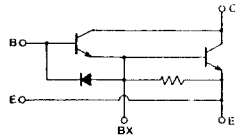
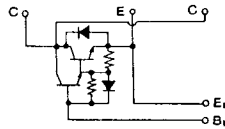


トランジスタ・モジュール (NPN, 1アーム)

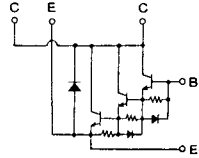
HD 1A



HY-1A



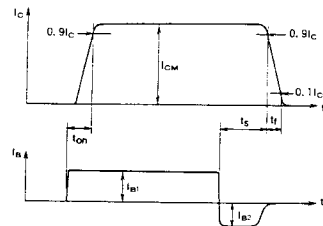
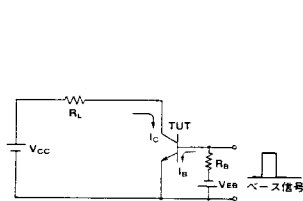
HY-2A



注1. $I_c = 1A$, $V_{EB} = 2V$, #印は V_{CEX} ($V_{EB} = 2V$)。 注2. 60Hz, 単相半波1サイクル波高値。 注3. $T_c = 25^\circ C$ 。 注4. AC, 1分間。

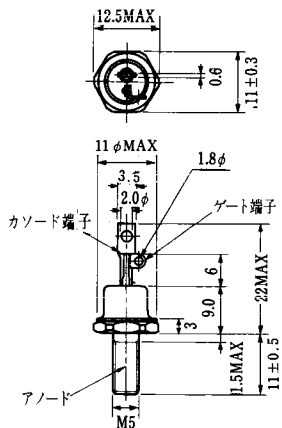
型 名	最 大 定 格 ($T_c = 25^\circ C$)											電 気 的 特 性									
	V_{CBO}	V_{CEX} (SUS)	V_{EBO}	I_c	I_B	I_F	I_{FM}	P_c	T_c	$T_{c,reg}$	V_{ceo}	I_{CEX}		I_{EBO}		V_{CBO} (SUS)		h_{FE}			
	(V)	(V)	(V)	(A)	(A)	(A)	(A)	(W)	($^\circ C$)	($^\circ C$)	(V)	最大	V_{CE}	V_{EB}	最大	V_{EB}	最小	I_c	最小	V_{CE}	I_c
													(V)	(V)	(V)	(V)	(V)	(A)			(V)
QM200HA-H	600	600	7	200	12	200	2000	1250	150	-40~125	2500	4	600	2	200	7			75/100	2/5	200
QM200HA-2H	1000	1000	7	200	10	200	2000	1560	150	-40~125	2500	4	1000	2	800	7			75/100	2.8/5	200
QM200HA-2.4	1200	1200	7	200	10	200	2000	1560	150	-40~125	2500	4	1200	2	800	7			75	5	200
QM200HC-M	400	350	10	200	6.0	200	2000	830	150	-40~125	-	1	350	2	400	10			100	2	200
QM300HA-H	600	600	7	300	18	300	3000	1380	150	-40~125	2500	4	600	2	300	7			75/100	2/5	300
QM300HA-2H	1000	1000	7	300	16	300	3000	1980	150	-40~125	2500	4	1000	2	400	7			75/100	2.8/5	300
QM300HA-2.4	1200	1200	7	300	16	300	3000	1980	150	-40~125	2500	4	1200	2	400	7			75	5	300
QM300HC-M	400	350	10	300	10	300	3000	1250	150	-40~125	-	2	350	2	600	10			100	2	300
QM400HA-H	600	600	7	400	10	400	4000	1500	150	-40~125	2500	5	600	2	400	7			750	2.5	400
QM400HA-2H	1000	1000	7	400	20	400	4000	3120	150	-40~125	2500	8	1000	2	600	7			75/100	2.8/5	400
QM400HA-2.4	1200	1200	7	400	20	400	4000	3120	150	-40~125	2500	8	1200	2	600	7			75	5	400
QM500HA-H	600	600	7	500	10	500	5000	1780	150	-40~125	2500	5	600	2	500	7			750	2.5	500
QM600HA-2H	1000	1000	7	600	30	600	6000	3500	150	-40~125	2500	8	1000	2	800	7			75/100	2.8/5	600
QM600HA-2.4	1200	1200	7	600	30	600	6000	3500	150	-40~125	2500	8	1200	2	800	7			75	5	600
QM600HD-M	400	350	10	600	15			2080	150	-40~125	2500	2	350	2	800	10			500	2	600

■スイッチング時間測定回路

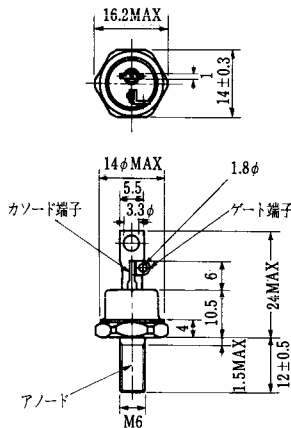


(T _J =25°C)											エミッタ・コレクタ間ダイオード					熱抵抗		等価回路	外形図	記事	型名	
飽和電圧 (V)		I _c	I _B	スイッチング時間 (μs)			I _{B1}	I _{B2}	V _{cc}	I _c	V _F (V)	I _F (A)	t _{rr} (μs)	I _F (A)	V _{BE} (V)	di/dt (A/μs)	θ _{J-C} (°C/W)					
V _{CE}	V _{BE}			t _{on}	t _{sig}	t _r											最大					最大
2.0	2.5	200	2.6	2.0	12	3.0	4.0	-4.0	600	200	1.75	200					0.1	0.39	HA-1C	M-8A1A	UL認定済	QM200HA-H
2.5	3.5	200	4.0	3.0	15	3.0	4.0	-4.0	600	200	1.8	200					0.08	0.35	HA-2B	M-9B1A	UL認定済	QM200HA-2H
3.0	3.5	200	4.0	3.0	15	3.0	4.0	-4.0	600	200	1.8	200					0.08	0.35	HA-2B	M-9B1A	UL認定済	QM200HA-24
2.0	2.5	200	2.0	2.0	10	3.0	4.0	-4.0	200	200	1.5	200					0.15	0.25	HC-1B	M-6A1A	非絶縁形	QM200HC-M
2.0	2.5	300	4.0	2.5	12	3.0	6.0	-6.0	300	300	1.85	300					0.09	0.3	HA-1B	M-9B1A	UL認定済	QM300HA-H
2.5	3.5	300	6.0	3.0	15	3.0	6.0	-6.0	600	300	1.85	300					0.063	0.3	HA-2B	M-9B1A	UL認定済	QM300HA-2H
3.0	3.5	300	6.0	3.0	15	3.0	6.0	-6.0	600	300	1.8	300					0.063	0.3	HA-2B	M-9B1A	UL認定済	QM300HA-24
2.0	2.5	300	3.0	2.0	10	3.0	6.0	-6.0	200	300	1.85	300					0.1	0.25	HA-1B	M-7A1A	非絶縁形	QM300HC-M
2.5	3.5	400	0.53	3.0	10	3.5	0.8	-8.0	300	400	1.8	400					0.083	0.25	HA-2C	M-7A1A	UL認定済	QM400HA-H
2.5	3.5	400	8.0	3.0	16	3.0	8.0	-8.0	600	400	1.8	400					0.04	0.175	HA-2C	M-7B1A	UL認定済	QM400HA-2H
3.0	3.5	400	8.0	3.0	18	3.0	8.0	-8.0	600	400	1.8	400					0.04	0.175	HA-2C	M-7B1A	UL認定済	QM400HA-24
2.5	3.5	500	0.76	3.0	10	3.5	1.0	-10	300	500	1.8	500					0.07	0.25	HA-2C	M-7A1B	UL認定済	QM500HA-H
2.5	3.5	600	12	3.0	16	3.0	12	-12	600	600	1.8	600					0.035	0.16	HA-2C	M-7C1A	UL認定済	QM600HA-2H
3.0	3.5	600	12	3.0	16	3.0	12	-12	600	600	1.8	600					0.035	0.16	HA-2C	M-7C1A	UL認定済	QM600HA-24
2.0	2.5	600	1.2	3.0	15	3.0	2.0	-4.0	200	600							0.06		HD-1A	M-7A1A	非絶縁形, FDなし	QM600HD-M

