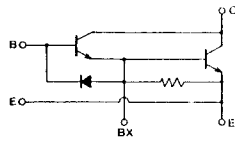
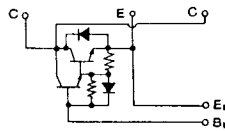


トランジスタ・モジュール (NPN, 1アーム)

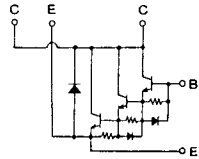
HD 1A



HY-1A



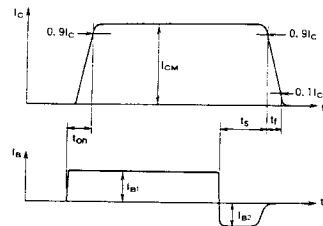
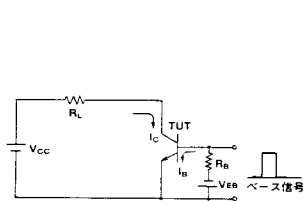
HY-2A



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) (注1)	V_{EBO}	I_c	I_B	I_F	I_{FM} (注2)	P_c (注3)	T_c	$T_{c,reg}$	$V_{I,so}$ (注4)	I_{CEX}		I_{ERO}		V_{CBO} (SUS)		h_{FE}			
	(V)	(V)	(V)	(A)	(A)	(A)	(A)	(W)	($^\circ C$)	($^\circ C$)	(V)	最大	V_{CE} (V)	V_{EB} (V)	最大	V_{EB} (V)	最小	I_c (A)	最 小	V_{CE} (V)	I_c (A)
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-1A	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

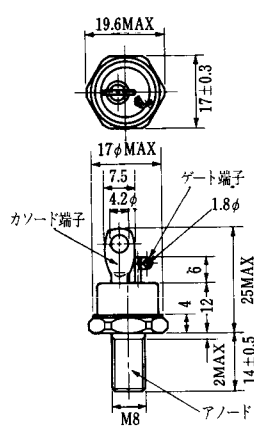
FD-1



FD-2



FD-3



FD-4



FD-5



FD-6



FD-7



FD-8



FD-9



FD-10

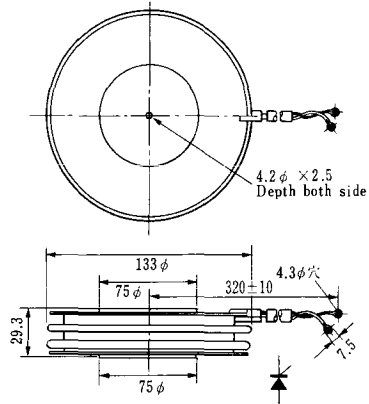


FD-12





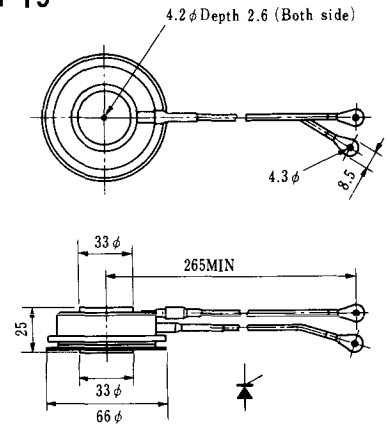
H-17



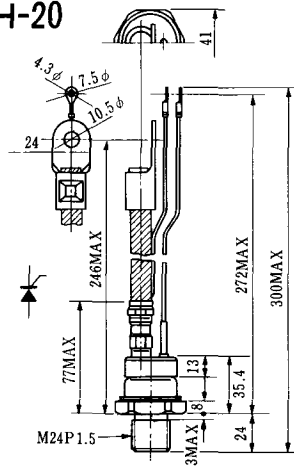
H-18



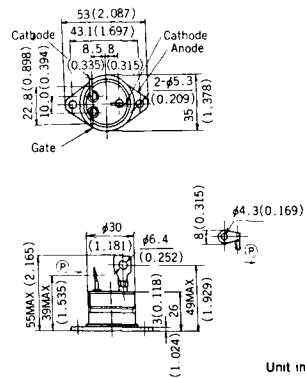
H-19



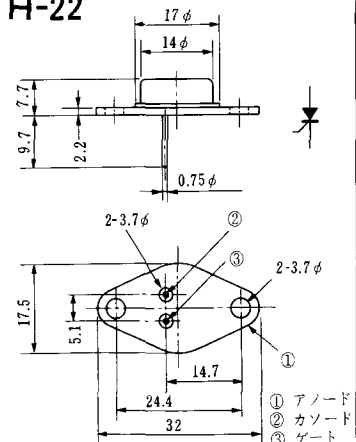
H-20



H-21



H-22

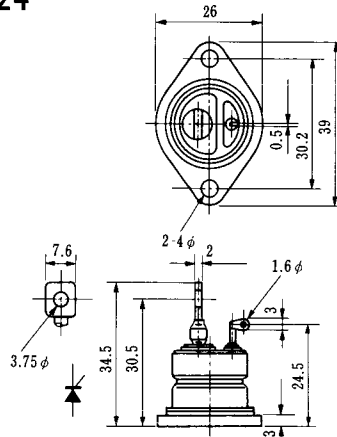


H-23

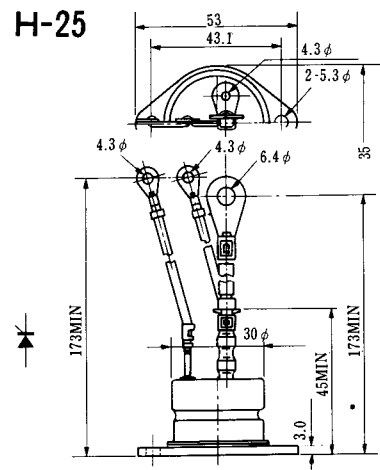


① アノード
② カソード
③ ゲート

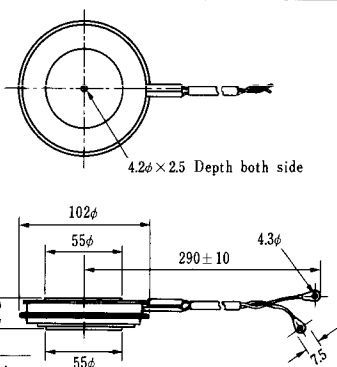
H-24



H-25



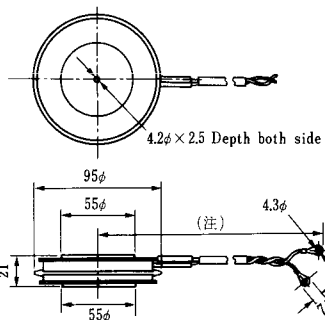
H-26



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

CA12	
------	--

H-27

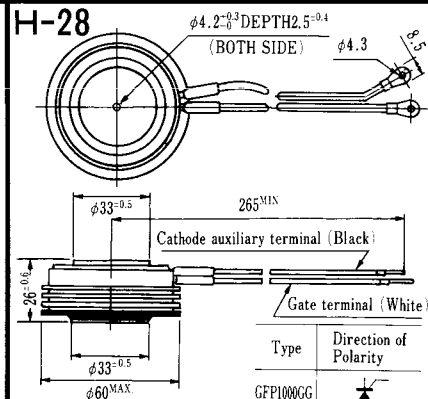


Type	Direction of polarity
------	-----------------------

CF11V	
-------	--

(注) CC11V : 400 ± 10
CF11V : 250 ± 10

H-28



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

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

Weight: 360(g)

