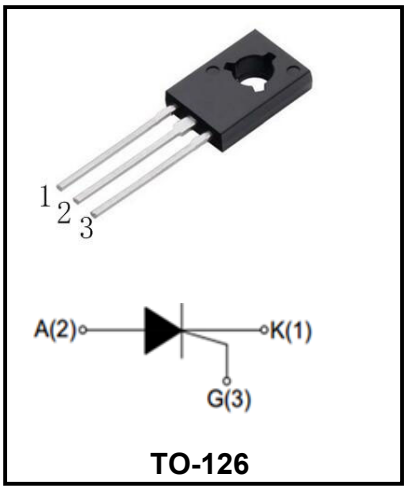
2A Sensitive SCRs

Product Summary

Symbol	Value	Unit
$I_{T(AV)}$	2	A
V_{DRM} V_{RRM}	600/800	V
I_{GT}	200	μA



TO-126

Features

With high ability to withstand the shock loading of large current, Provide high dv/dt rate with strong resistance to electromagnetic interference.

Application

Power charger, T-tools, massager, solid state relay, AC Motor speed regulation and so on.

Order Information

Part Number	Package	Marking	packing	Delivery Quantity
2P4MC	TO-126	2P4M XXXX	Bag	500pcs/Bag

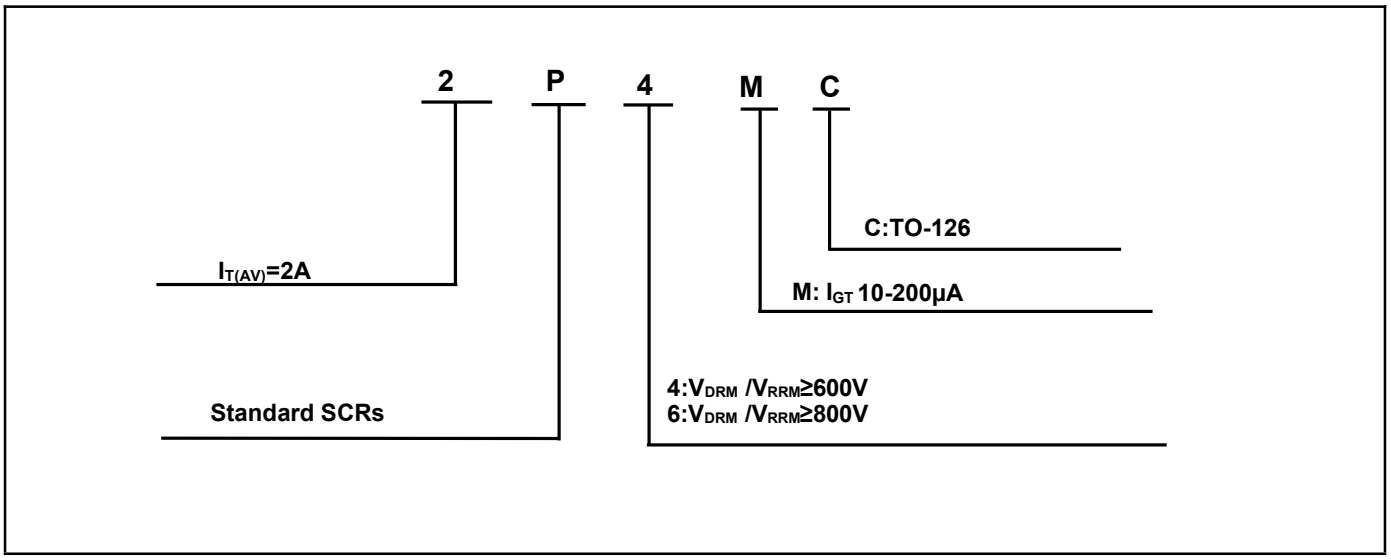
Absolute maximum ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive peak off-state voltage	V_{DRM}	600/800	V
Repetitive peak reverse voltage	V_{RRM}	600/800	V
RMS on-state current	$I_{T(RMS)}$	3	A
Average on-state current	$I_{T(AV)}$	2	A
Non repetitive surge peak on-state current (full cycle, F=50Hz)	I_{TSM}	20	A
I^2t value for fusing (tp=10ms)	I^2t	2	A^2s
Critical rate of rise of on-state current (I_G =2 x I_{GT})	dI_T/dt	I - II -III | 50	A/μs
Peak gate current	I_{GM}	0.2	A
Average gate power dissipation	$P_{G(AV)}$	0.1	W
Junction Temperature	T_J	-40~+110	°C
Storage Temperature	T_{STG}	-40 ~+150	°C

