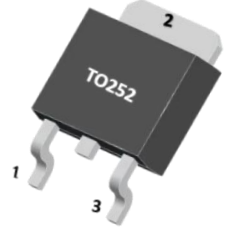
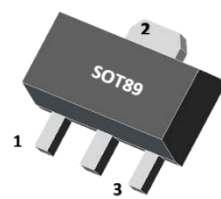


GENERAL DESCRIPTION

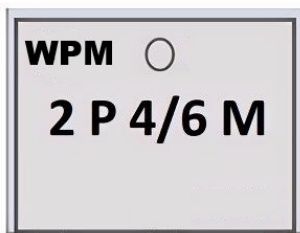
- Glass passivated, sensitive gate thyristors in a plastic envelope, intended for use in general purpose switching and phase control applications.
- These devices are intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.



Pin1:K (Cathode)
Pin2:A (Anode)
Pin3:G (Gate)

MARKING

Type Code: Marking: 2P4M
2P6M



WPM : LOGO
2P4/6M=Device Code

ABSOLUTE MAXIMUM RATINGS (T_C=25°C, unless otherwise specified)

SYMBOL	PARAMETER	CONDITION	VALUE	UNIT
VDRM	Repetitive Peak off-state voltage	2P4M	400	V
		2P6M	600	
IT(AV)	Average On-State Current (180° IT(AV) Conduction Angle)	T _j =60°C	3	A
IT(RMS)	R.M.S On-State Current(180° Conduction Angle)	T _c =60°C	2	A
ITSM	Surge On-State Current	t=20ms,F=50HZ	20	A
I ² t	I ² t for Fusing	t=10ms	1.7	A ² S
di/dt	Critical rate of rise of on-state current	T _j =125°C	50	A/μs
PG(AV)	Forward Average Gate Power Dissipation	T _j =125°C	0.5	W
PGM	Forward Peak Gate Power Dissipation		1	W
Tstg	Storage Temperature		-40 to +150	°C
T _j	Operating junction temperature		125	°C

THERMAL RESISTANCES

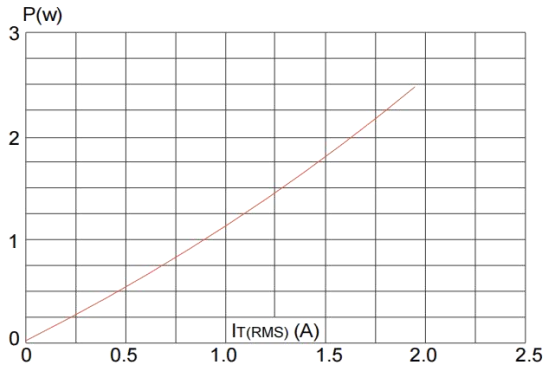
PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOT-89	R θ JA	165	°C/W
	TO-252		62.5	°C/W
Junction to Case	SOT-89	R θ JC	60	°C/W
	TO-252		2.6	°C/W

ELECTRICAL CHARACTERISTICS(T_j=25°C unless otherwise specified)

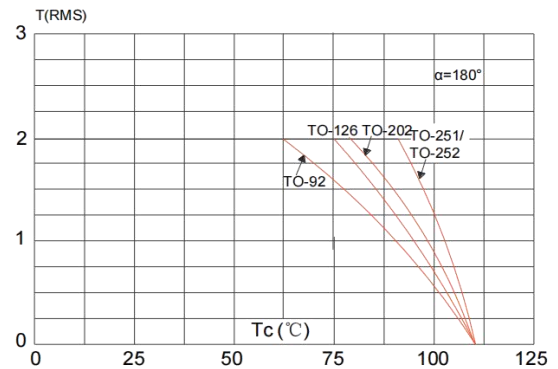
Symbol	Parameter	Test Conditions	Value	Unit
IDRM	Repetitive Peak Off-State Current	T _c =25°C	≤5	uA
		T _c = 110°C	≤100	uA
IRRM	Repetitive Peak Reverse Current	T _c =25°C	≤5	uA
		T _c = 110°C	≤100	uA
VTM	Forward "on" voltage	I _T =2A t _p =380us	≤1.7	V
VGD	Gate nontrigger voltage	V _D =V _{DRM} , T _j = 110°C R _{GK} = 1K Ω ,R _L =3.3K Ω	≥0.2	V
IL	Latching current	I _G = 1.2I _{GT}	≤6	mA
IH	Holding current	V _D = 12V ,I _{GT} =0. 1A	≤5	mA
VGT	Gate trigger voltage	V _D = 12V ,I _{GT} =0. 1A	≤0.8	V
IGT	Gate trigger current	V _D = 12V,I _T =0. 1A	≤120	uA
dv/dt	Critical-rate of rise of commutation voltage	V _D =2/3V _{DRM} ,T _j = 110°C R _{GK} = 1K Ω	≥10	V/us
R _{th(j-c)}	Thermal resistance	Junction to case	3.0	°C/W