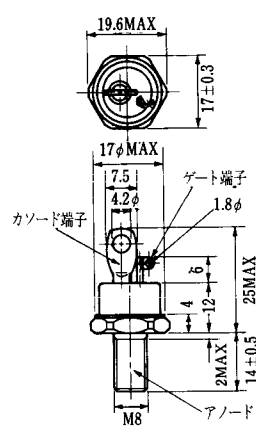
FD-1



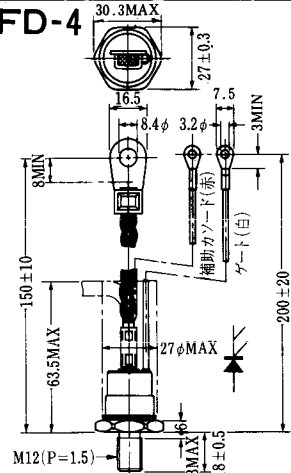
FD-2



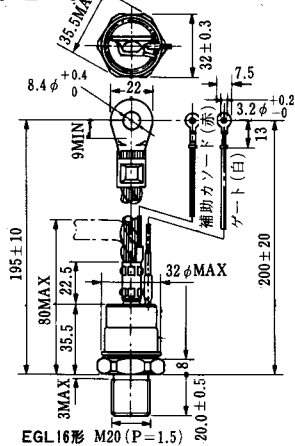
FD-3



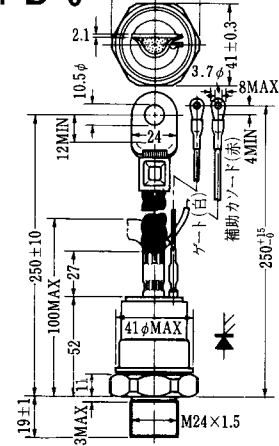
FD-4



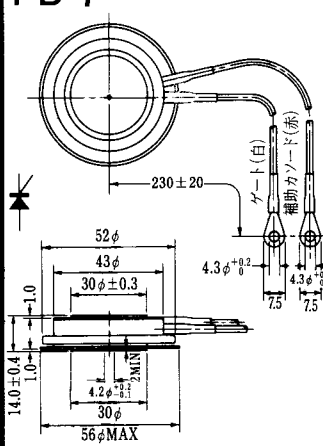
FD-5



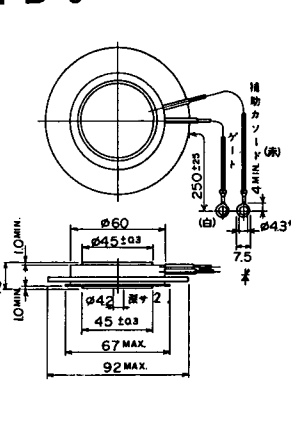
FD-6



FD-7



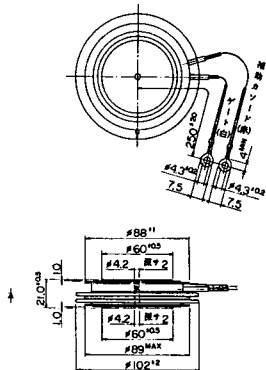
FD-8



FD-9



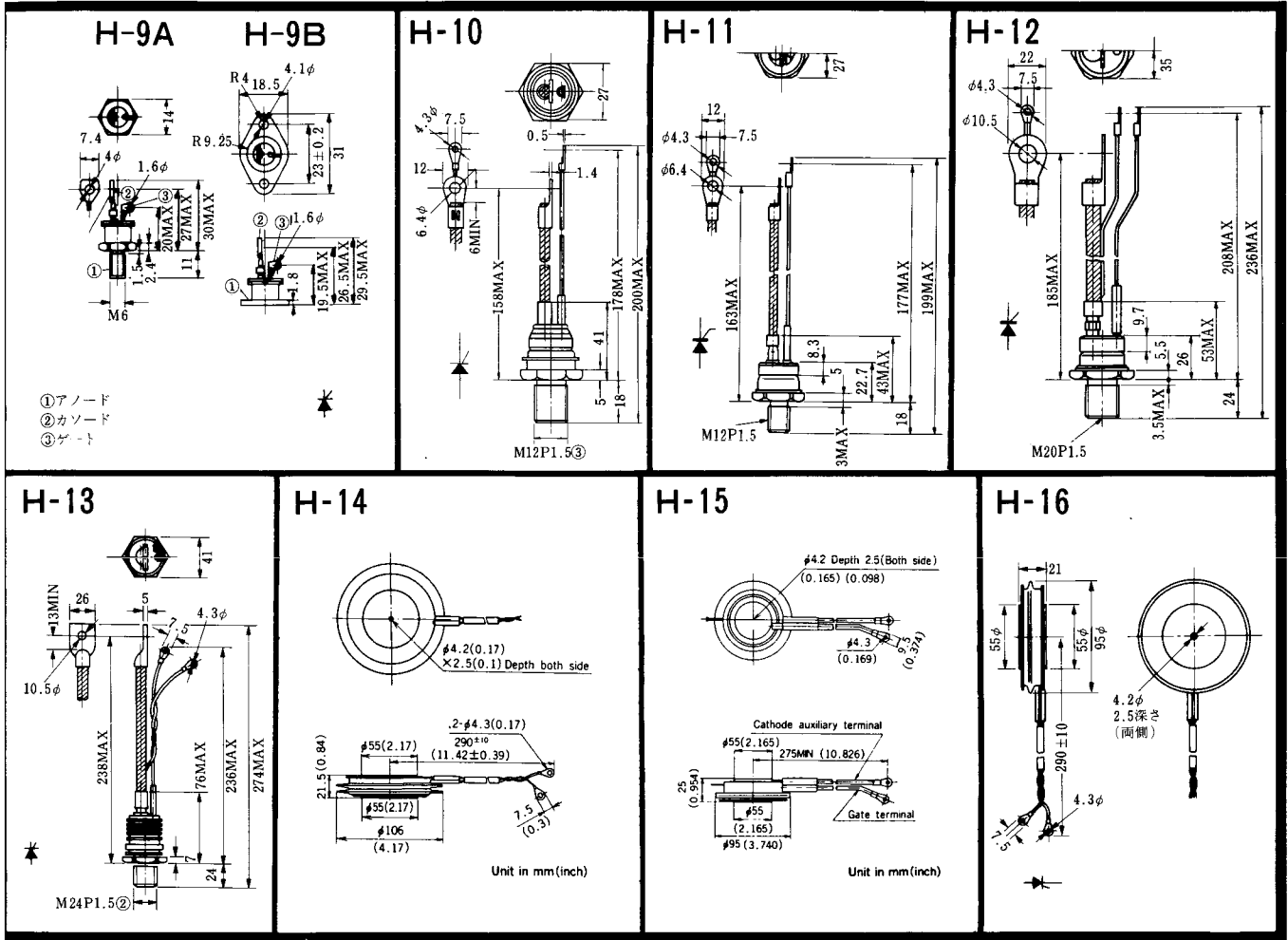
FD-10



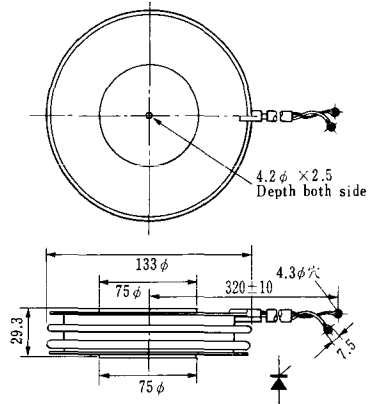
FD-11

FD-12

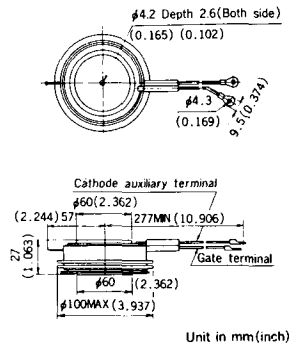




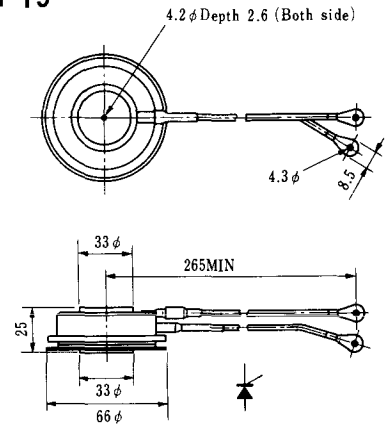
H-17



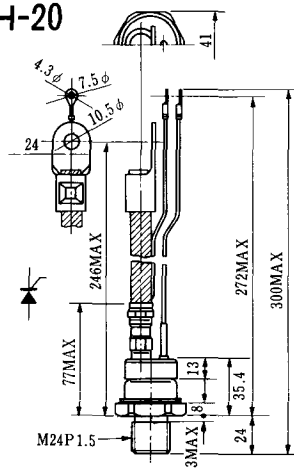
H-18



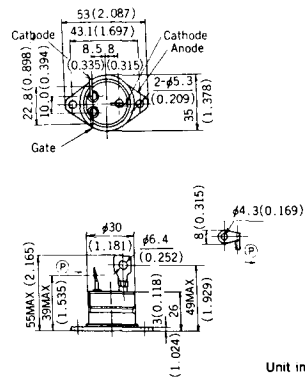
H-19



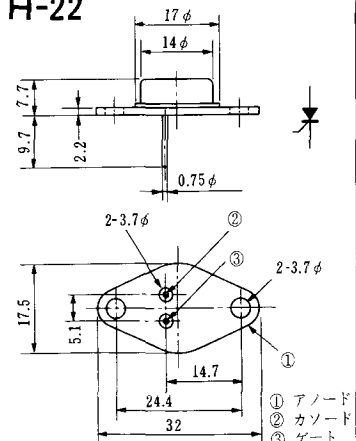
H-20



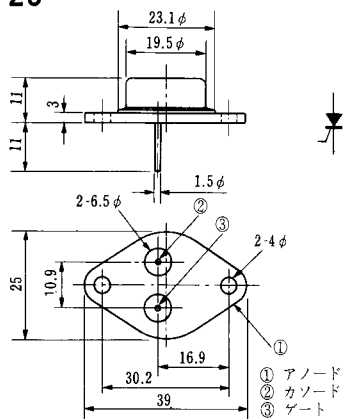
H-21



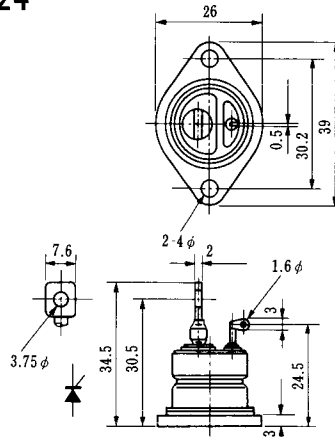
H-22



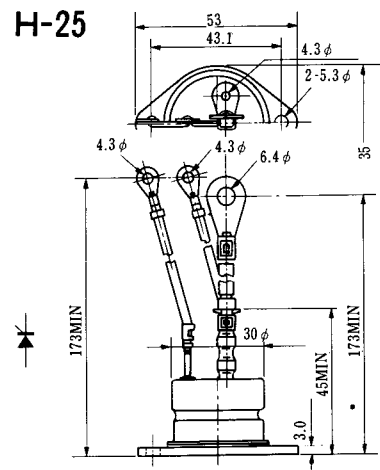
H-23



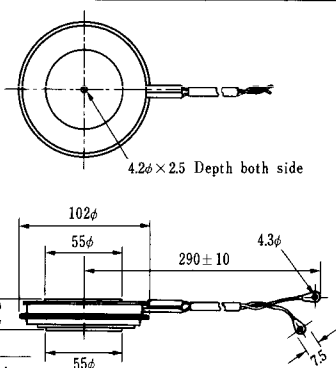
H-24



H-25

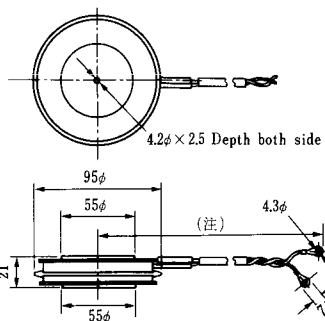


H-26



Type	Direction of polarity
CA12	

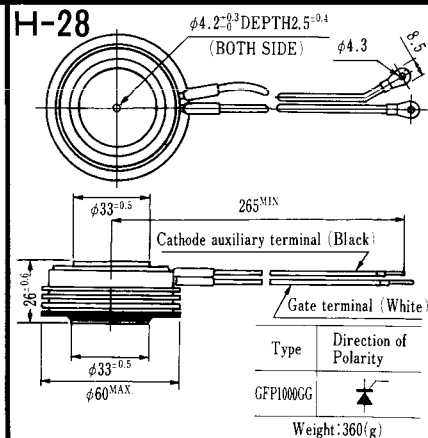
H-27



Type	Direction of polarity
CF11V	

(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.

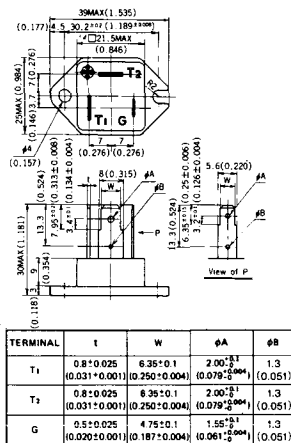


Note : The thickness is a dimension in press at the rated mounting force. Weight: 870(g)



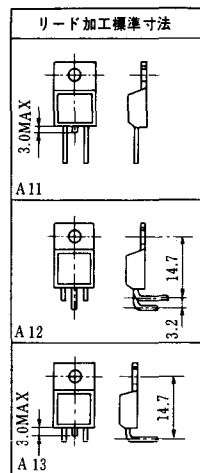
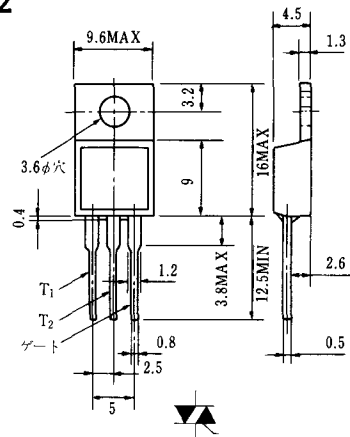
Note : The thickness is a dimension in press at the rated mounting force. Weight: 1,460(g)

HT-1

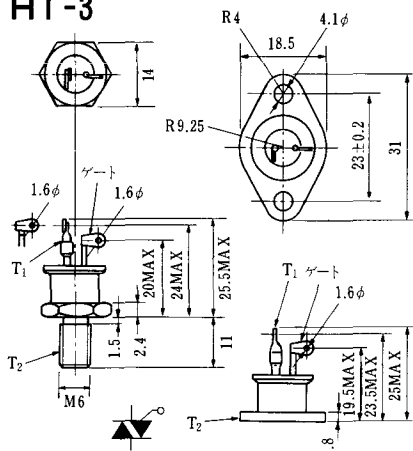


Unit in mm (inch)

