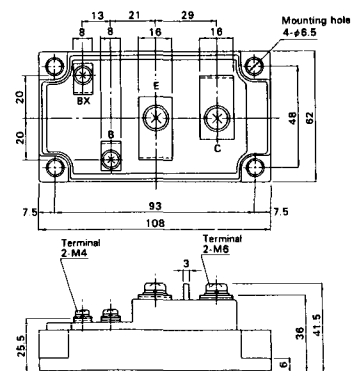
M-104



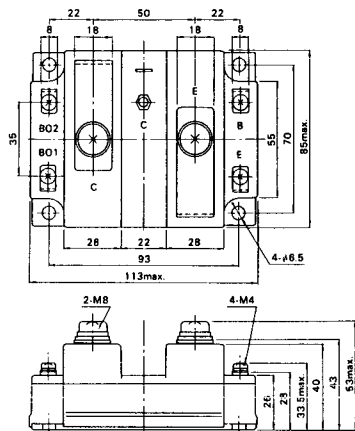
M-105



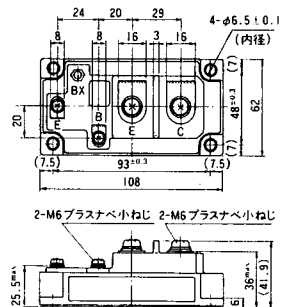
M-106



M-107



M-116



M-201



M-202



M-203



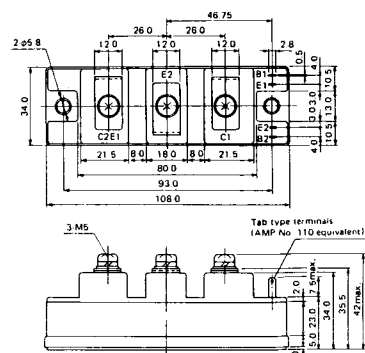
M-204



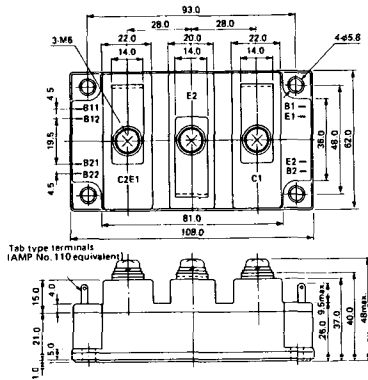
M-205



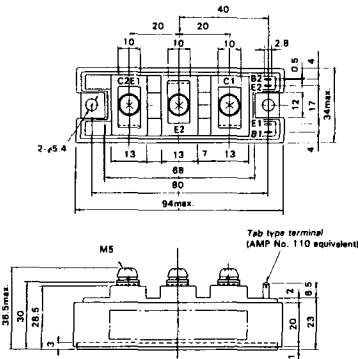
M-206



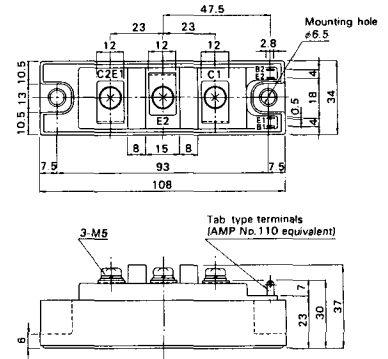
M-207



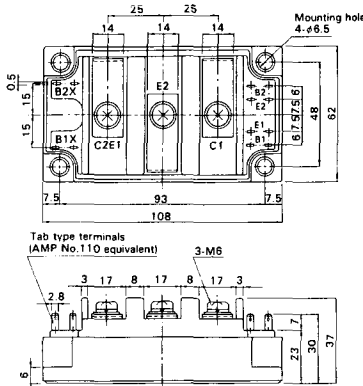
M-208