Electrical characteristics (T_A=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Value			Unit
			Min	Typ	Max	
Gate trigger current	I_{GT}	V_D=6V,R_L=100Ω R_{GK}=1kΩ,Fig. 6	10		200	μA
Gate trigger voltage	V_{GT}	V_D=12V,R_L=100Ω, R_{GK}=1kΩ			0.8	V
Non-triggering gate voltage	V_{GD}	V_D=1/2V_{DRM},R_{GK}=1kΩ, T_j=110℃	0.2			V
Holding current	I_H	V_D=24V,R_{GK}=1kΩ,I_{TM}=4A, T_j=25℃,Fig. 6		1	3	mA
Latching current	I_L	I_G=1.2I_{GT},Fig. 6			4	mA
Critical-rate of rise of commutation voltage	dV_D/dt	V_D=2/3V_{DRM}, R_{GK}=1kΩ, T_j=110℃	10			V/μs
STATIC CHARACTERISTICS						
On-state Voltage	V_{TM}	I_{TM}=4A,Fig. 4			1.55	V
Repetitive Peak Off-State Current	I_{DRM}	V_D=V_{DRM}= V_{RRM} T_j=25℃			5	μA
Repetitive Peak Reverse Current	I_{RRM}	V_D=V_{DRM}= V_{RRM} T_j=110℃			100	μA
THERMAL RESISTANCES						
Ihermal resistance	$R_{th\ (j-c)}$	Junction to case		TYP.	7.2	℃/W
	$R_{th\ (j-a)}$	Junction to ambient		TYP.	100	℃/W

Ordering Information



Typical Characteristics

FIG.1: Maximum power dissipation versus RMS on-state current (full cycle)

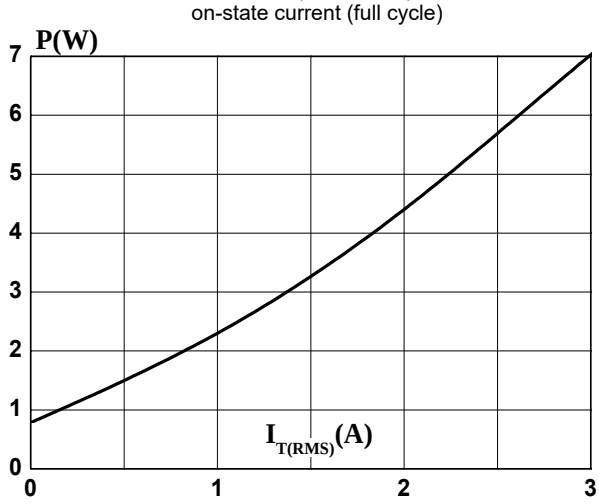


FIG.2: RMS on-state current versus case temperature (full cycle)

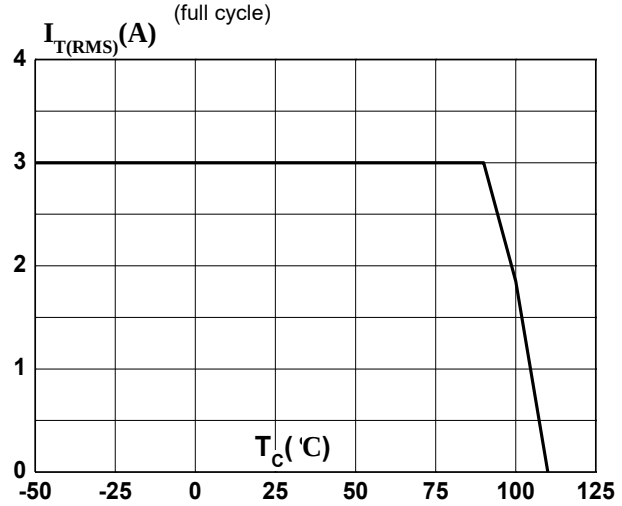


FIG.3: Surge peak on-state current versus number of cycles

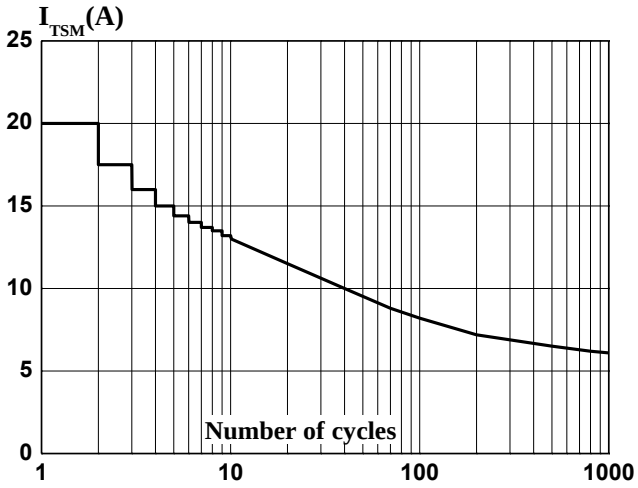


FIG.4: On-state characteristics (maximum values)