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



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



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

M-1



M-2



M-3



M-4



M-5



M-6



M-7



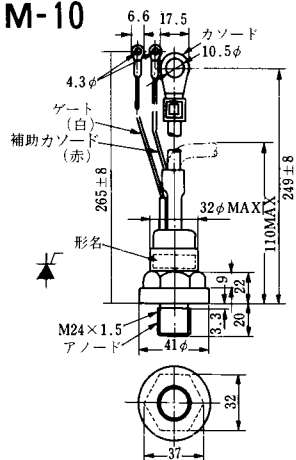
M-8



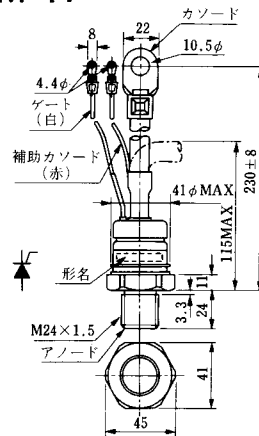
M-9



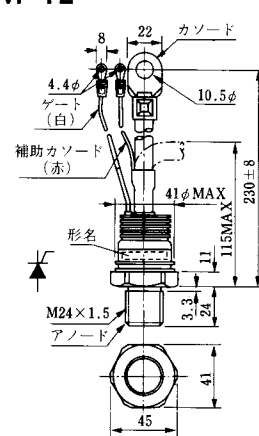
M-10



M-11



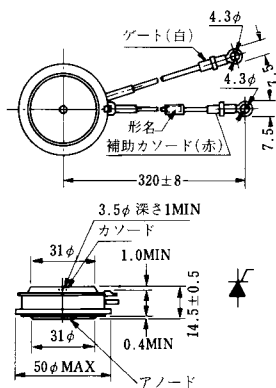
M-12



M-13



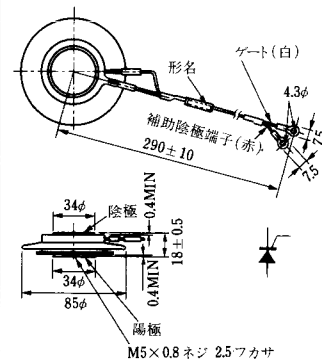
M-14



M-15



M-16





M-25



M-26



M-27



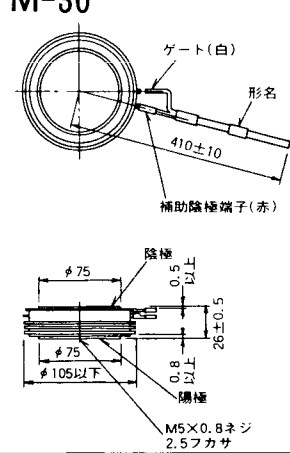
M-28



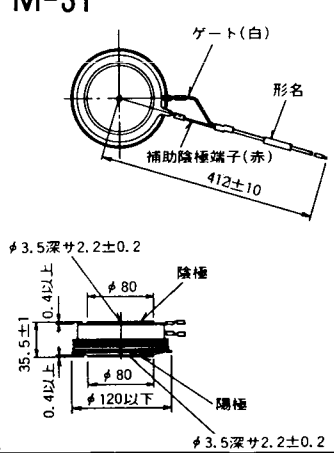
M-29



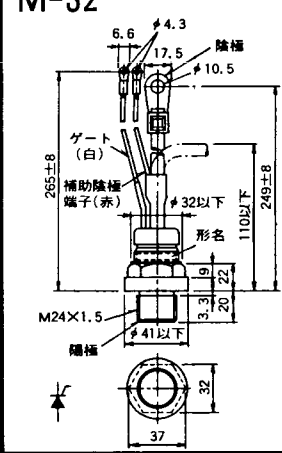
M-30



M-31



M-32



M-33



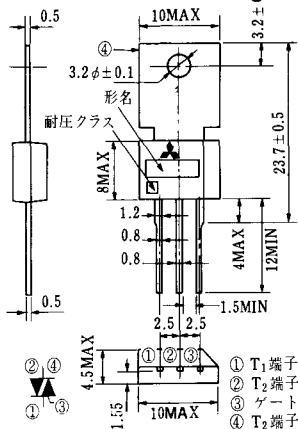
M-34



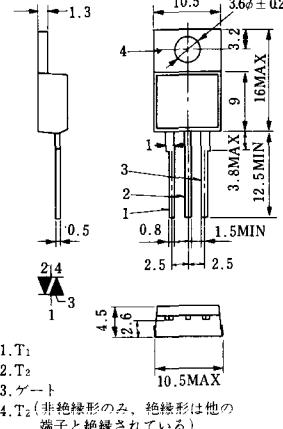
MT-1



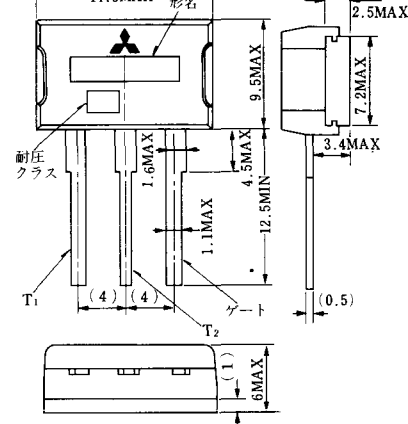
MT-2



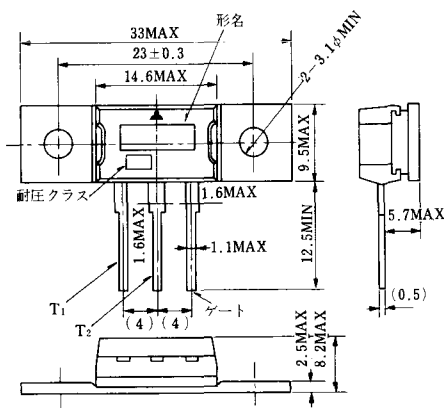
MT-3



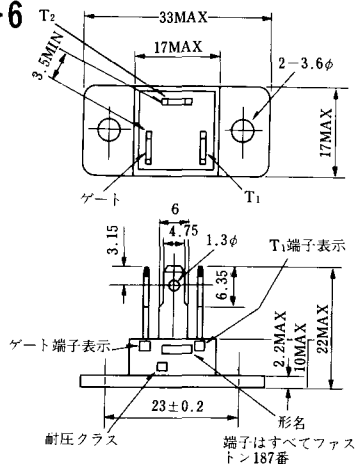
MT-4



MT-5



MT-6



MT-7

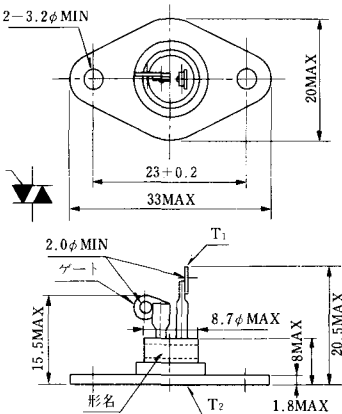


1. T₁
2. T₂
3. ゲート