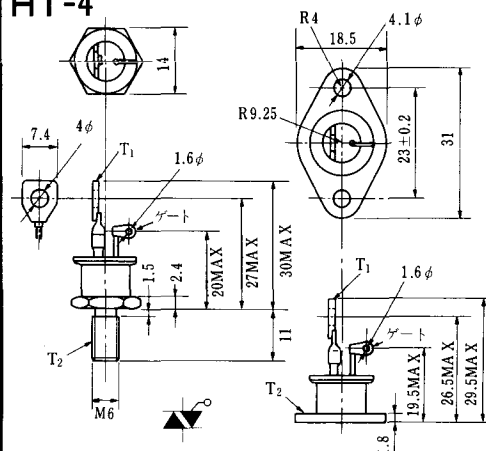
HT-2



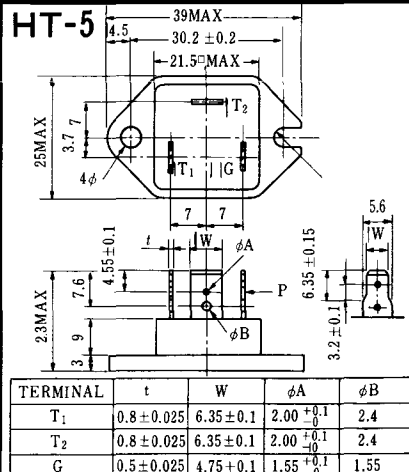
HT-3



HT-4



HT-5



M-1



M-2



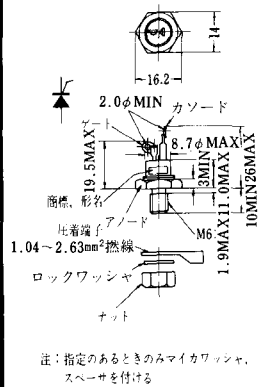
M-3



M-4



M-5



M-6



M-7



M-8



M-9



M-10



M-11



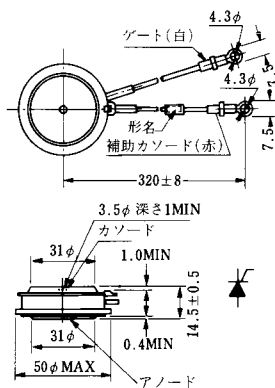
M-12



M-13



M-14



M-15

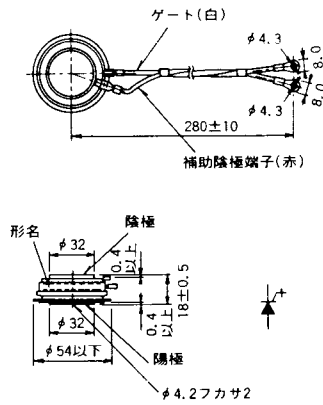


M-16

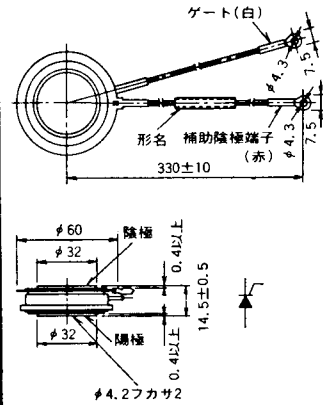




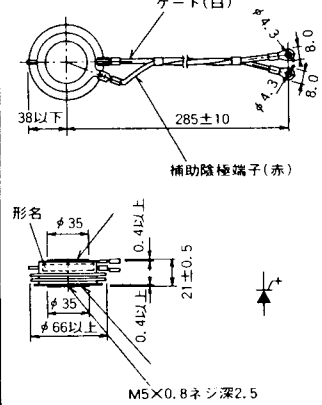
M-25



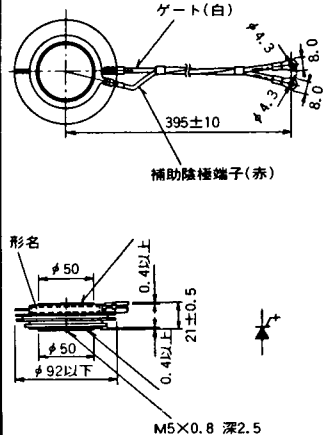
M-26



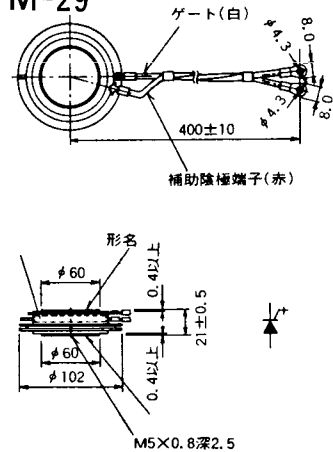
M-27



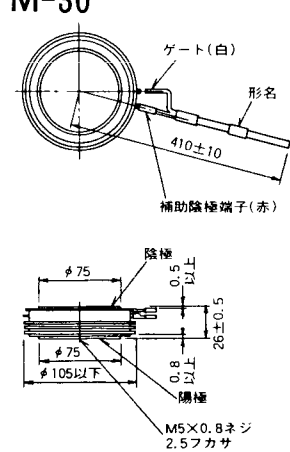
M-28



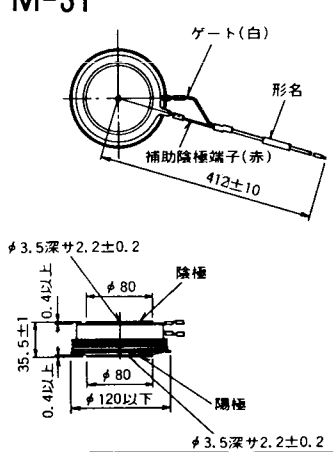
M-29



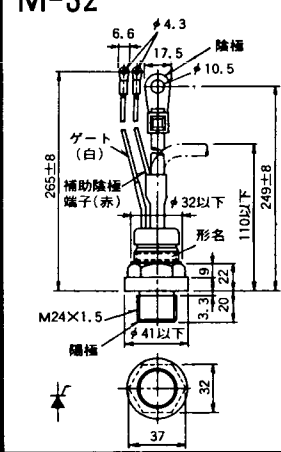
M-30



M-31



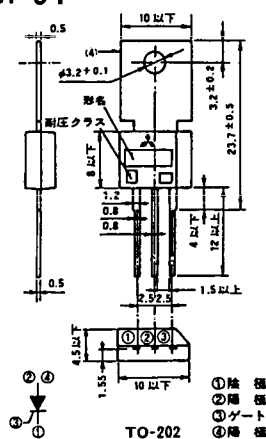
M-32



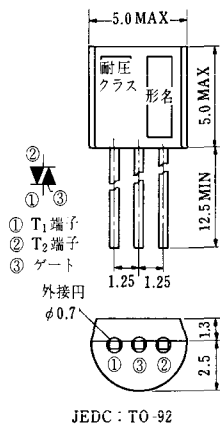
M-33



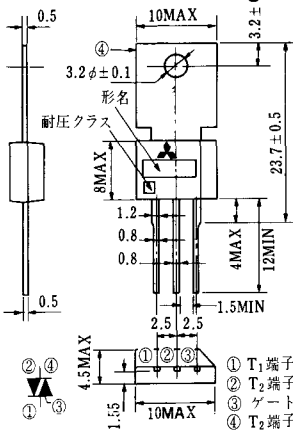
M-34



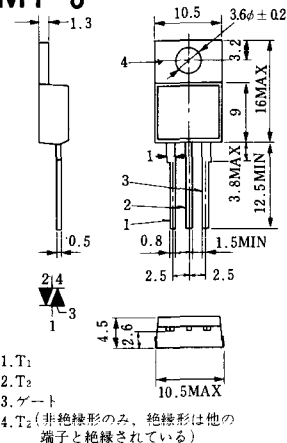
MT-1



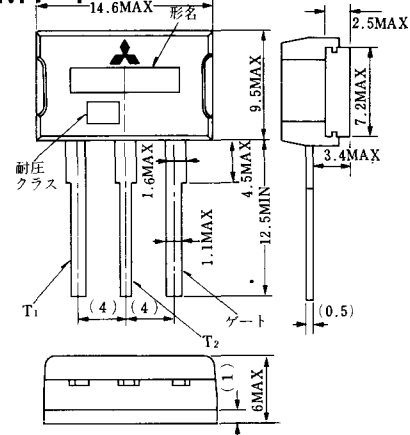
MT-2



MT-3



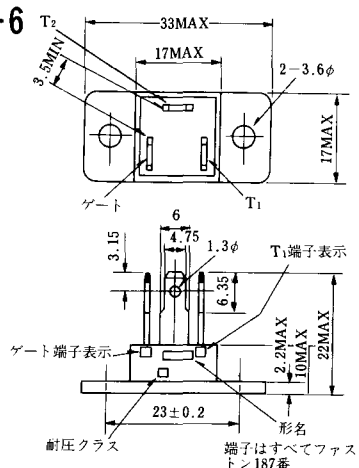
MT-4



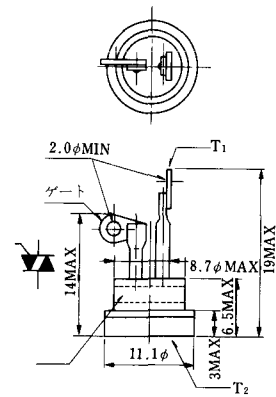
MT-5



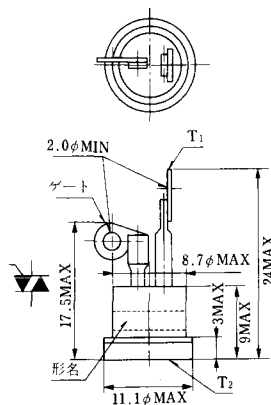
MT-6



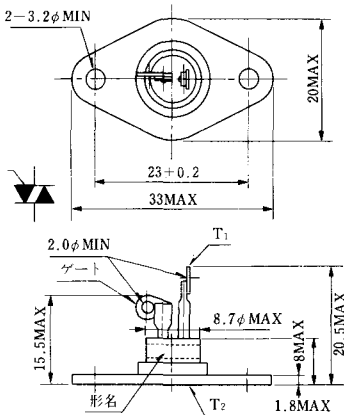
MT-7



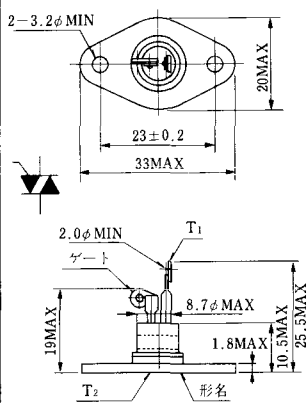
MT-8



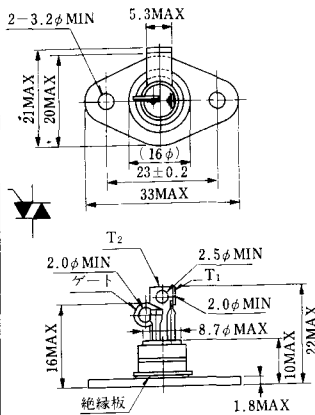
MT-9



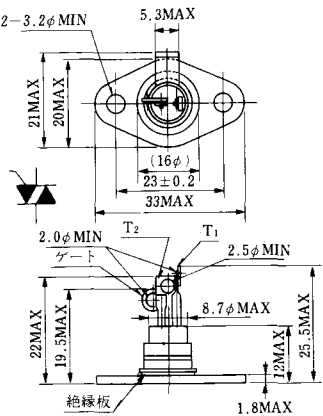
MT-10



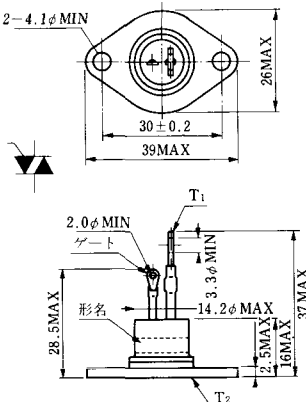
MT-11



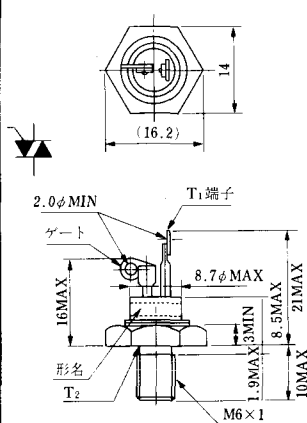
MT-12



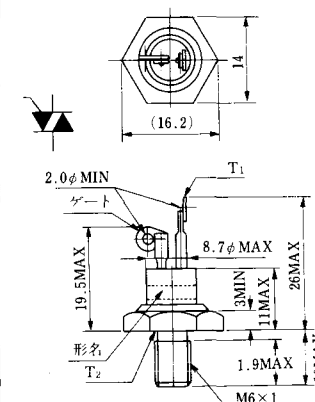
MT-13



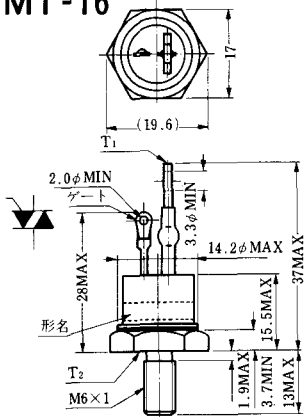
MT-14



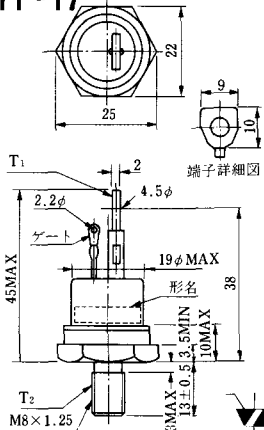
MT-15



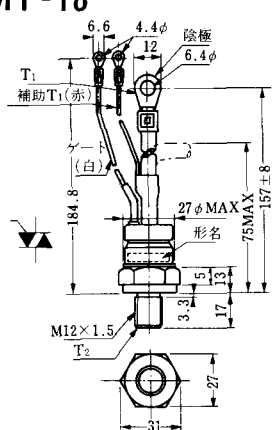
MT-16



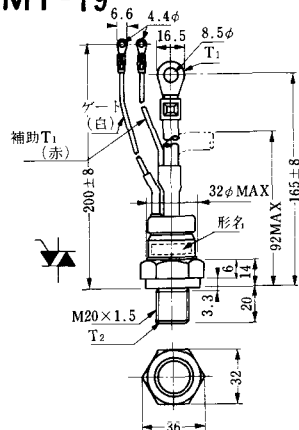
MT-17



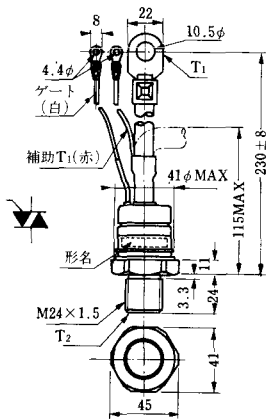
MT-18



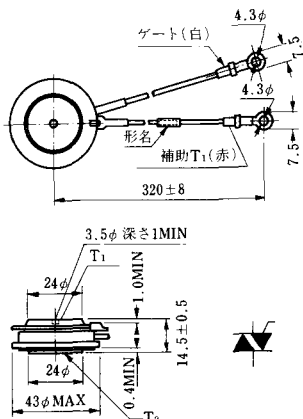
MT-19



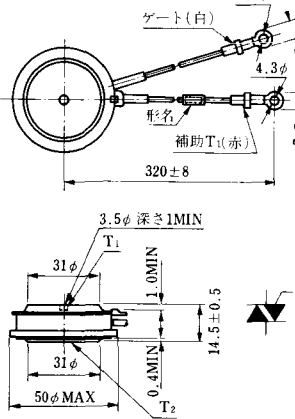
MT-20