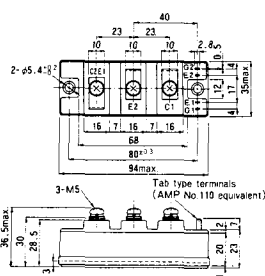
M-209



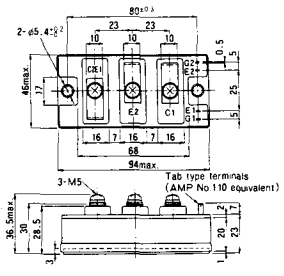
M-210



M-211



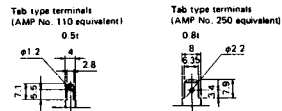
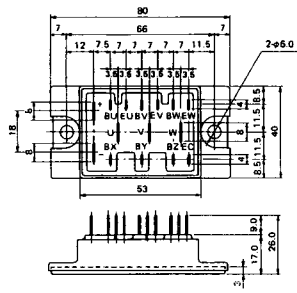
M-212



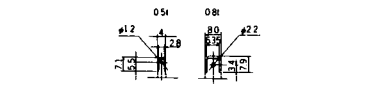
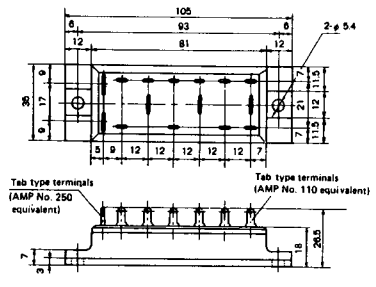
M-219



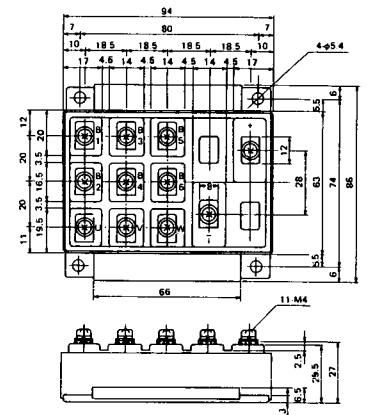
M-601



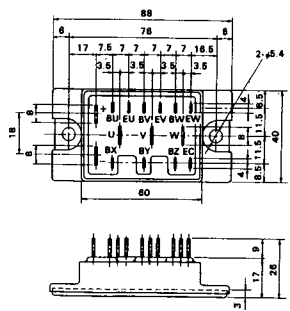
M-602



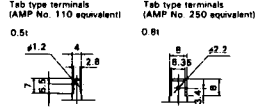
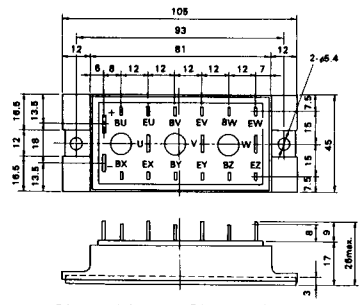
M-603