4. T₂ (非絶縁形のみ、絶縁形は他の端子と絶縁されている)

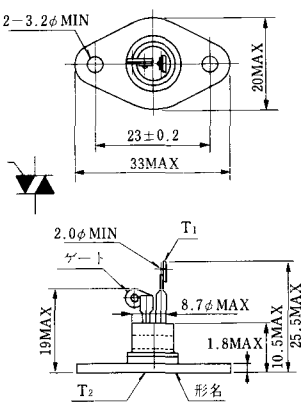
MT-8



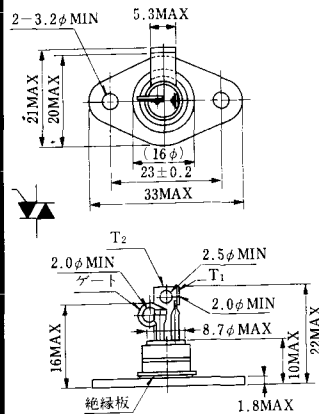
MT-9



MT-10



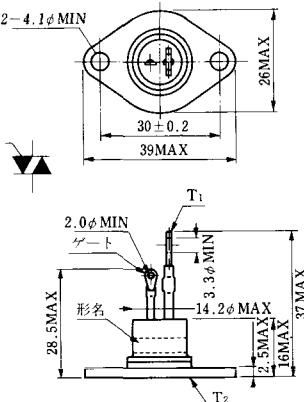
MT-11



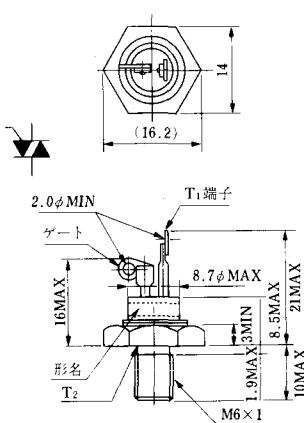
MT-12



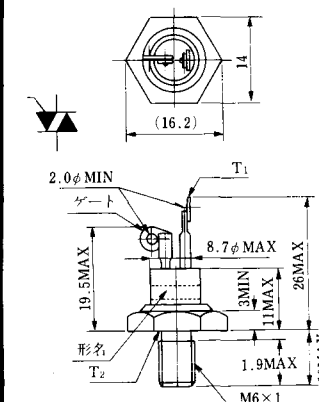
MT-13



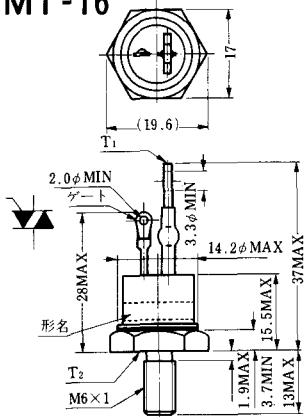
MT-14



MT-15



MT-16

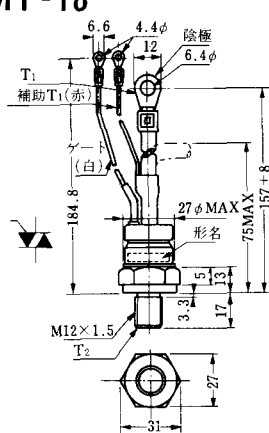


MT-17

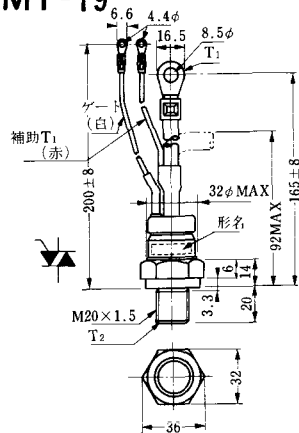


端子詳細図

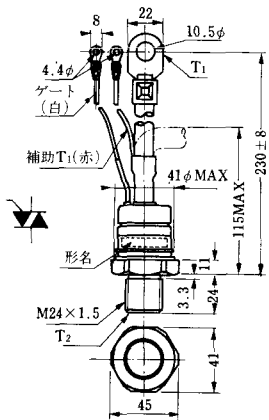
MT-18



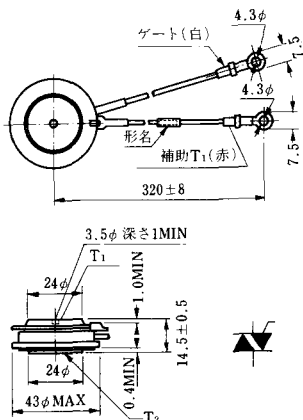
MT-19



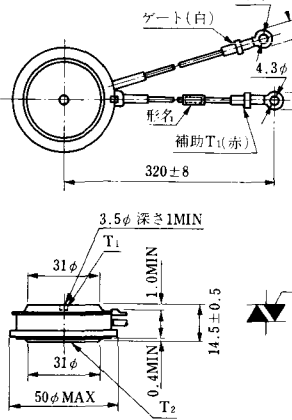
MT-20



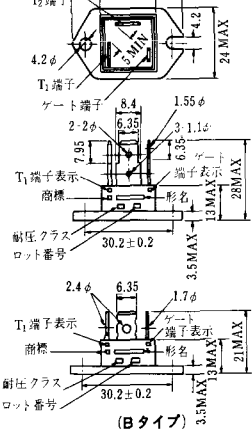
MT-21



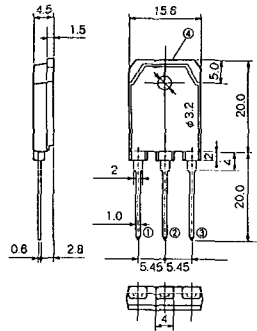
MT-22



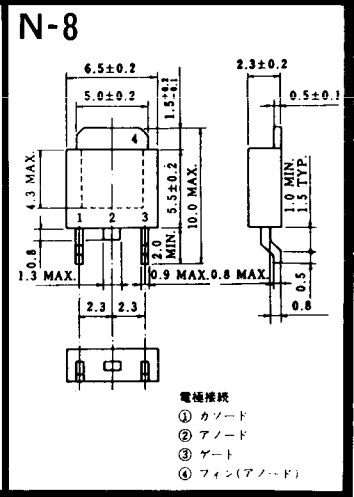
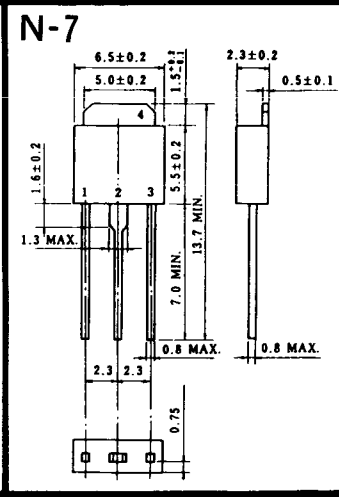
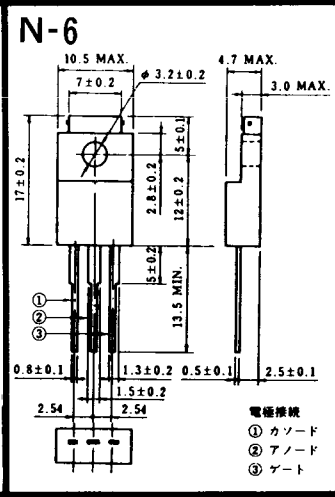
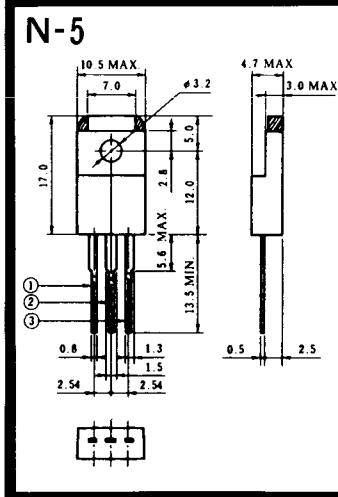
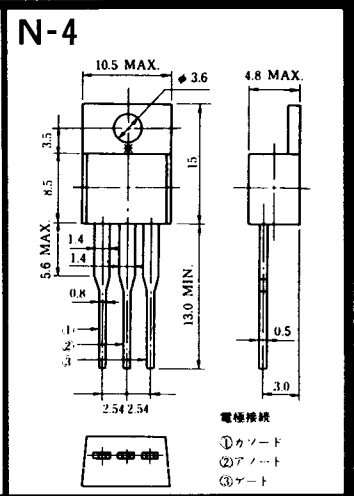
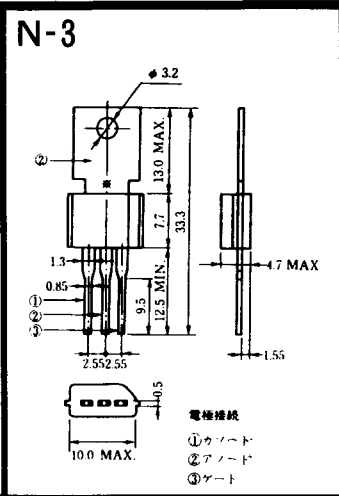
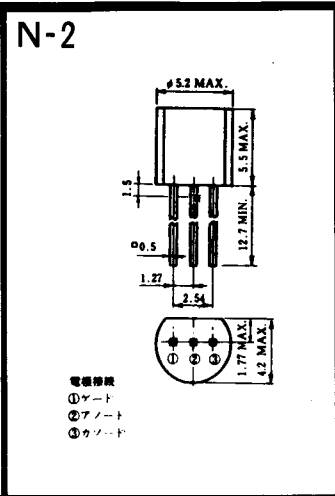
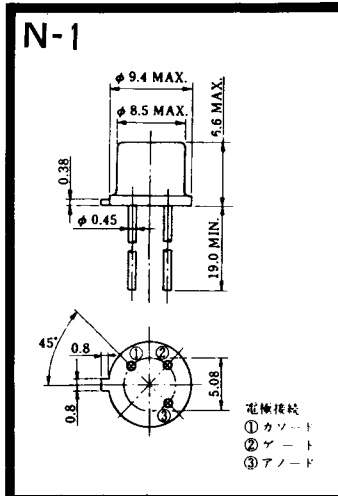
MT-23