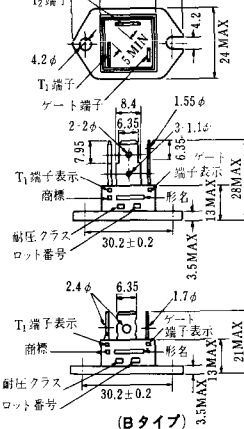
MT-21

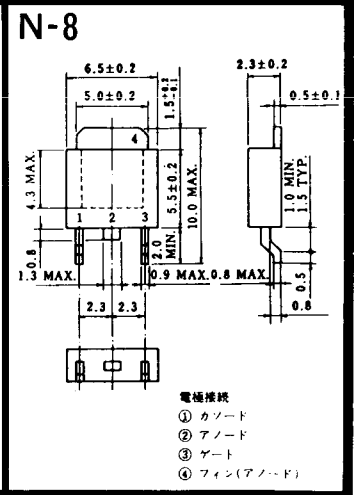
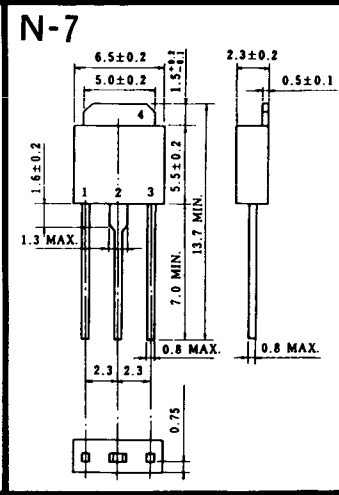
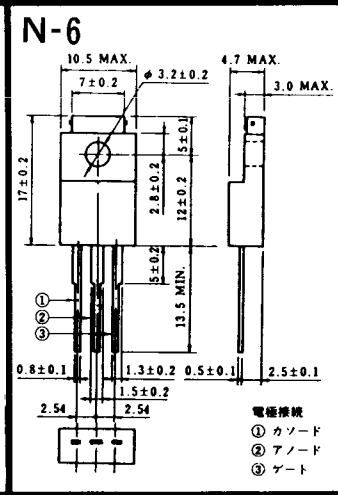
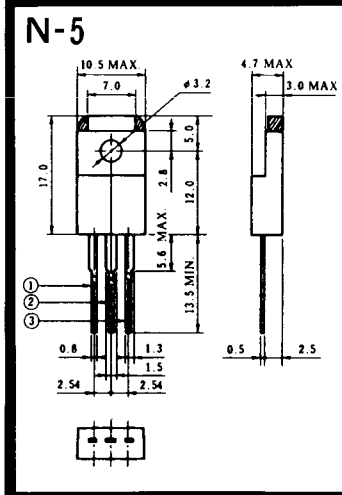
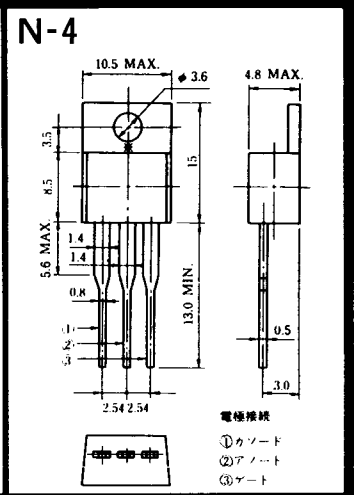
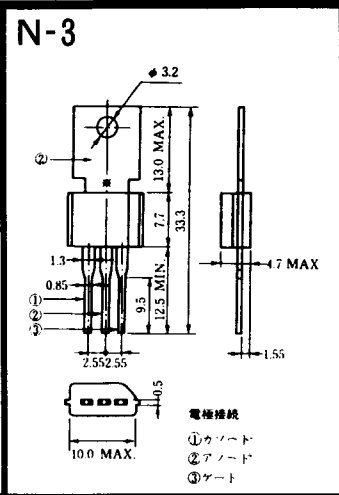
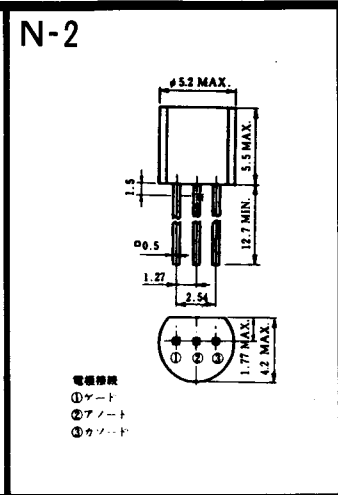
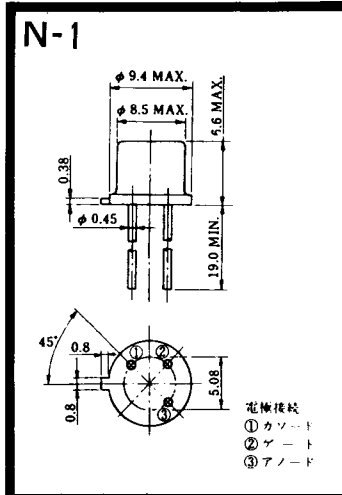


MT-22

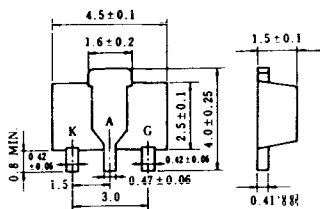


MT-23





N-9



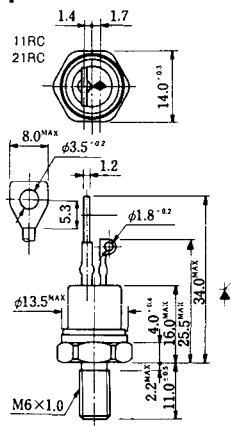
電極接続

K: カソード

A: アノード

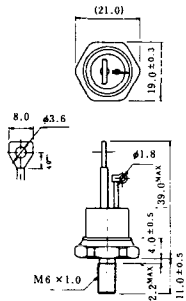
G: ゲート

NI-1



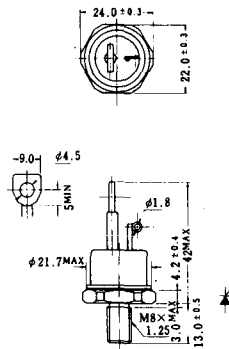
NI-2

29RD



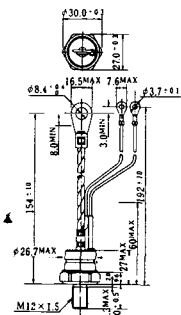
NI-3

39RC
59RC
39RF
59RF



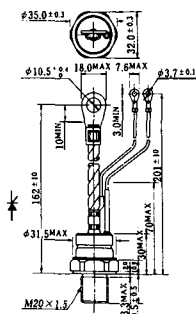
NI-4

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



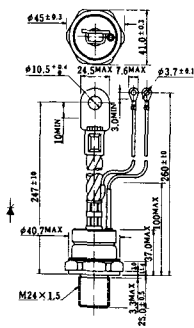
NI-5

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



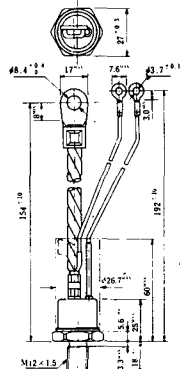
NI-6

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



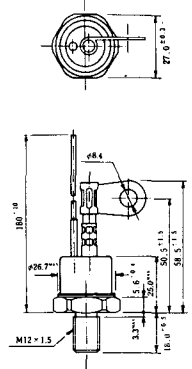
NI-7

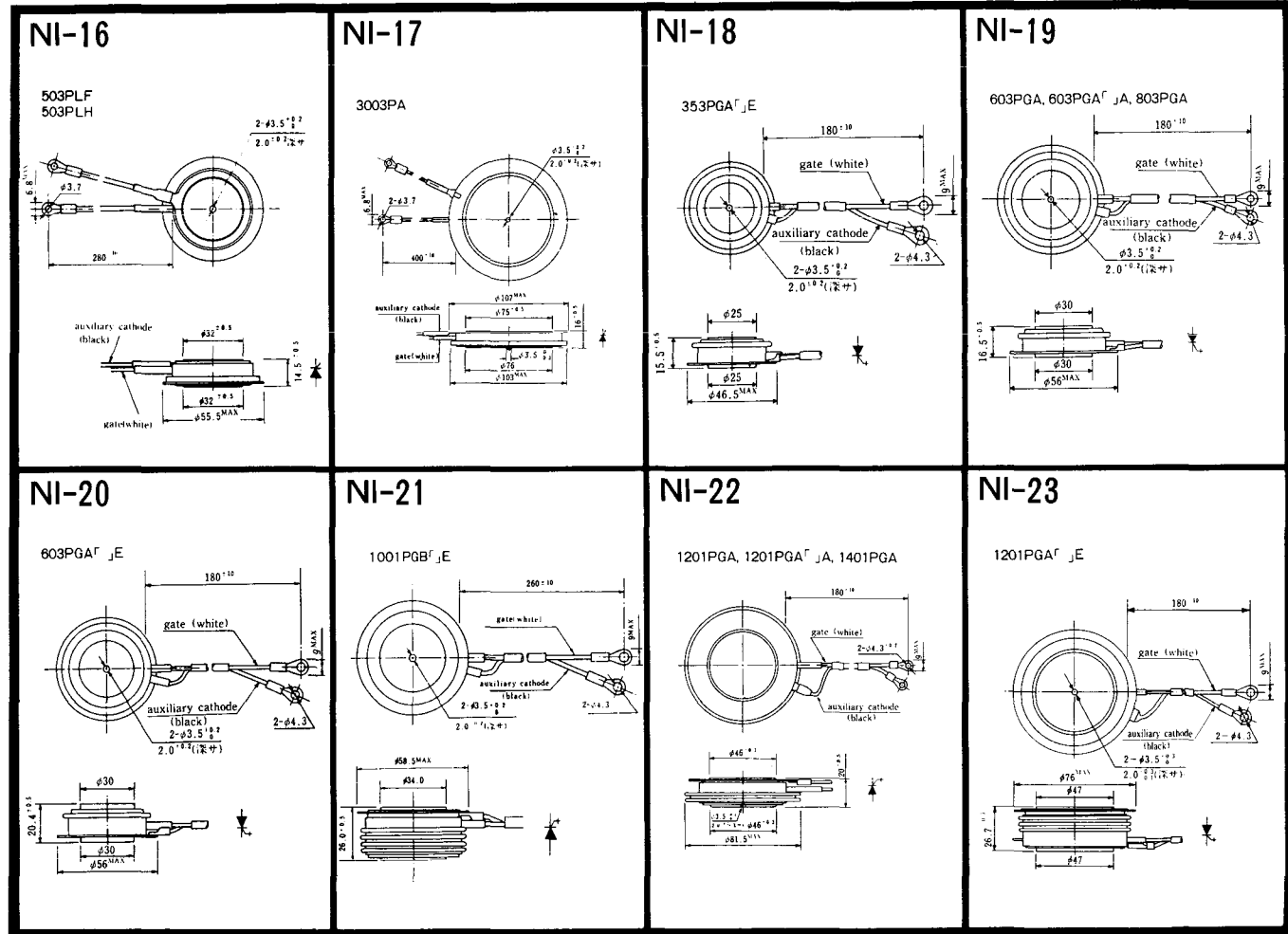
89RW_{JL}
129RW_{JL}



NI-8

89RW
129RW





NI-24

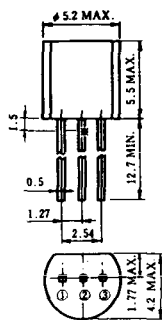
2001PGB^r JE



NI-25

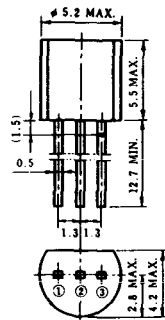
NI-26

NT-1



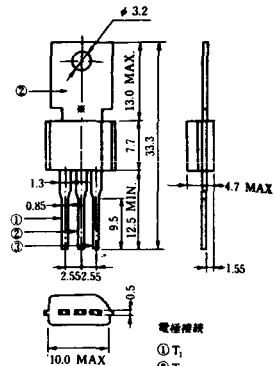
電極接続
① T₁
② ゲート
③ T₂

NT-2



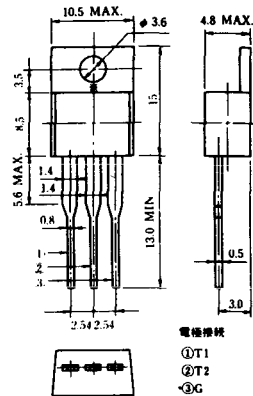
電極接続
① T₁
② ゲート
③ T₂

NT-3



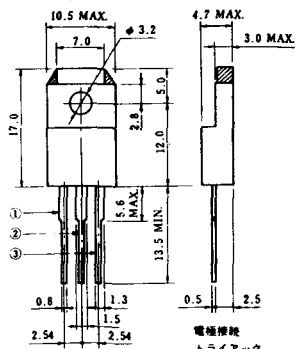
電極接続
① T₁
② T₂
③ ゲート

NT-4



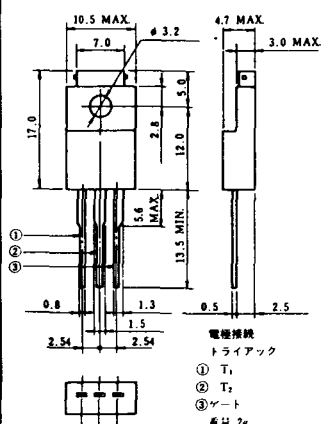
電極接続
① T₁
② T₂
③ G

NT-5



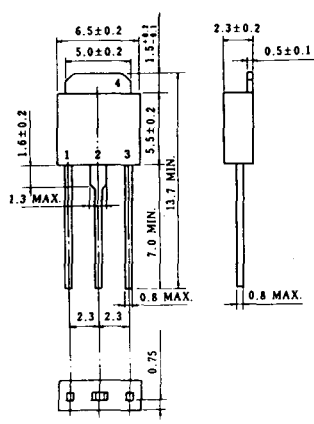
電極接続
トライアック
① T₁
② T₂
③ ゲート
④ G

NT-6

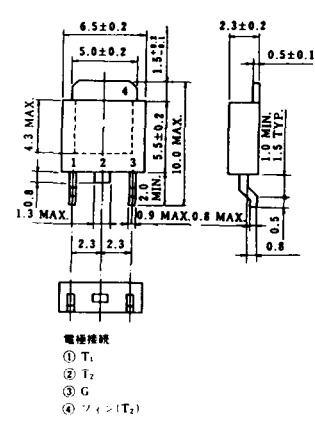


電極接続
トライアック
① T₁
② T₂
③ ゲート
④ G
⑤ 2k

NT-7

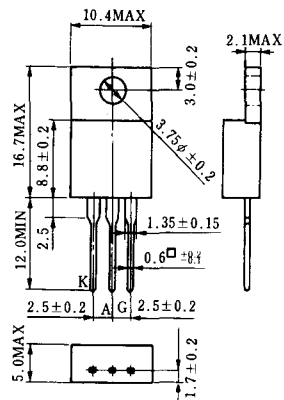


NT-8

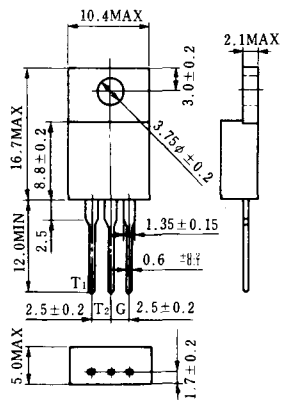


電極接続
① T₁
② T₂
③ G
④ ソフト(T₂)