TYPICAL CHARACTERISTICS

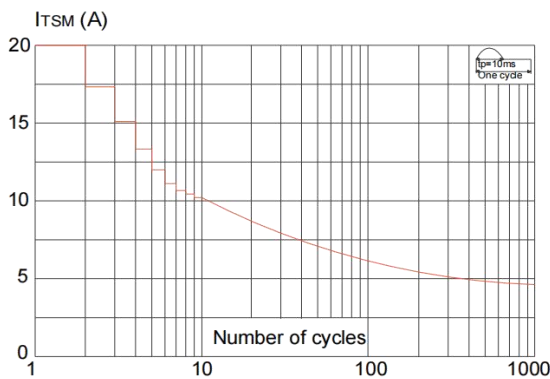
Maximum power dissipation versus RMS on-state current



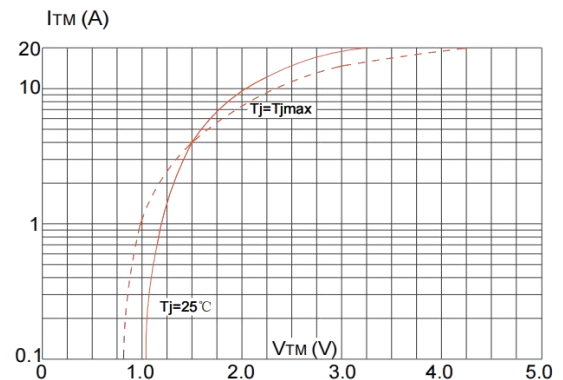
RMS on-state current versus case temperature



Surge peak on-state current versus number of cycles



On-state characteristics (maximum values)



Non-repetitive surge peak on-state current for a sinusoidal pulse with width $t_p < 20ms$, and corresponding value of I^2t ($di/dt < 100A/\mu s$)

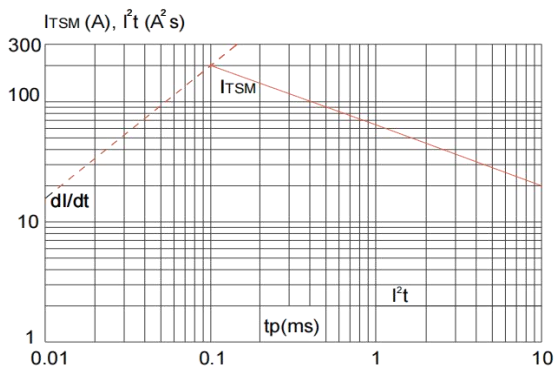
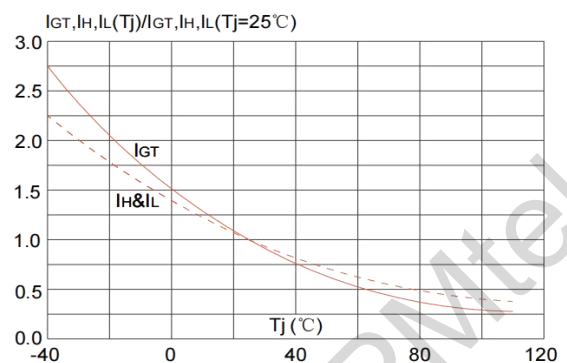
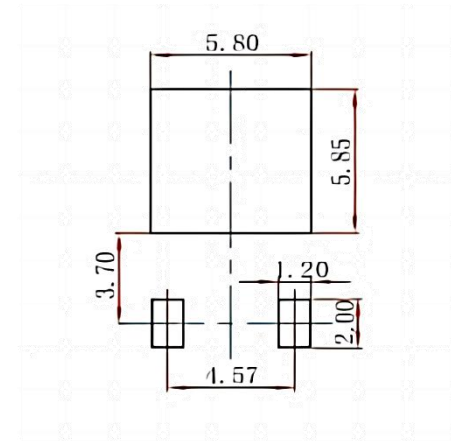
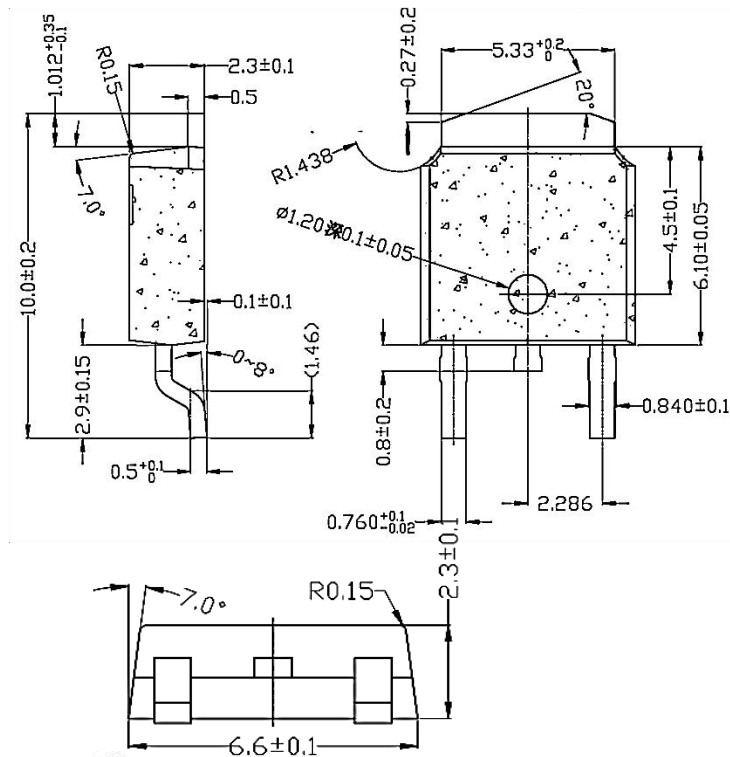