MT-24



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



N-9



電極接続

K : カソード

A : アノード

G : ゲート

NI-1



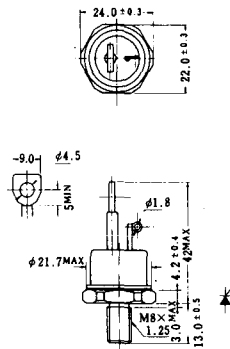
NI-2

29RD



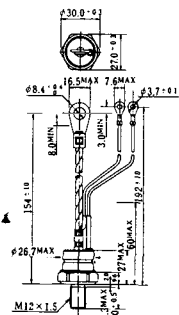
NI-3

39RC
59RC
39RF
59RF



NI-4

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



NI-5

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



NI-6

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



NI-7

89RW_{JL}
129RW_{JL}



NI-8

89RW
129RW



NI-9

259RW
309RW



NI-10

259RW_{JL}
309RW_{JL}



NI-11

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



型名	103PA, 103PLE, 103PLG, 103PLH	253PA, 203PLG, 253PLE, 253PLH	503PA, 553PA, 353PLG, 403PLE, 403PLH	803PA
寸法 A	40	46	55.5	55.5
寸法 B	16	22	30	32
寸法 C	36	42	50.5	50.5

NI-12

403PAB
503PAB
503PLB



NI-13

1003PA
1003PAB
1003PLF
1003PLH
1503PA



NI-14

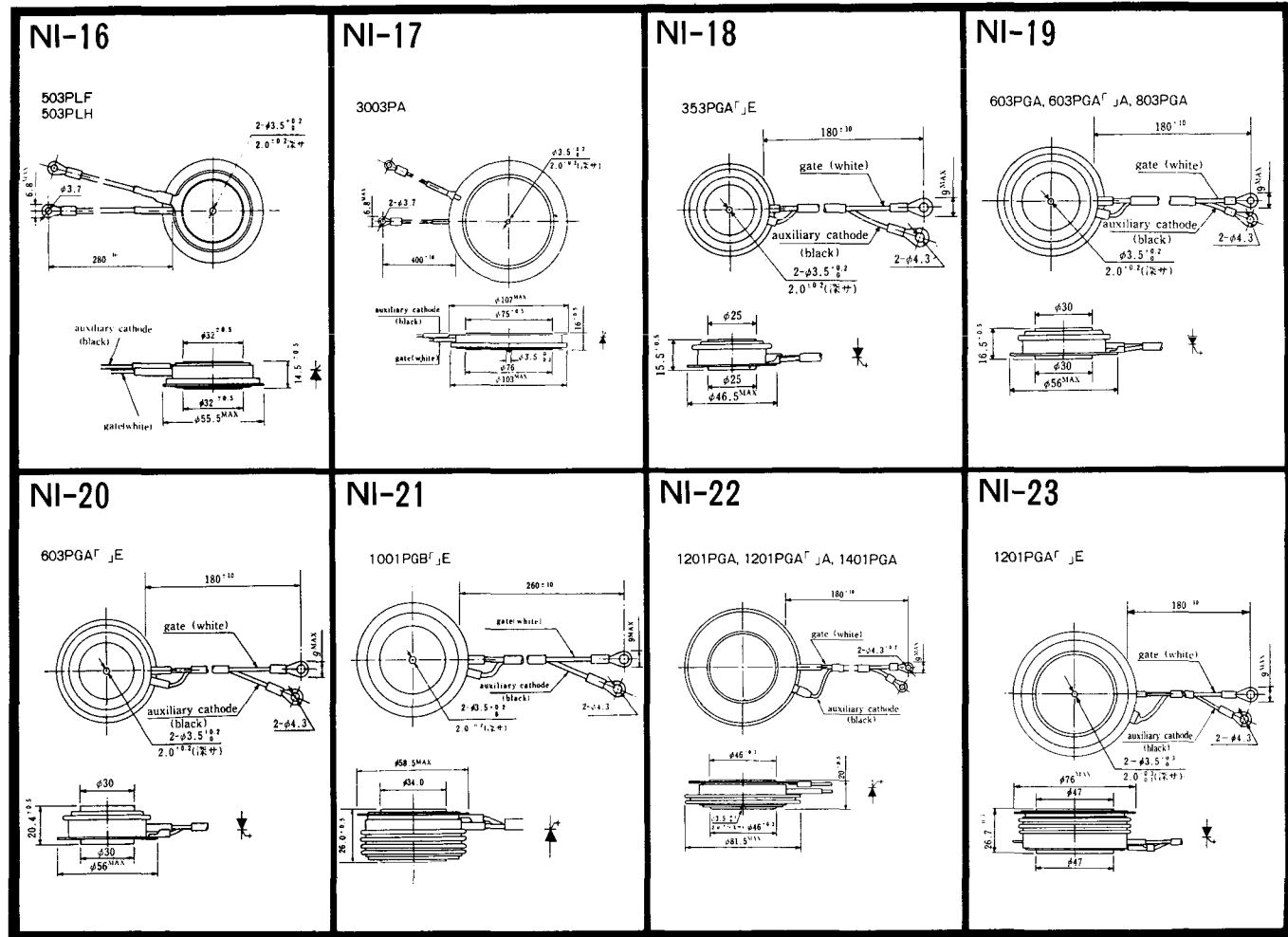
358RGA



NI-15

359RGA





NI-24

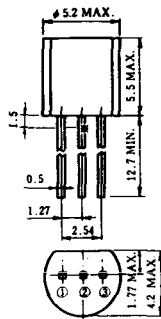
2001PGB^r JE



NI-25

NI-26

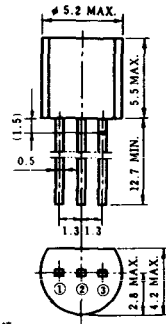
NT-1



電極接続

- ① T₁
- ② ゲート
- ③ T₂

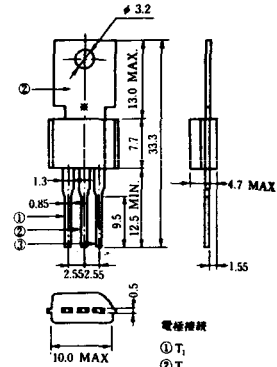
NT-2



電極接続

- ① T₁
- ② ゲート
- ③ T₂

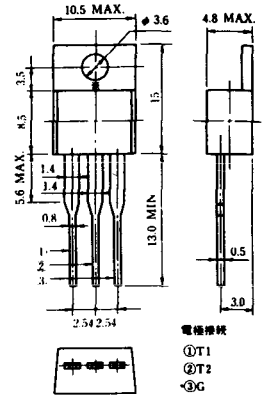
NT-3



電極接続

- ① T₁
- ② T₂
- ③ ゲート

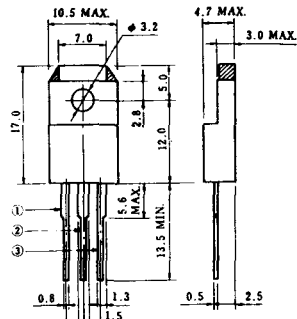
NT-4



電極接続

- ① T₁
- ② T₂
- ③ G

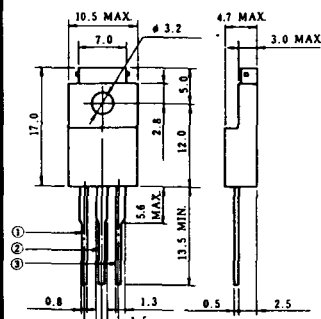
NT-5



電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