S-1



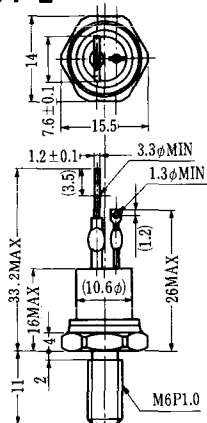
ST-1



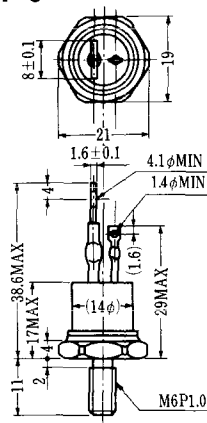
SA-1



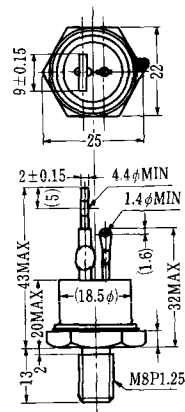
SA-2



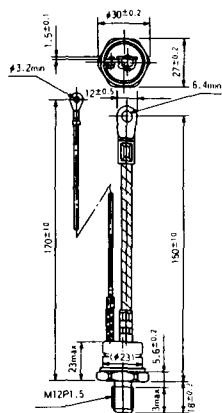
SA-3



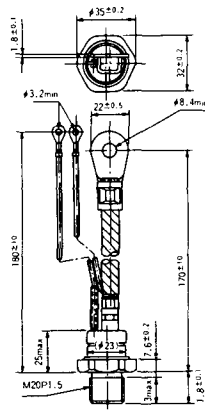
SA-4



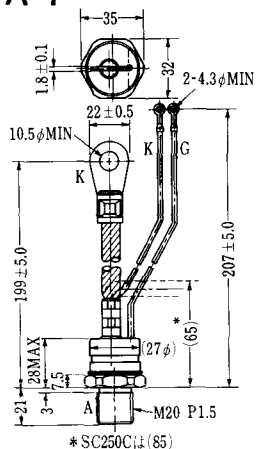
SA-5



SA-6

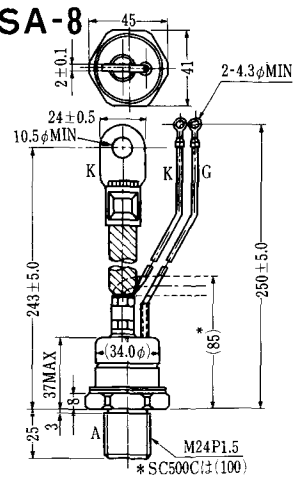


SA-7



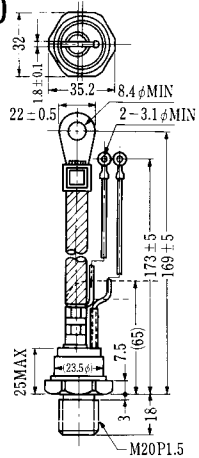
* SC250C(1)(85)

SA-8

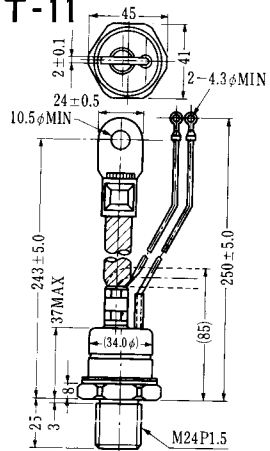


* SC500C(1)(100)

SAT-10



SAT-11

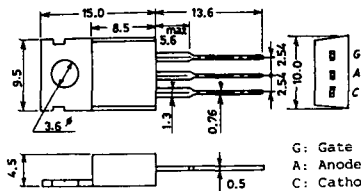


SY-1 (1096A)



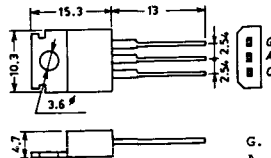
C: Cathode
A: Anode
G: Gate

SY-2 (1151)



G: Gate
A: Anode
C: Cathode

SY-3 (1104)



G: Gate
A: Anode
C: Cathode

SY-4 (1150)



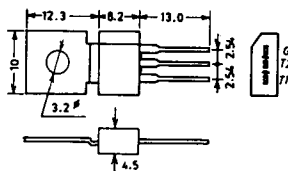
G: Gate
A: Anode
C: Cathode

1097A

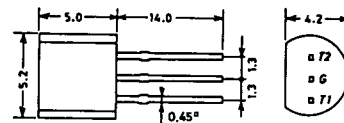


G: Gate

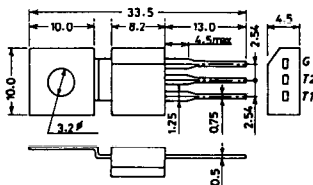
1102



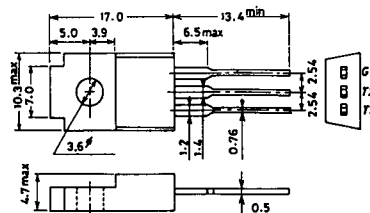
1141



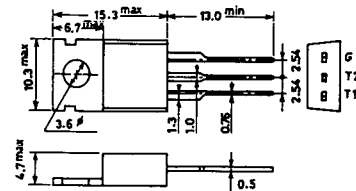
1142



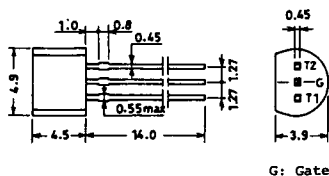
1144



1155

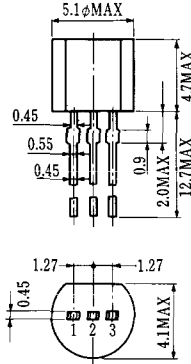


1192A



G: Gate

T-1 (13-5A1A)



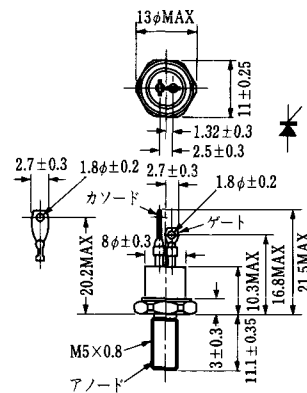
- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



1. カソード
2. ゲート
3. アノード(ケース)

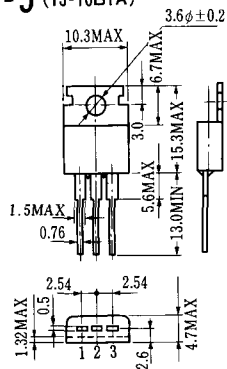
T-3 (13-8C1A)



M5×0.8
アノード

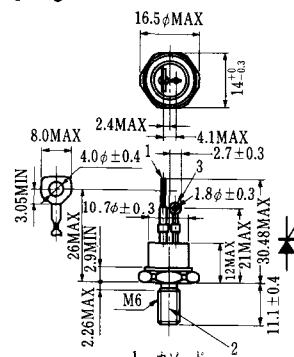
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



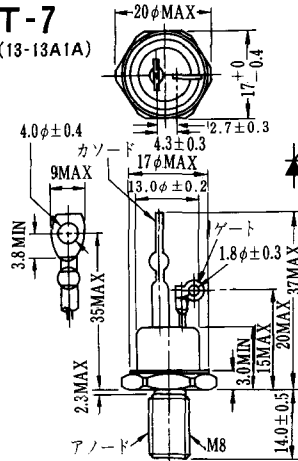
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



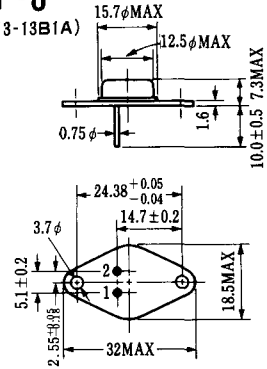
- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



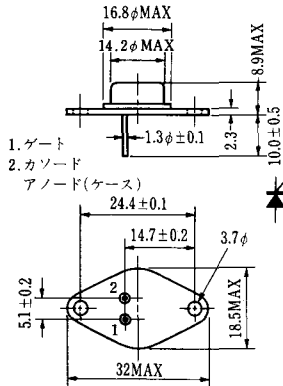
アノード
M8

T-8 (13-13B1A)



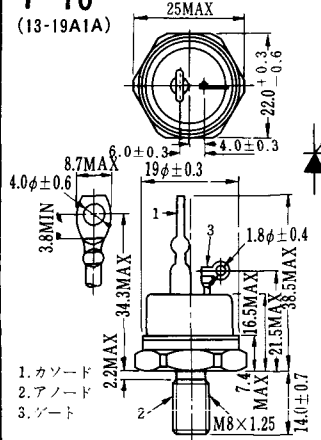
1. ゲート
2. カソード
3. アノード(ケース)

T-9 (13-14A1A)



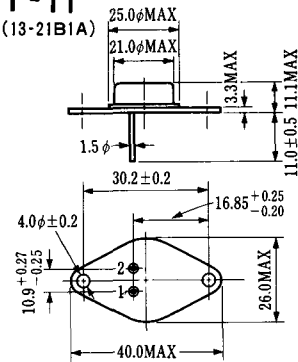
1. ゲート
2. カソード
- アノード(ケース)

T-10 (13-19A1A)



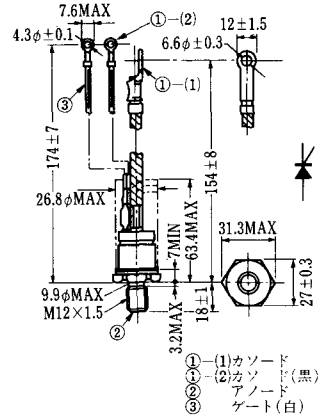
1. カソード
2. アノード
3. ゲート

T-11 (13-21B1A)



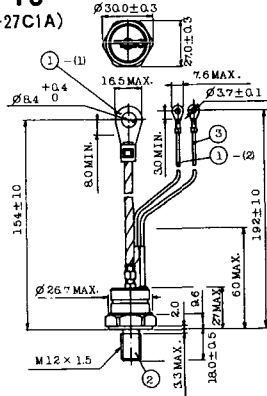
1. ゲート
2. カソード
- アノード(ケース)

T-12 (13-27B1B)



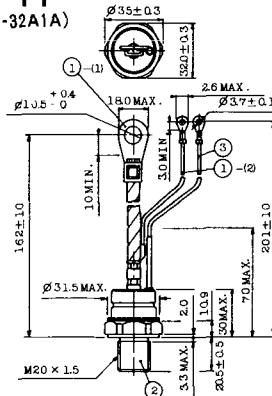
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-13 (13-27C1A)



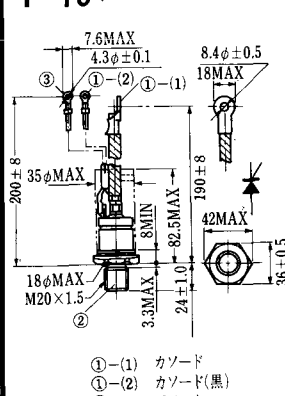
- 1-(1) カソード
- 1-(2) カソード(黒)
2. アノード
3. ゲート(白)

T-14 (13-32A1A)



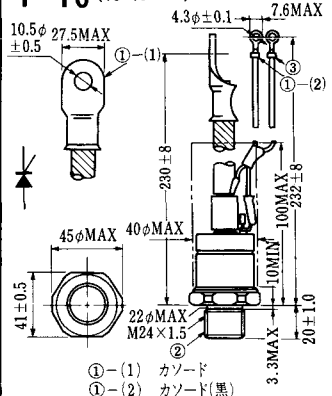
- 1-(1) カソード
- 1-(2) カソード(黒)
2. アノード
3. ゲート(白)

T-15 (13-35C1B)



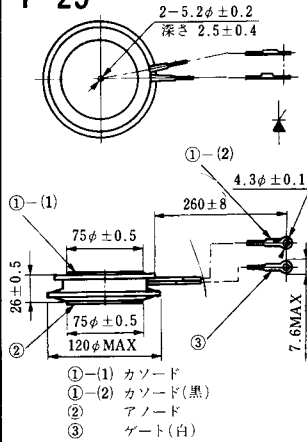
- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-16 (13-40B1A)

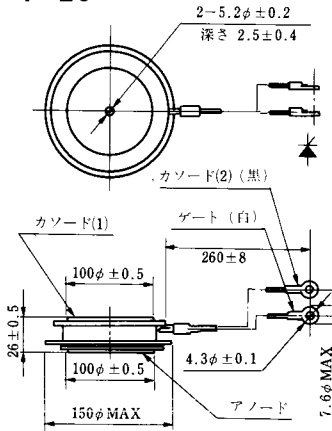


- ① (1) カソード
- ① (2) カソード(黒)
- ② アノード
- ③ ゲート(白)

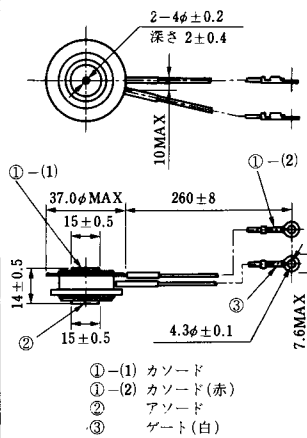
T-25 (13-120A2A)



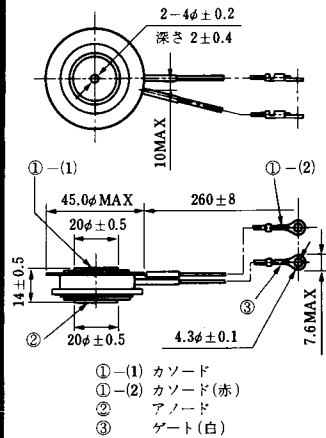
T-26 (13-150A1A)



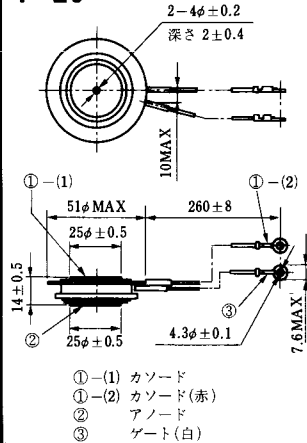
T-27 (13-37A1A)