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature



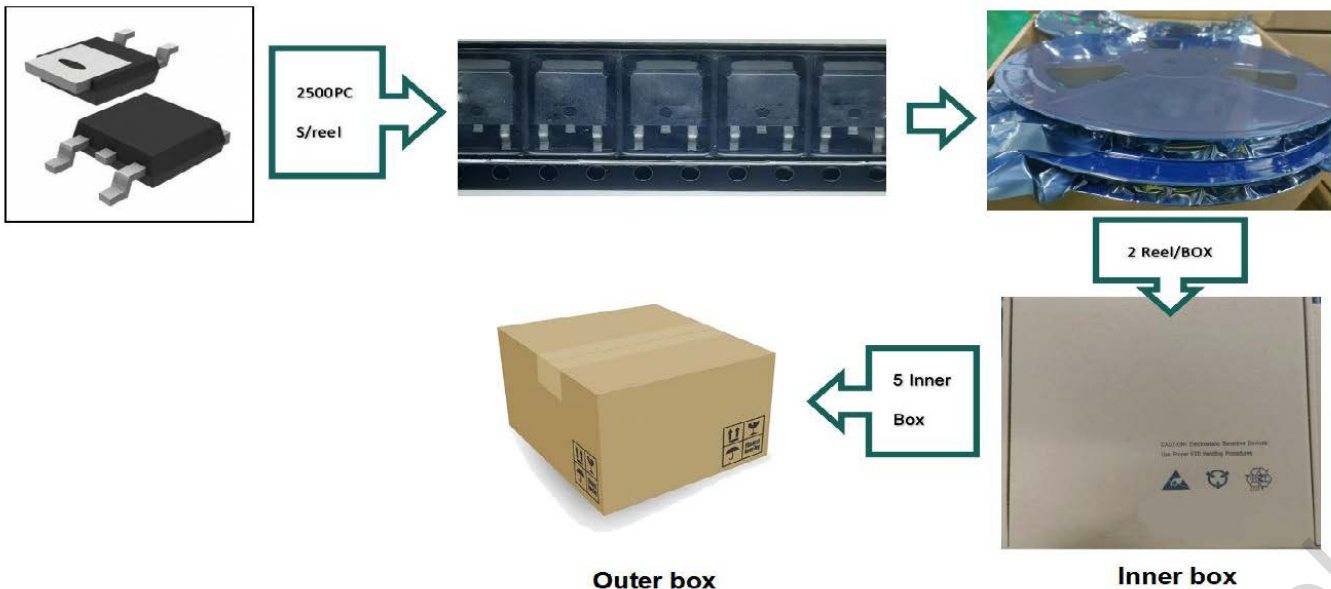
TO- 252 Package Outline Dimensions



Note:

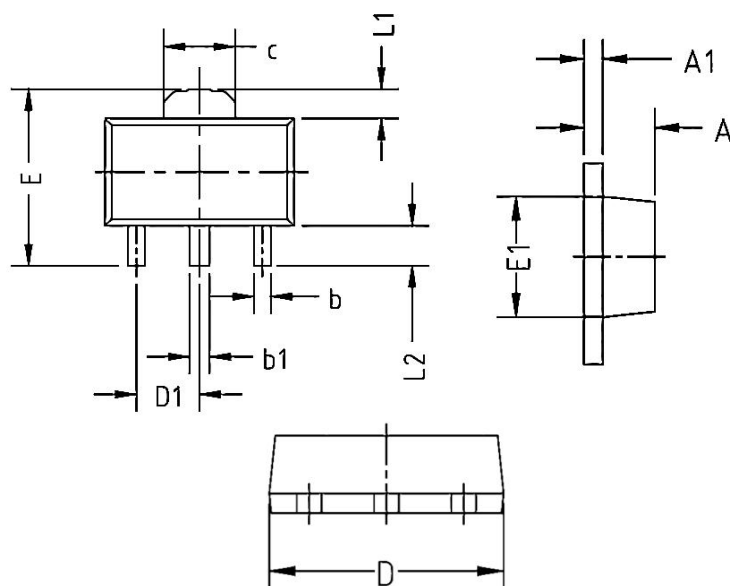
1. Controlling dimension: in millimeters.
2. General tolerance: ±0.05mm.
3. The pad layout is for reference purposes only.

TO - 252 Packing Information



Package version	Reel dimensions $\Phi \times H$ (mm)	Per Reel (pcs)	Reels per box	Inner box dimensions $L \times W \times H$ (mm)	Outer box (pcs)	Outer box dimensions $L \times W \times H$ (mm)
TO-252	$\Phi 330 \times 20$	2500	2	360*340*50	25000	375*375*280

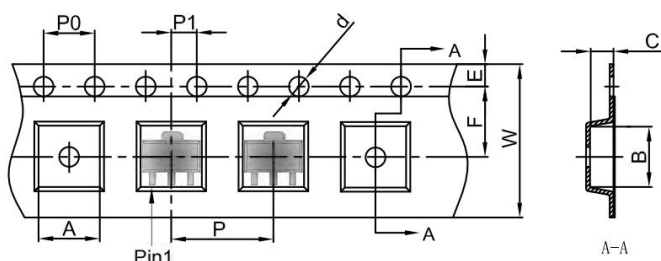
SOT - 89 Package Outline Dimensions



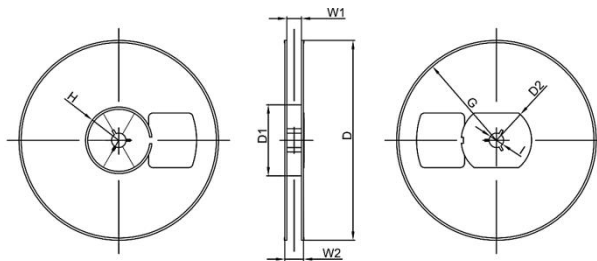
COMMON DIMENSION(MM)			
PKG	SOT-89		
Symbol	MIN	MON	MAX
A	1.450	1.500	1.550
A1	0.350	0.400	0.450
b	0.350	0.400	0.48
b1	0.430	0.480	0.550
C	1.500	1.550	1.650
D	4.450	4.550	4.700
D1	1.470	1.500	1.550
E	4.100	4.200	4.300
E1	2.500	2.550	2.650
L1	0.650	0.700	0.750
L2	0.900	0.950	1.000

SOT89 Packaging Information

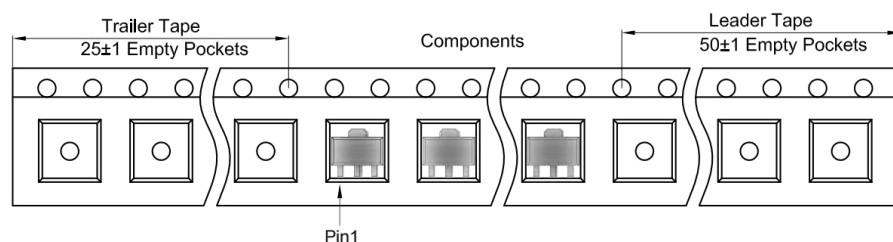
SOT-89 Embossed Carrier Tape



SOT-89 Reel



SOT-89 Tape Leader and Trailer



REEL	Reel Size
1000 pcs	7 inch

Dimensions are in millimeter

Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø180.00	60.00	R32.00	R86.50	R30.00	Ø13.00	13.20	16.50

Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-89-3L	4.85	4.45	1.85	Ø1.50	1.75	5.50	4.00	8.00	2.00	12.00

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