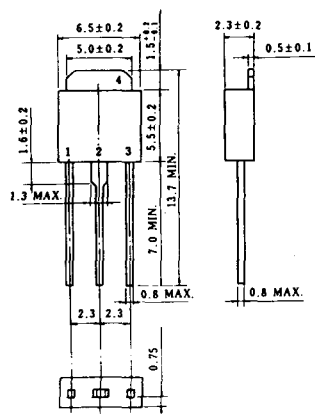
NT-6



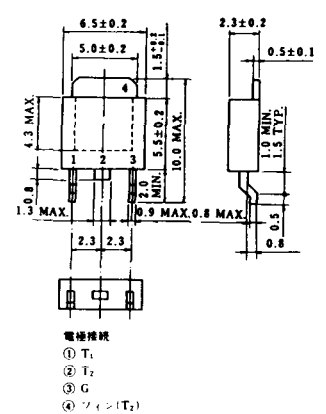
電極接続
トライアック

- ① T₁
- ② T₂
- ③ ゲート

NT-7



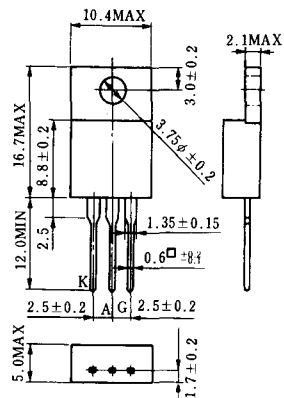
NT-8



電極接続

- ① T₁
- ② T₂
- ③ G
- ④ シフト(T₂)

S-1



ST-1



SA-1



SA-2



SA-3



SA-4



SA-5



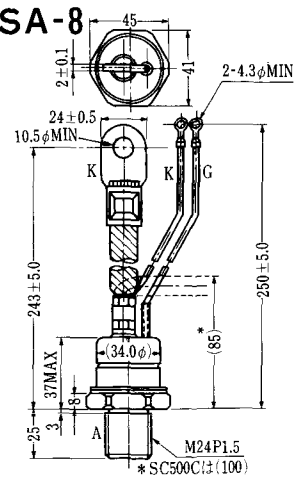
SA-6



SA-7



SA-8



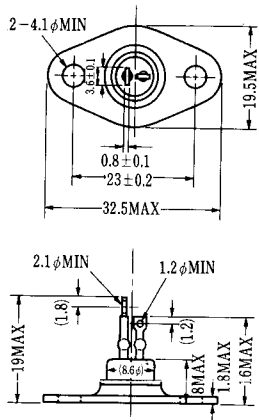
SA-9



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



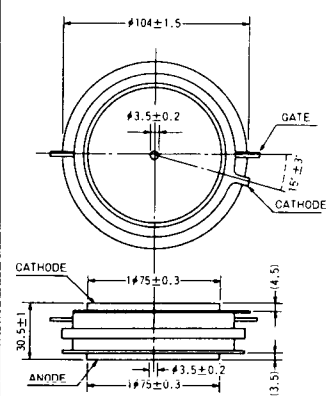
SA-10



SA-11



SA-12



SAT-10



SAT-11

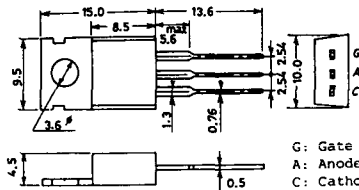


SY-1 (1096A)



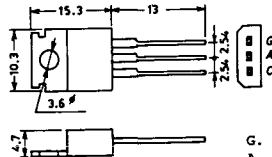
C: Cathode
A: Anode
G: Gate

SY-2 (1151)



G: Gate
A: Anode
C: Cathode

SY-3 (1104)



G: Gate
A: Anode
C: Cathode

SY-4 (1150)



G: Gate
A: Anode
C: Cathode

1097A

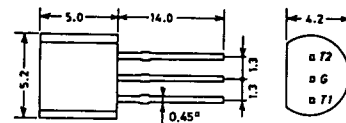


G: Gate

1102



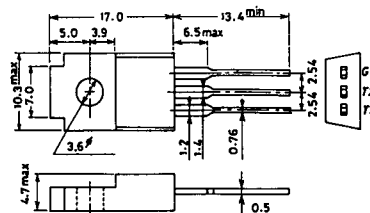
1141



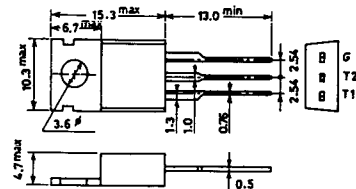
1142



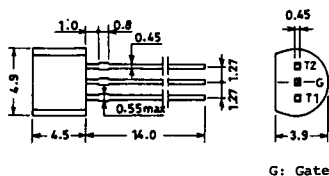
1144



1155



1192A



G: Gate

T-1 (13-5A1A)



- 1 ゲート
- 2 アノード
- 3 カソード

T-2 (13-8A1A)



1. カソード
2. ゲート
3. アノード(ケース)

T-3 (13-8C1A)



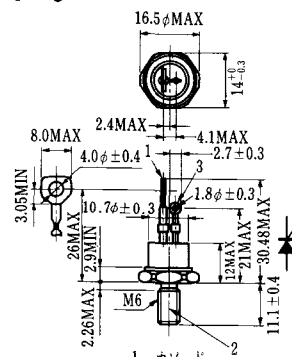
- 1 カソード
- 2 アノード
- 3 ゲート

T-5 (13-10B1A)



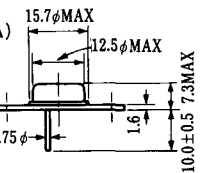
- 1 カソード
- 2 アノード
- 3 ゲート

T-6 (13-11D1A)



- 1 カソード
- 2 アノード
- 3 ゲート

T-7 (13-13A1A)



1. ゲート
2. カソード
3. アノード(ケース)

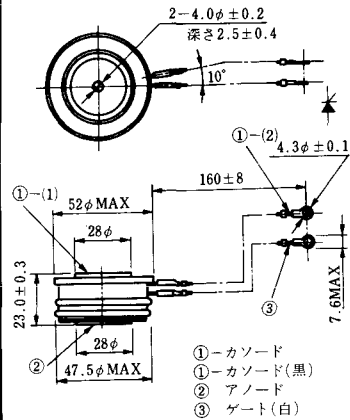
T-17 (13-42A1A)