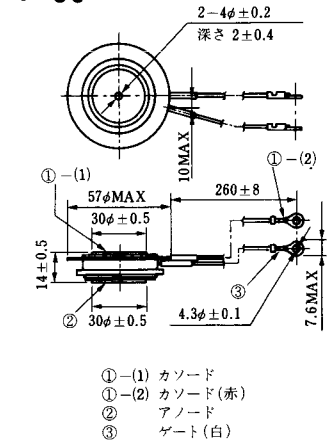
T-28 (13-45E1A)



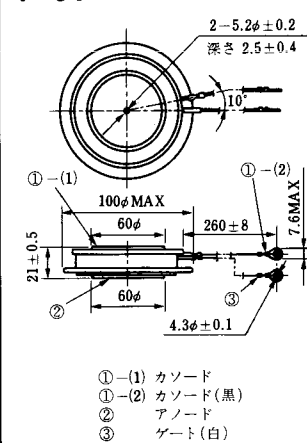
T-29 (13-51A1A)



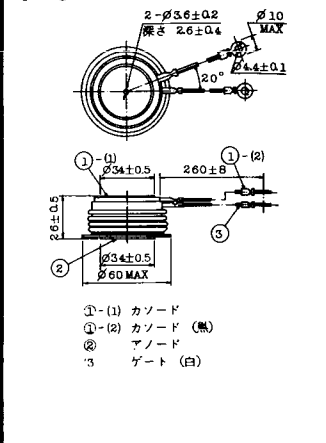
T-30 (13-57A1A)



T-31 (13-100E1A)



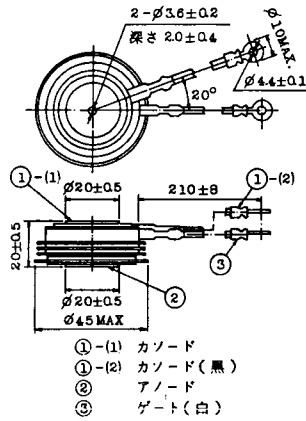
T-32 (13-60E3A)



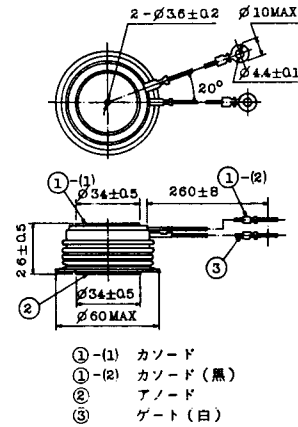
T-41 (13-28A2A)



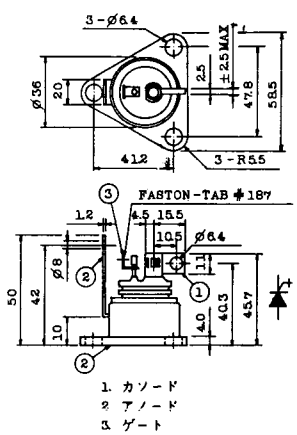
T-42 (13-45F1A)



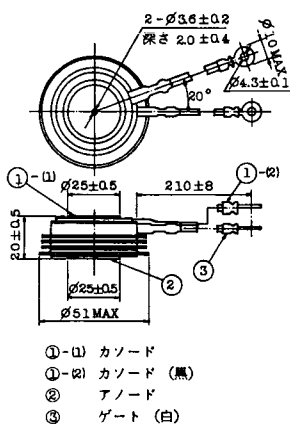
T-43 (13-60E2A)



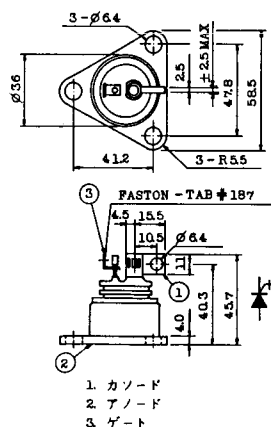
T-44 (13-36A1A)



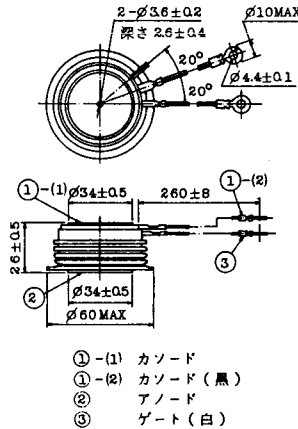
T-45 (13-51B1A)



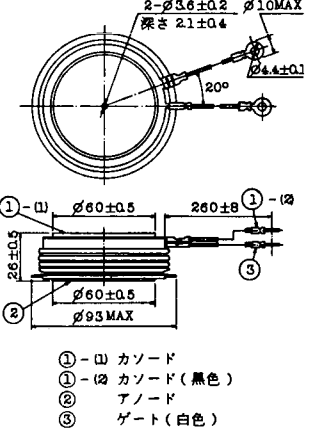
T-46 (13-36B1A)



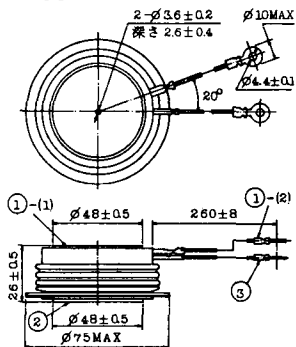
T-47 (13-60E1A)



T-48 (13-93C1A)

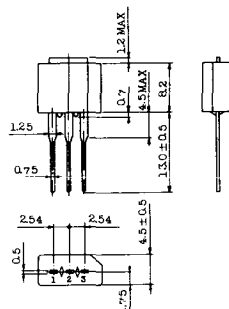


T-49 (13-75A1A)



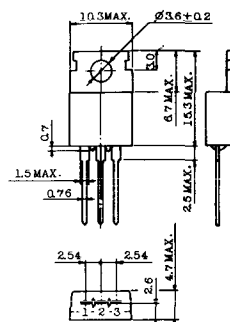
- 1-(1) カソード
- 1-(2) カソード(黒)
- 2 アノード
- 3 ゲート(白)

T-50 (13-10A3A)



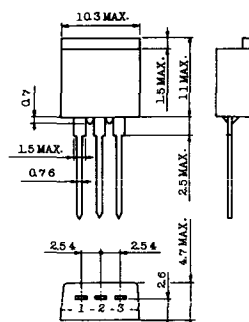
- 1 カソード
- 2 アノード
- 3 ゲート

T-51 (13-10D1A)



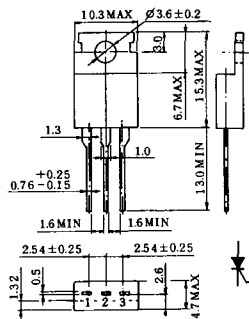
- 1 カソード
- 2 アノード
- 3 ゲート

T-52 (13-10D2A)



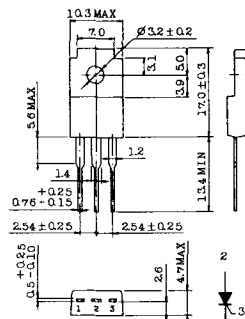
- 1 カソード
- 2 アノード
- 3 ゲート

T-53 (13-10E1B)



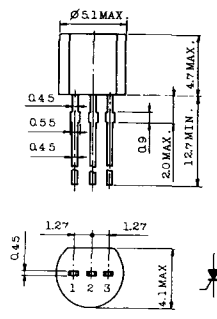
- 1 カソード
- 2 アノード
- 3 ゲート

T-54 (13-10F1B)



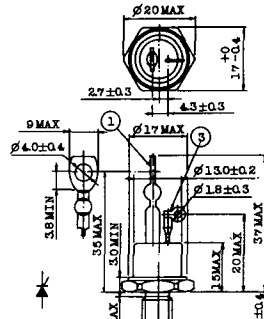
- 1 カソード
- 2 アノード
- 3 ゲート

T-55 (13-5A1D)



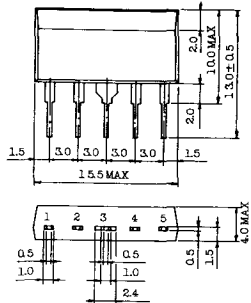
- 1 カソード
- 2 アノード
- 3 アノード

T-56 (13-13C1A)



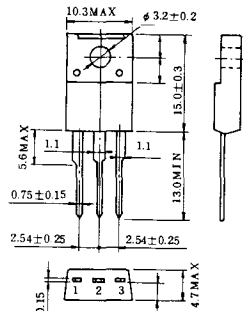
- 1 カソード
- 2 アノード
- 3 ゲート

T-57 (12-16C1A)



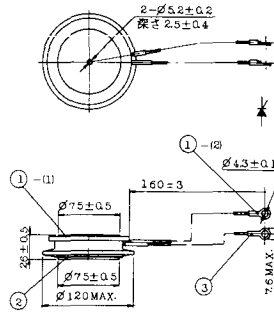
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



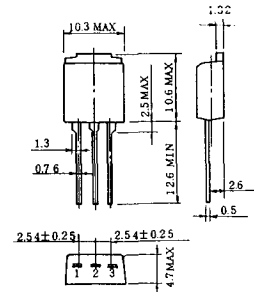
1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



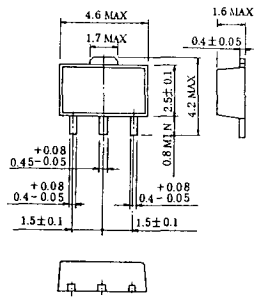
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



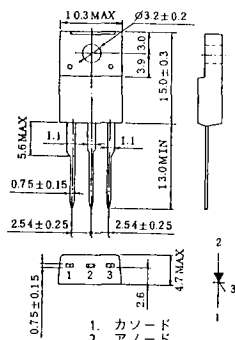
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



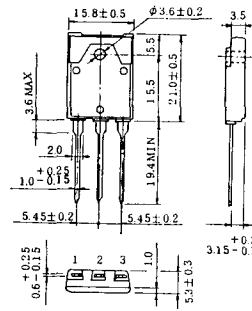
1. ゲート
2. アノード
3. カソード

T-62 (13-10H1A)



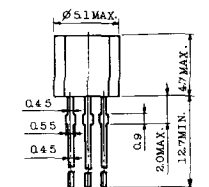
1. カソード
2. アノード
3. ゲート

T-63 (13-16A1B)



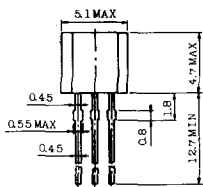
1. カソード
2. アノード
3. ゲート

TT-1



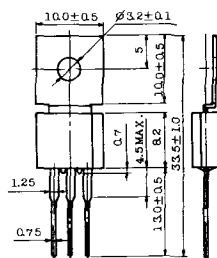
- 1 ゲート
- 2 T₂
- 3 T₁

TT-2



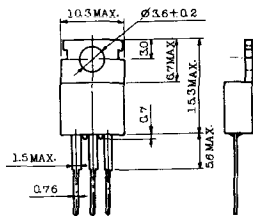
- 1 T₁
- 2 ゲート
- 3 T₂

TT-3



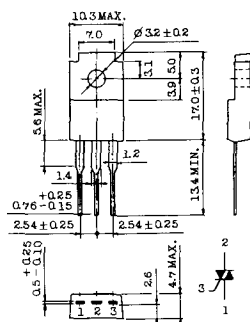
- 1 T₁
- 2 T₂
- 3 ゲート

TT-4



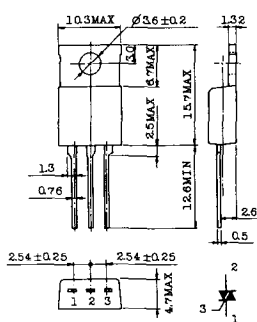
- 1 T₁
- 2 T₂
- 3 ゲート

TT-5



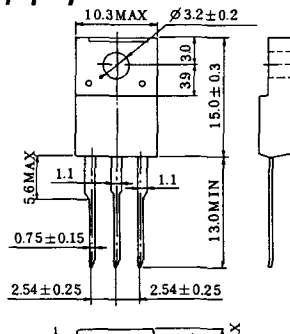
- 1 T₁
- 2 T₂
- 3 ゲート

TT-6



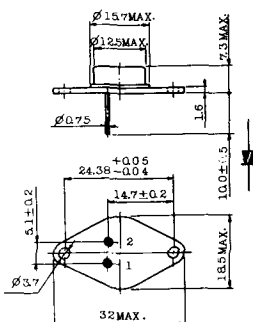
- 1 T₁
- 2 T₂ (放熱板)
- 3 ゲート

TT-7



- 1 T₁
- 2 T₂
- 3 ゲート

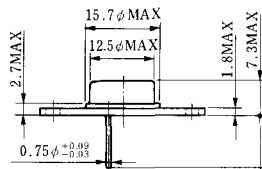
TT-8



- 1 ゲート
- 2 T₁
- T₂ (ケース)

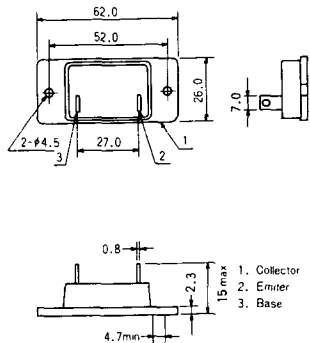


TS-8

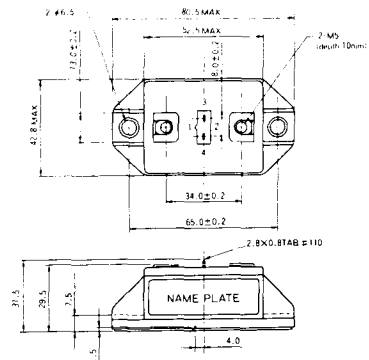


- 1. ベース
- 2. エミッタ
コレクタ
(ケース)