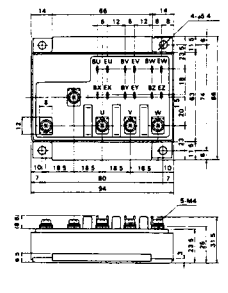
M-604



M-605



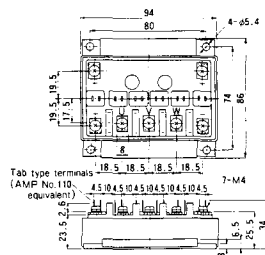
M-606



M-607



M-608



M-609



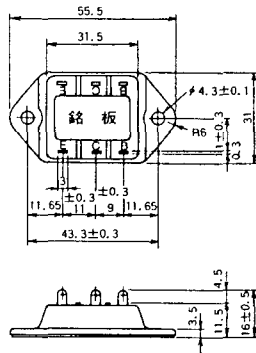
M-610



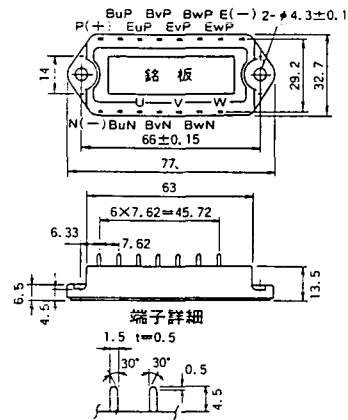
M-616



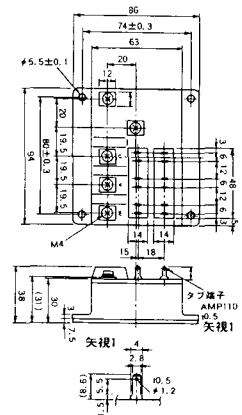
M-3C1A



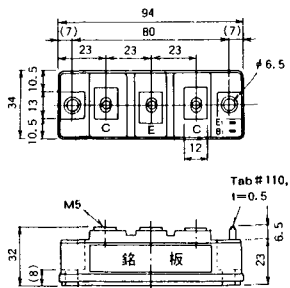
M-3D6A



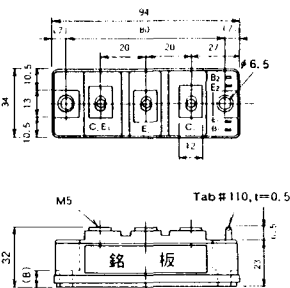
M-3E6A



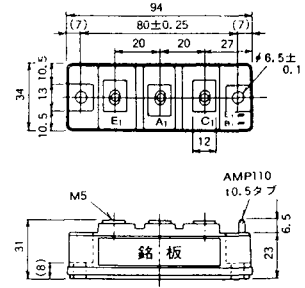
M-4A1A



M-4A2A



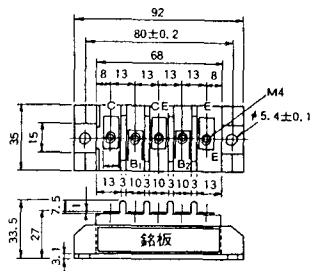
M-4A1B



M-4A2B



M-4B2A



M-5A1A



M-5A1B



M-5A2A



M-5B2A



M-5C2A



M-5D2A



M-6A1A



M-7A1A



M-7B1A



M-8A1A



M-8A1B



M-8A2A



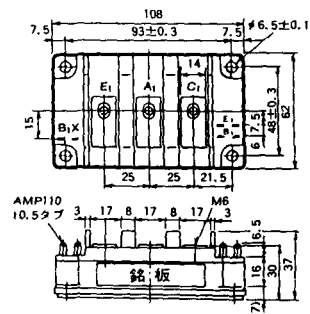
M-8A2B



M-8B2A



M-9A1A



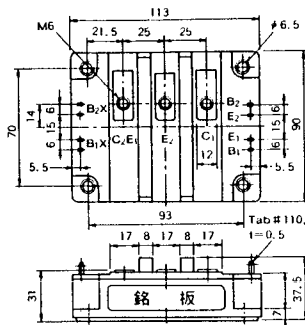
M-9A2A



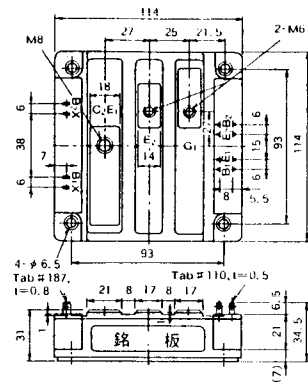
M-10A2A



M-10A2B



M-11A2A



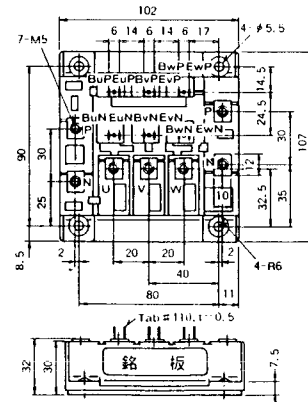
M-12A6A



M-12B6A



M-12B6B



M-9D2B



M-10A2C



H-101



Weight :480g

TERMINALS

H-201



Weight: 200g

H-202



Weight: 360g

LF-J



LF-K