T-18 (13-45D1A)



T-19 (13-52B1A)



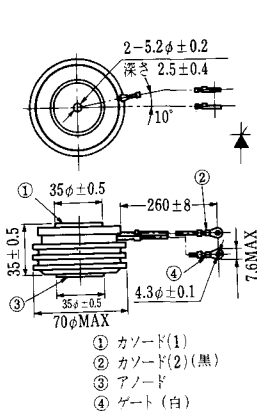
T-20 (13-52C1A)



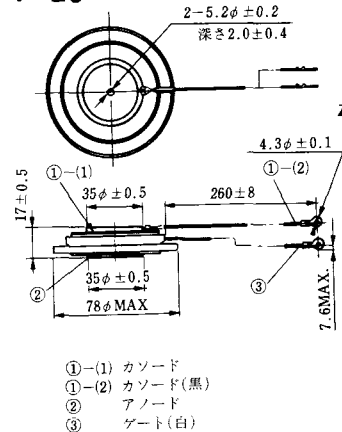
T-21 (13-60A1A)



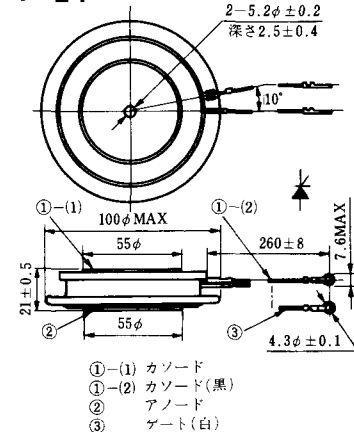
T-22 (13-70C1A)



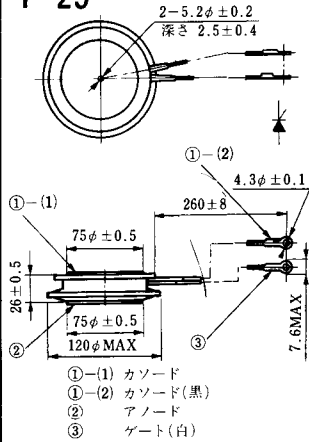
T-23 (13-78A1A)



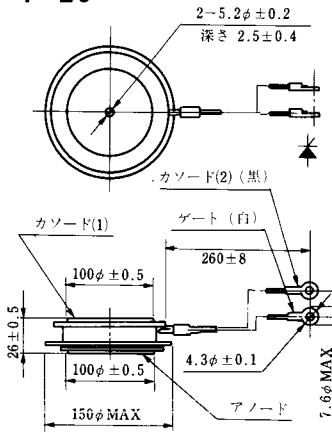
T-24 (13-100C1A)



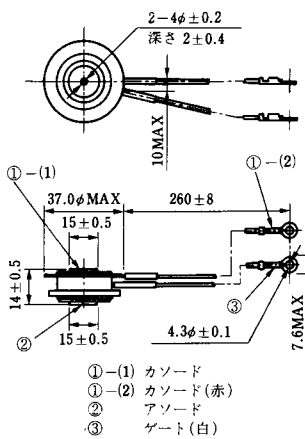
T-25 (13-120A2A)



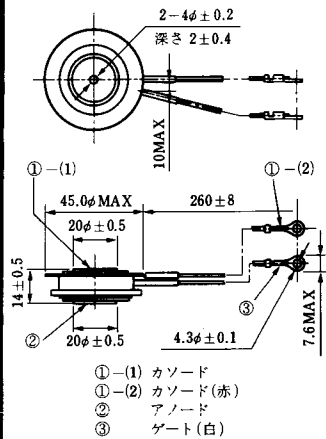
T-26 (13-150A1A)



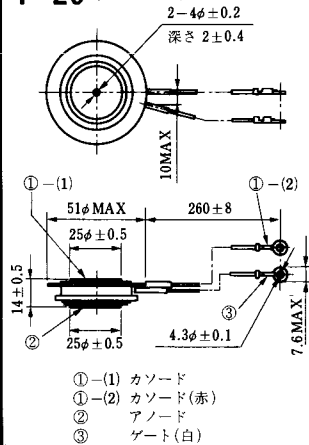
T-27 (13-37A1A)



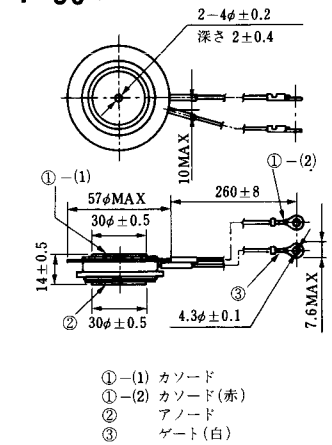
T-28 (13-45E1A)



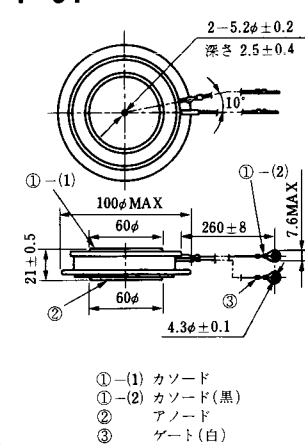
T-29 (13-51A1A)



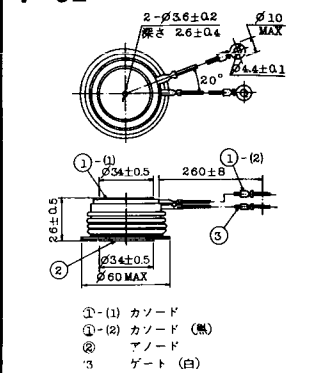
T-30 (13-57A1A)



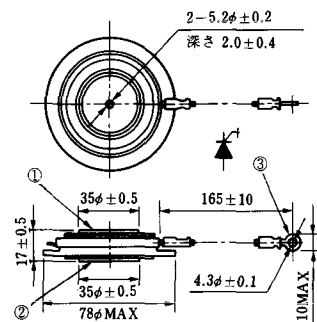
T-31 (13-100E1A)



T-32 (13-60E3A)

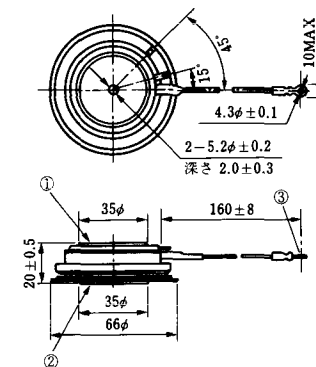


T-33 (13-78B1A)



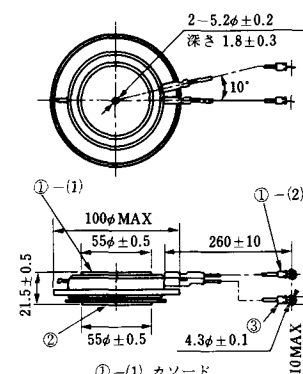
- ① カソード
- ② アノード
- ③ ゲート

T-34 (13-66A1A)



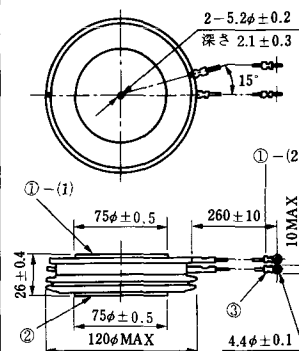
- ① カソード
- ② アノード
- ③ ゲート

T-35 (13-100D1A)



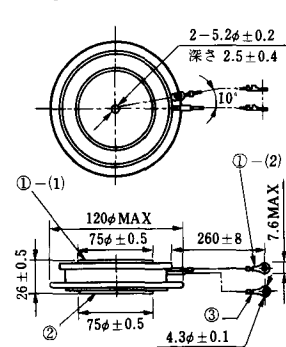
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-36 (13-120E1A)