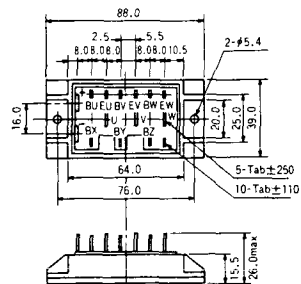
S-62A1A



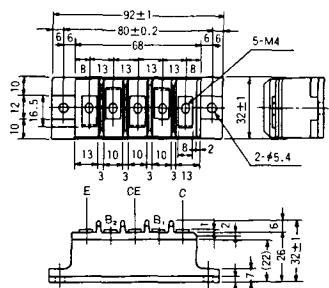
S-80A1A



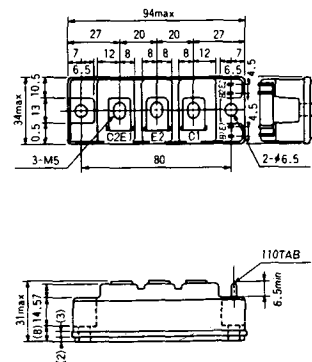
S-88D1A



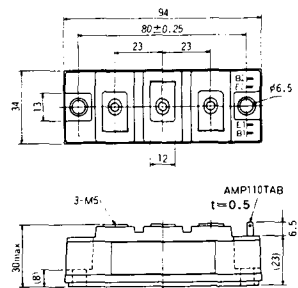
S-92B1A



S-94B1A



S-94B1B



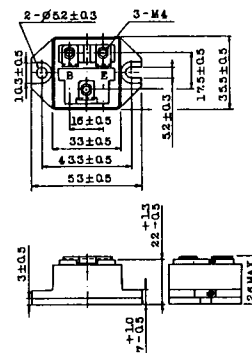
2-22B1A



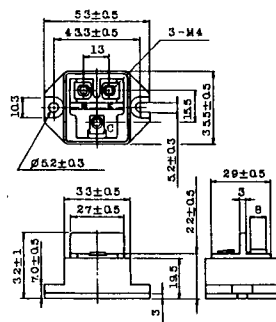
2-27A4A



2-33C1A



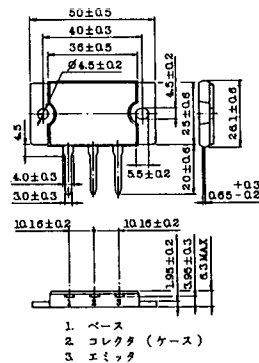
2-33D1A



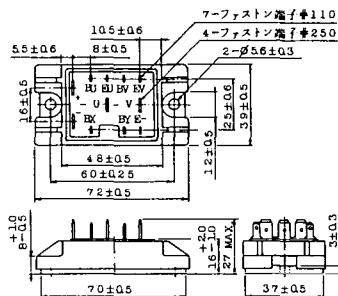
2-33F1A



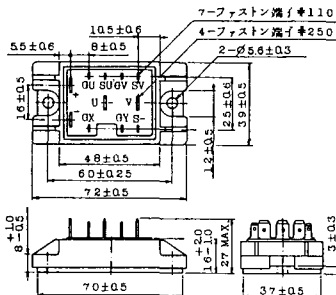
2-37A1A



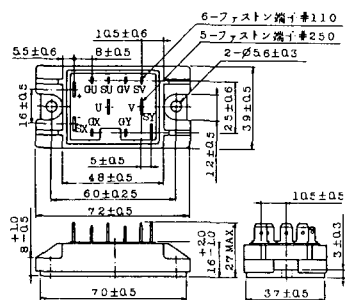
2-48A3A



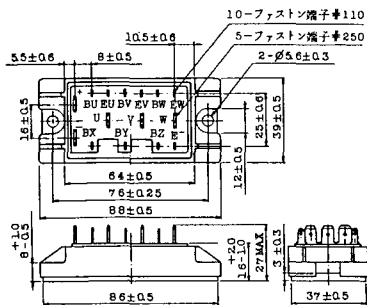
2-48A3B



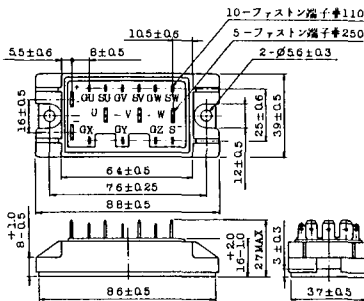
2-48A4A



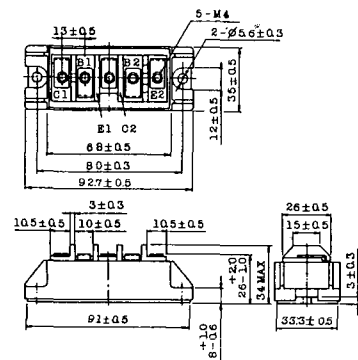
2-64A2A



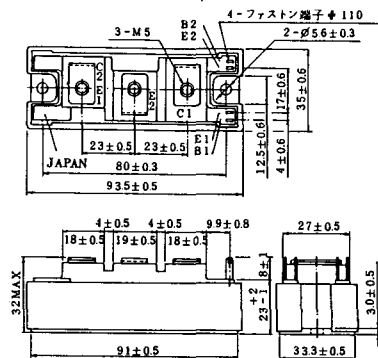
2-64A2B



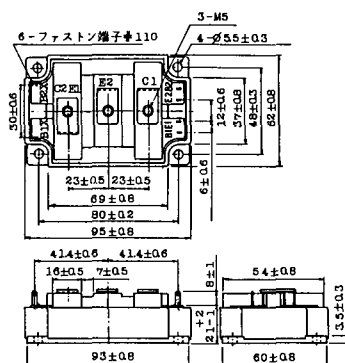
2-68A2A



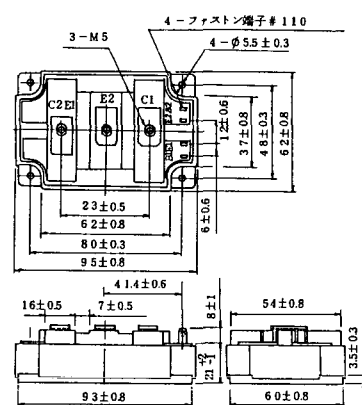
2-94D1A



2-96A3A



2-96A4A



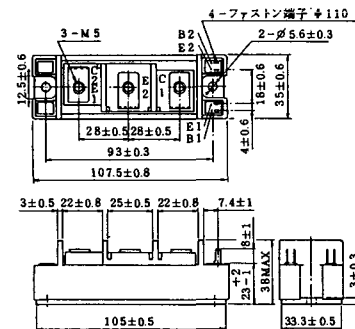
2-98B1A



2-98C2A



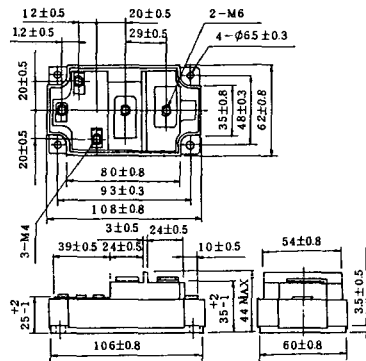
2-108A2A



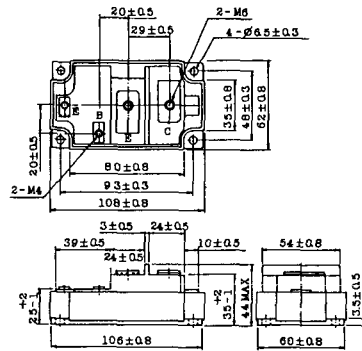
2-108B1A



2-109A3A



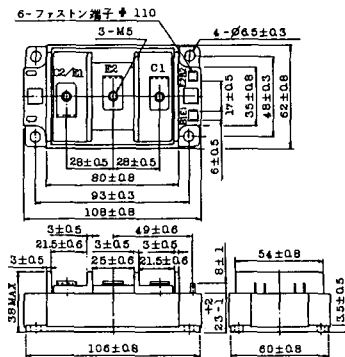
2-109A4A



2-109B3A

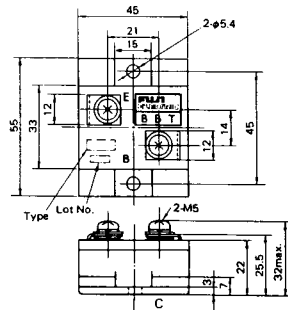


2-109B4A



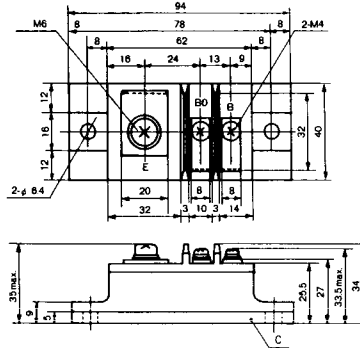
BBT-II

BBTII
1D200A-020



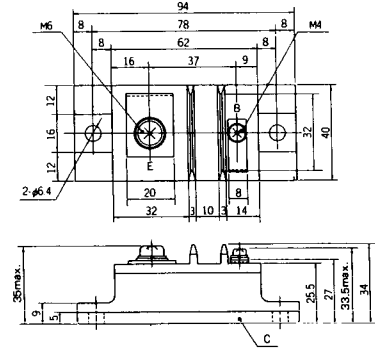
BBT-III

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



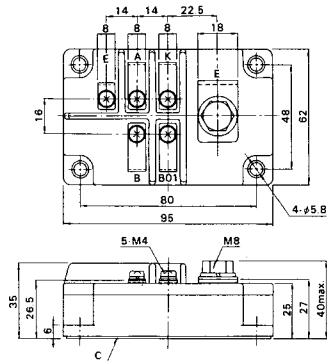
BBT-III

BBTIII
ETN01-055
ET1257

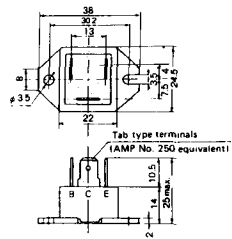


BBT-IV

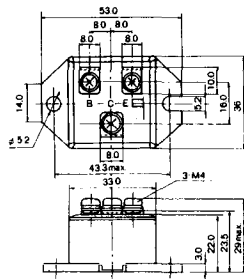
BBTIV
1D500A-030



M-101



M-102



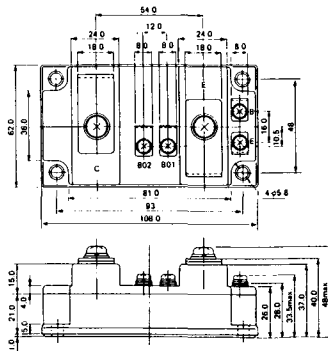
M-103



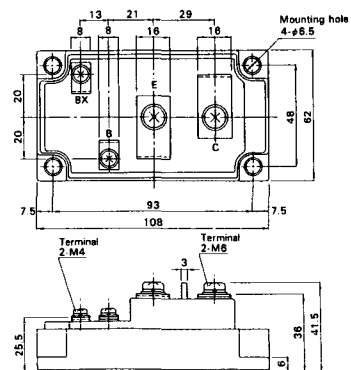
M-104



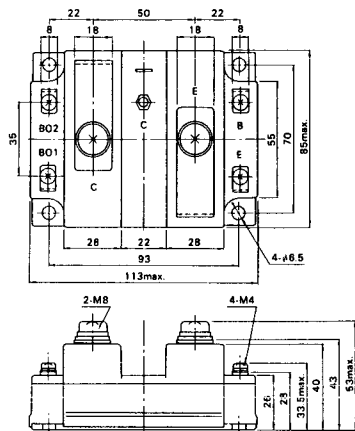
M-105



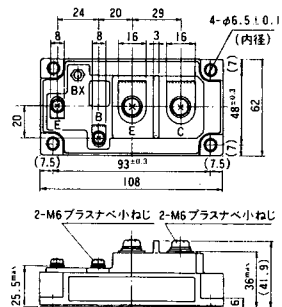
M-106



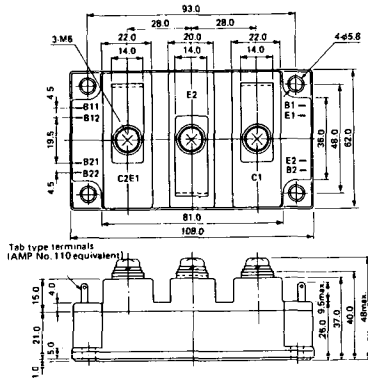
M-107



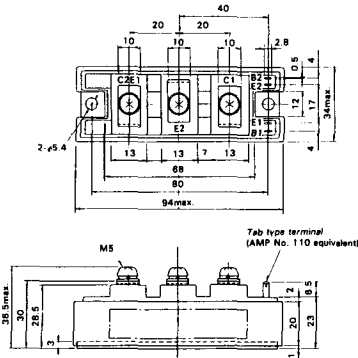
M-116



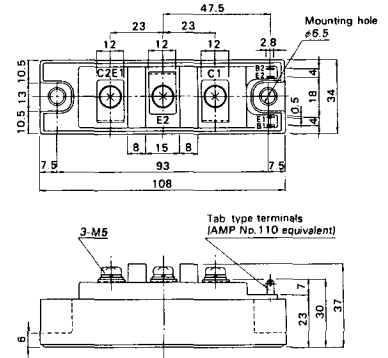
M-207



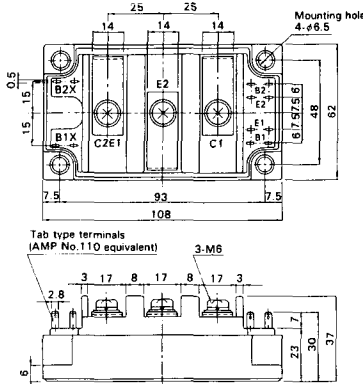
M-208



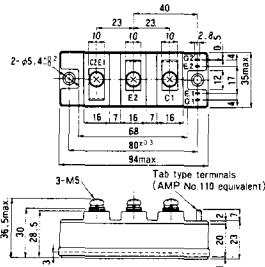
M-209



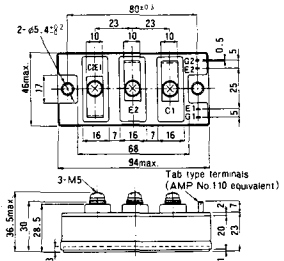
M-210



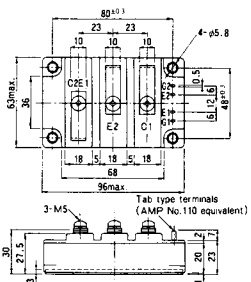
M-211



M-212

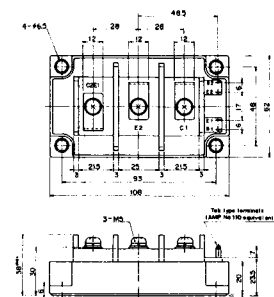


M-213

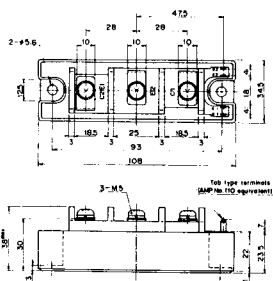


M-214

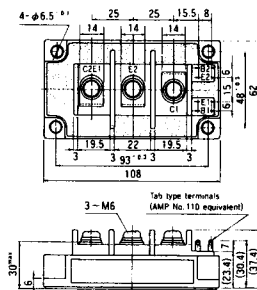
M-215



M-216



M-217



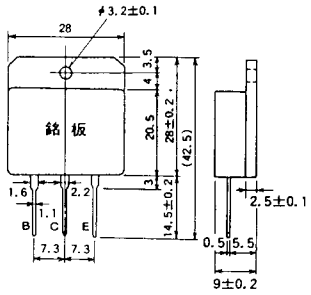
M-218



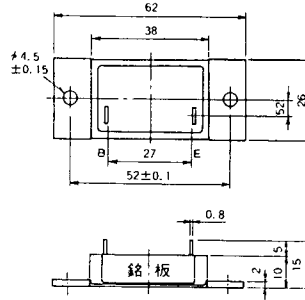
M-219



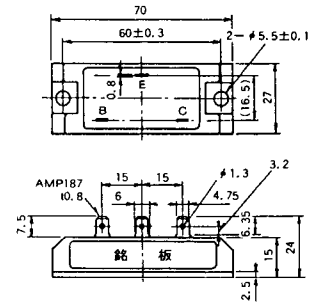
M-1A1A



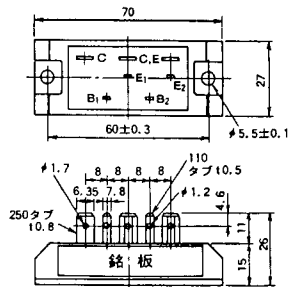
M-2A1A



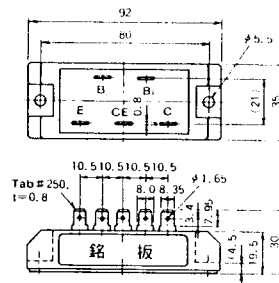
M-2B1A



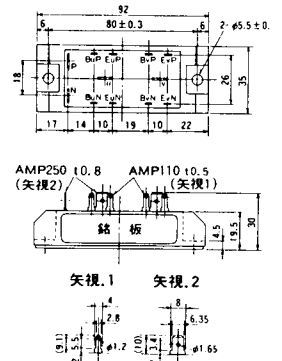
M-2B2A



M-2C2A



M-2D4A