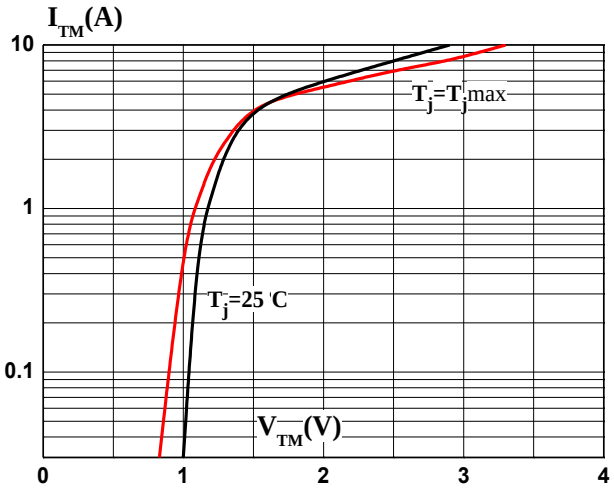


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp < 10ms

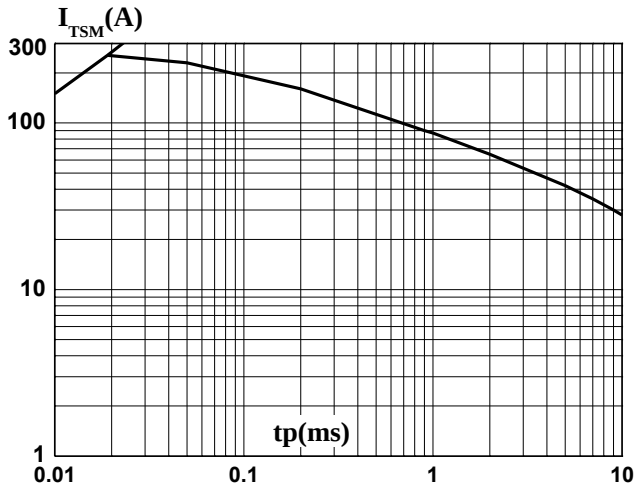
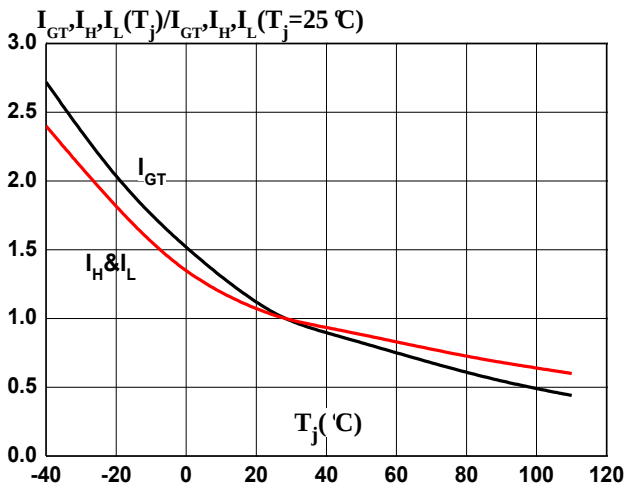
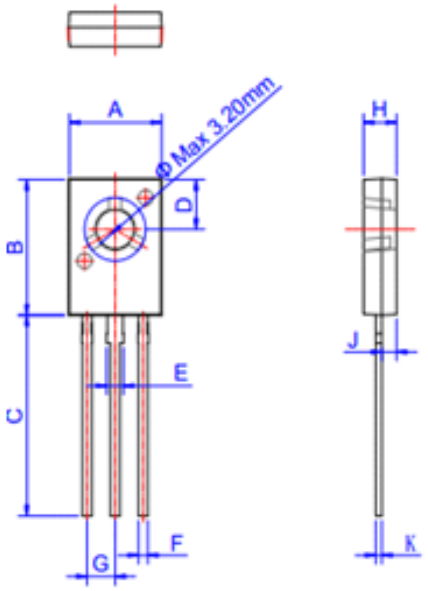


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)



Package Information

TO-126



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	7.40		7.80	0.291		0.307
B	10.6		11.2	0.417		0.441
C	15.3		16.3	0.602		0.642
D	3.90		4.10	0.154		0.161
E	1.17		1.47	0.046		0.058
F	0.66		0.86	0.026		0.034
G		2.29			0.090	
H	2.50		2.90	0.098		0.114
J	1.10		1.50	0.043		0.059
K	0.35		0.45	0.014		0.018