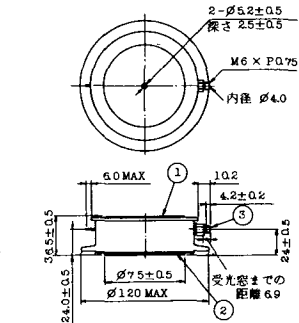
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-37 (13-120A1A)



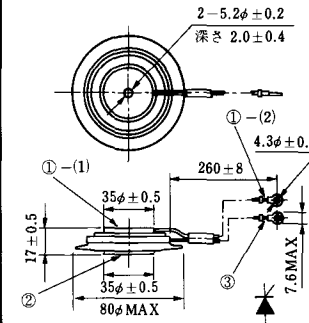
- ①-(1) カソード
- ①-(2) カソード(黒)
- ② アノード
- ③ ゲート(白)

T-38 (13-120C1A)



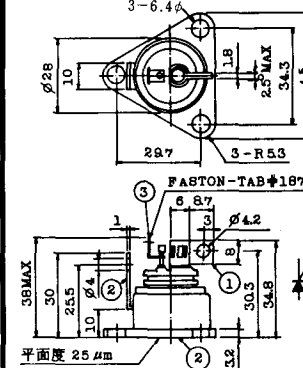
- ① カソード
- ② アノード
- ③ ゲート

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)

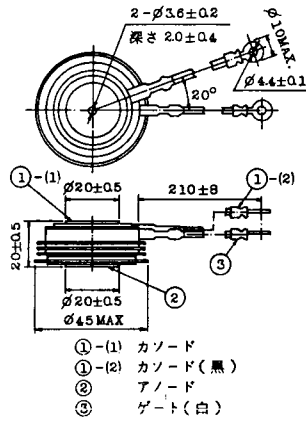


- 1. カソード
- 2. アノード
- 3. ゲート

T-41 (13-28A2A)



T-42 (13-45F1A)



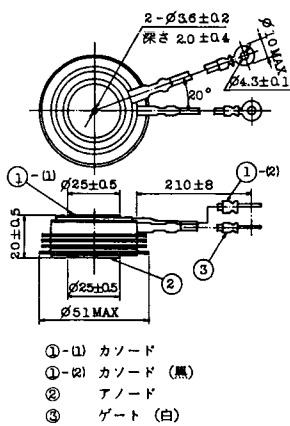
T-43 (13-60E2A)



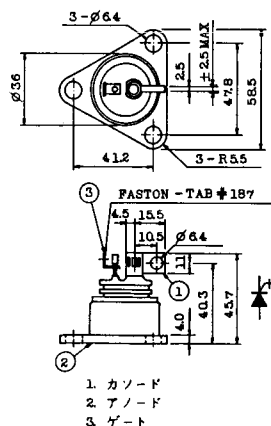
T-44 (13-36A1A)



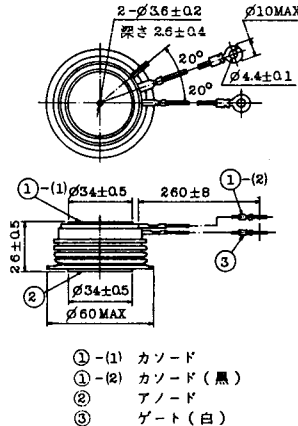
T-45 (13-51B1A)



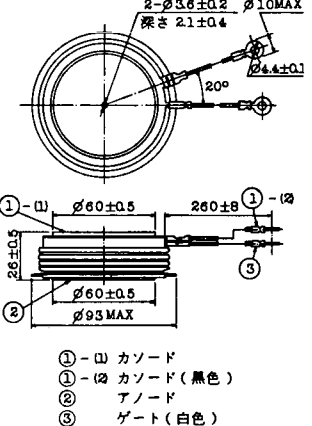
T-46 (13-36B1A)



T-47 (13-60E1A)



T-48 (13-93C1A)



T-57 (12-16C1A)



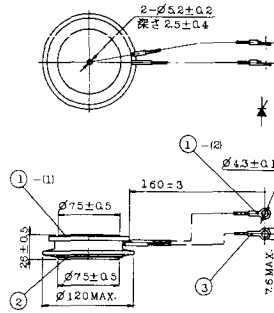
1. アノード (主)
2. ゲート (主)
3. カソード (共通)
4. ゲート (補助)
5. アノード (補助)

T-58 (13-10H1B)



1. カソード
2. アノード
3. ゲート

T-59 (13-120A1A)



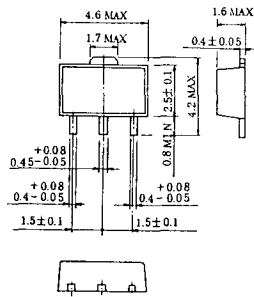
- 1-(1) カソード
- 1-(2) カソード (黒)
2. アノード
3. ゲート (白)

T-60



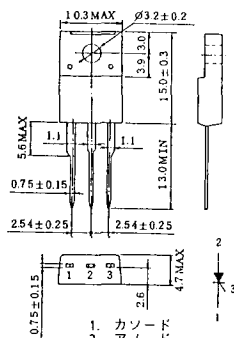
1. カソード
2. アノード
3. ゲート

T-61 (13-5B1A)



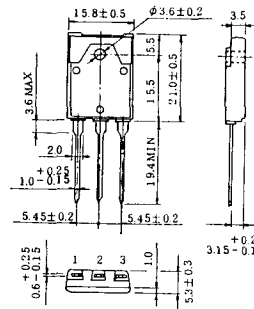
1. ゲート
2. アノード
3. カソード

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



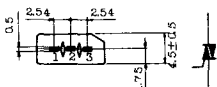
- 1 ゲート
- 2 T₂
- 3 T₁

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



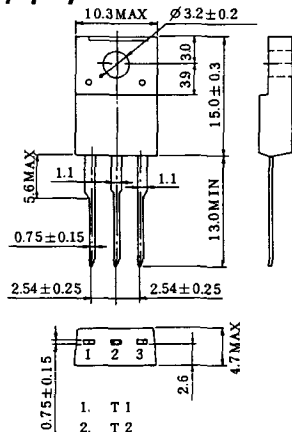
- 1 T₁
- 2 T₂
- 3 ゲート

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)