M-3C1A



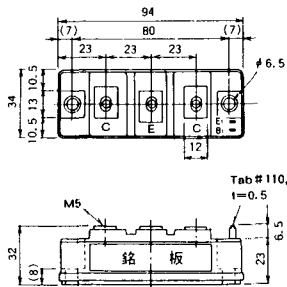
M-3D6A



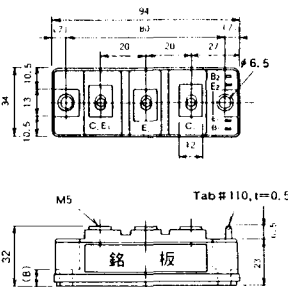
M-3E6A



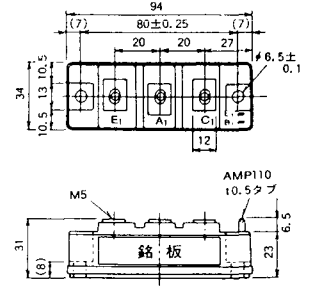
M-4A1A



M-4A2A



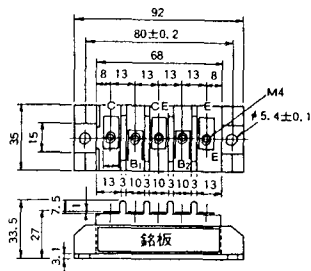
M-4A1B



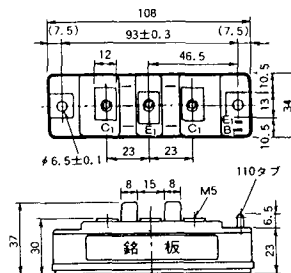
M-4A2B



M-4B2A



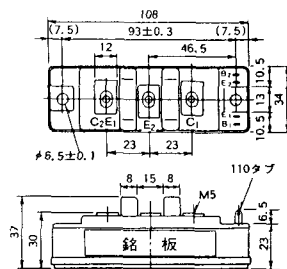
M-5A1A



M-5A1B



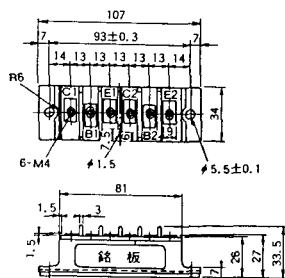
M-5A2A



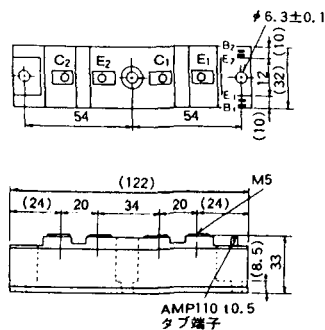
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M-5C2A



M-5D2A



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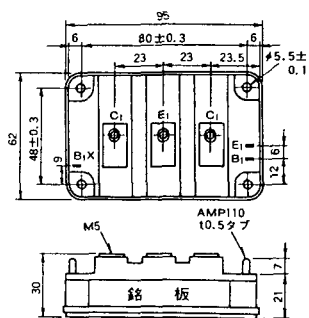
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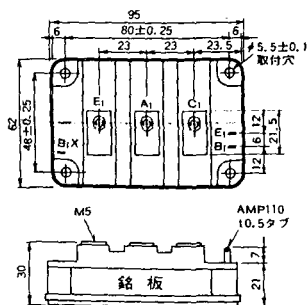
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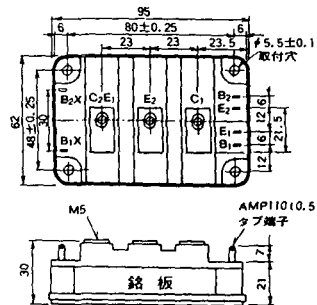
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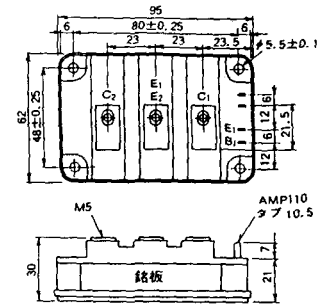
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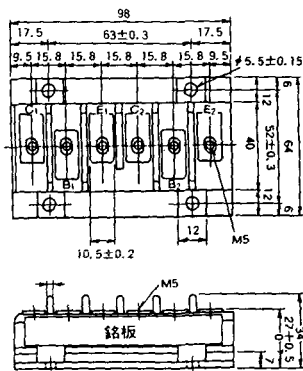
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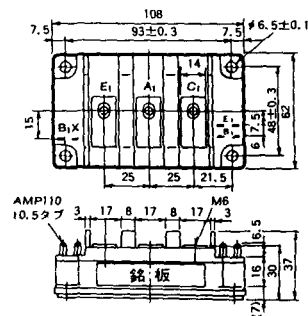
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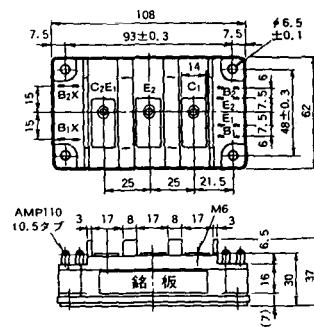
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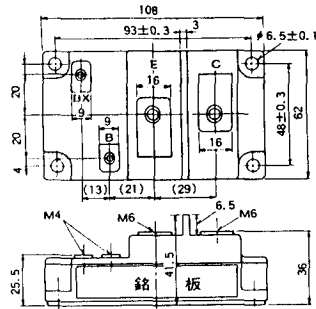
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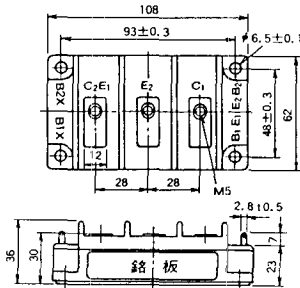
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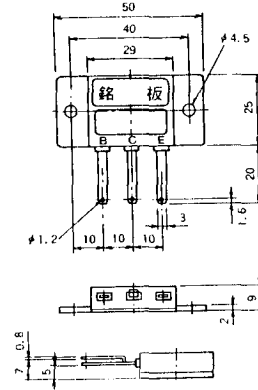
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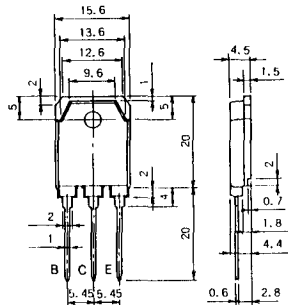
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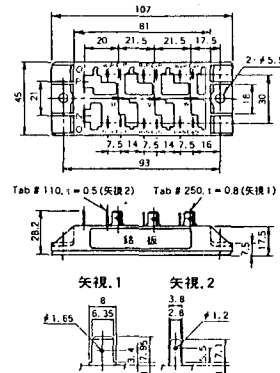
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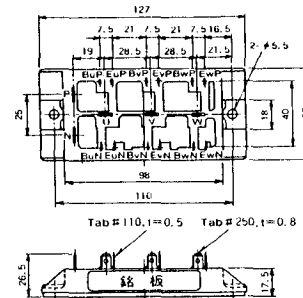
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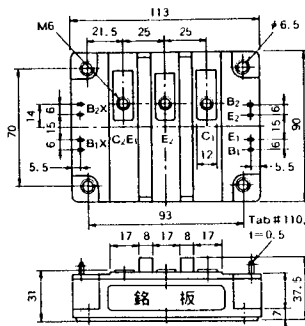
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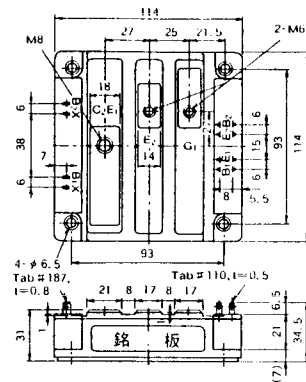
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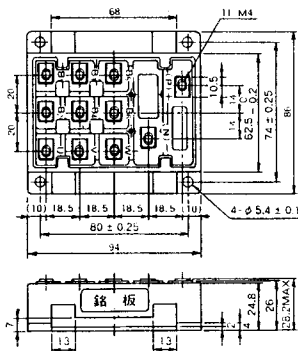
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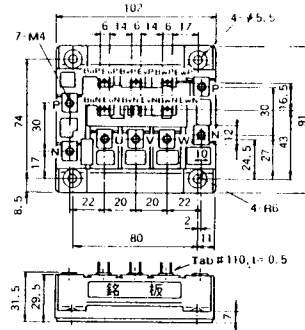
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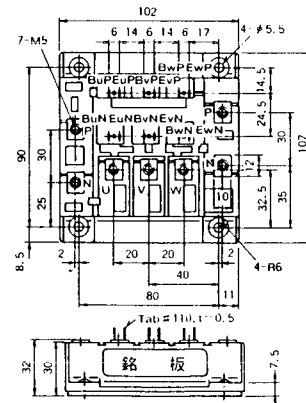
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M-12B6A



M-12B6B



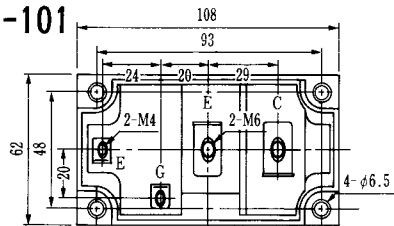
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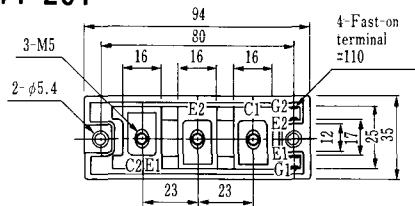


H-101



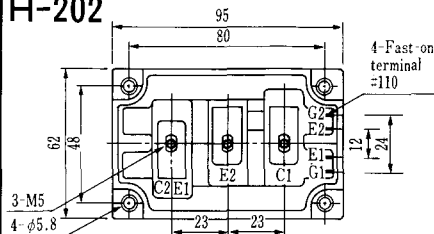
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H-201



Weight: 200g

H-202



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LF-J



LF-K