2-48A3A



2-48A3B



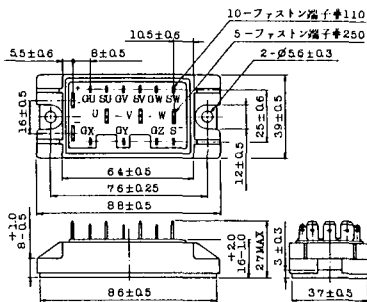
2-48A4A



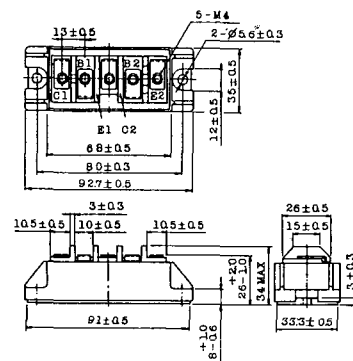
2-64A2A



2-64A2B



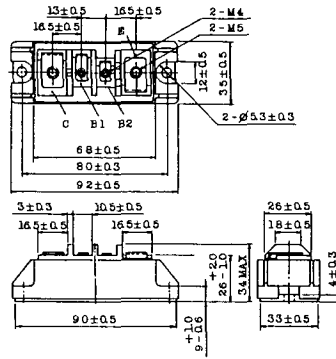
2-68A2A



2-68B2A



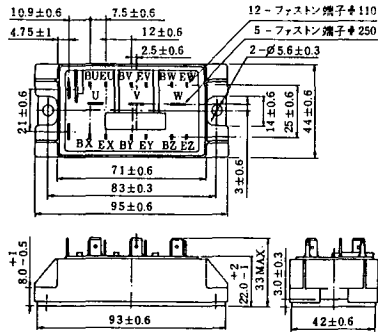
2-68C1A



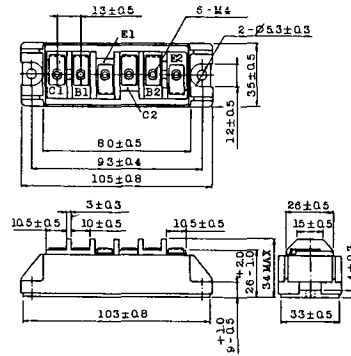
2-68D2A



2-72A3A



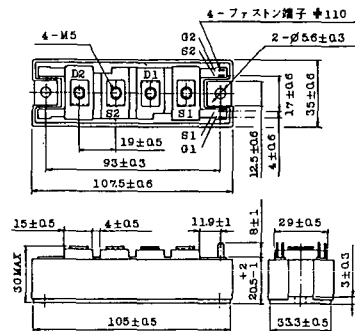
2-80A1A



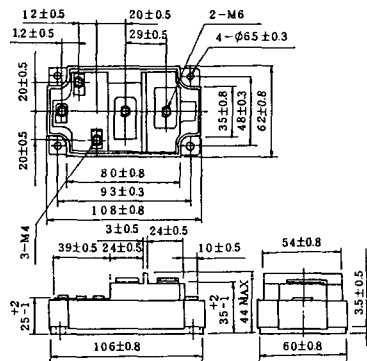
2-80B1A



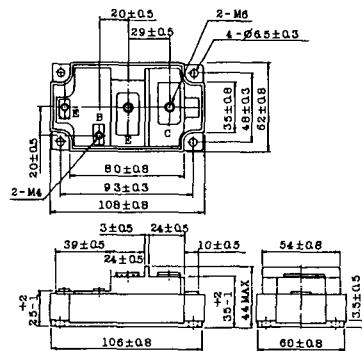
2-108B1A



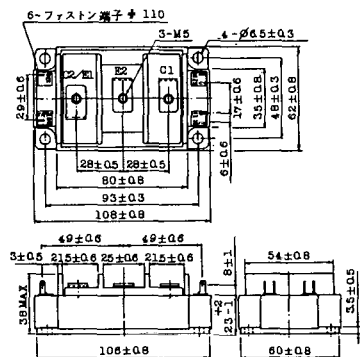
2-109A3A



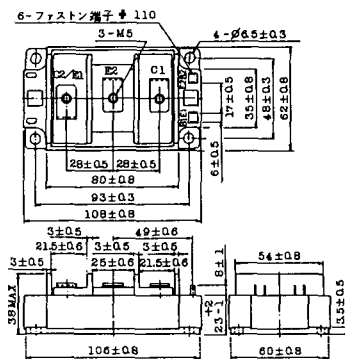
2-109A4A



2-109B3A



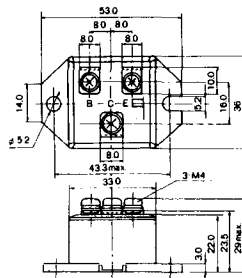
2-109B4A



M-101



M-102



M-103



M-104



M-105



M-106



M-107



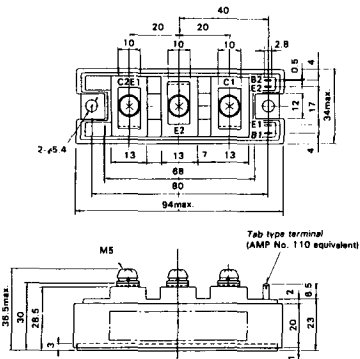
M-116



M-207



M-208



M-209



M-210



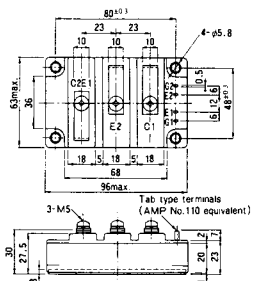
M-211



M-212

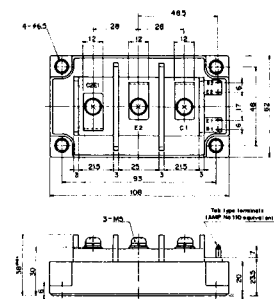


M-213

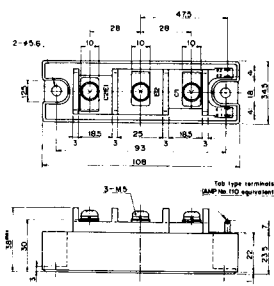


M-214

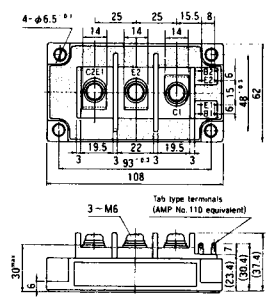
M-215



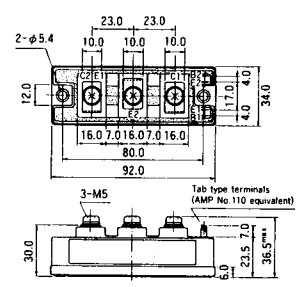
M-216



M-217



M-218



M-219



M-607



M-608



M-609



M-610



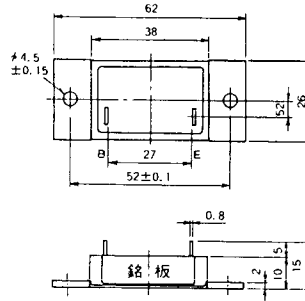
M-616



M-1A1A



M-2A1A



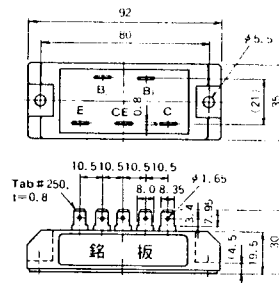
M-2B1A



M-2B2A



M-2C2A



M-2D4A



M-3C1A



M-3D6A



M-3E6A



M-4A1A



M-4A2A



M-4A1B



M-5C2A



M-5D2A



M-6A1A



M-7A1A



M-7B1A



M-8A1A



M-10A2A



M-10A2B



M-11A2A



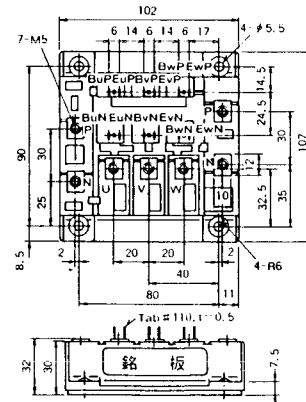
M-12A6A



M-12B6A



M-12B6B



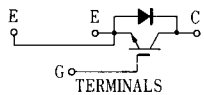
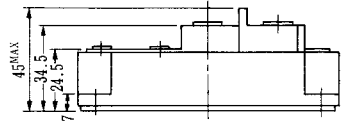
M-9D2B



M-10A2C



H-101



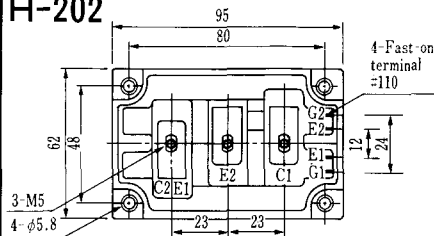
Weight :480g

H-201



Weight: 200g

H-202



Weight: 360g

LF-J



LF-K



