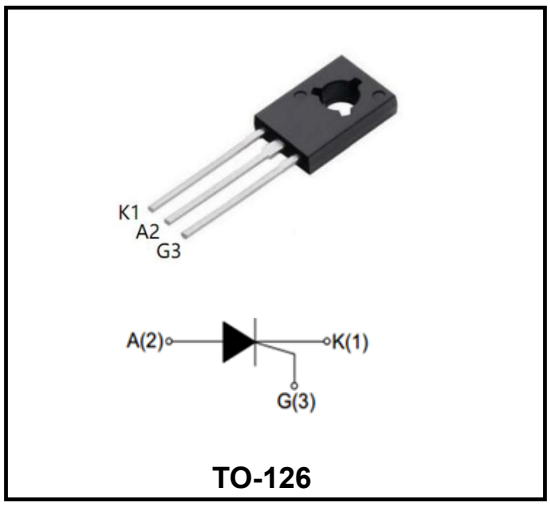
2A Sensitive SCRs

Product Summary

Symbol	Value	Unit
$I_{T(RMS)}$	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.

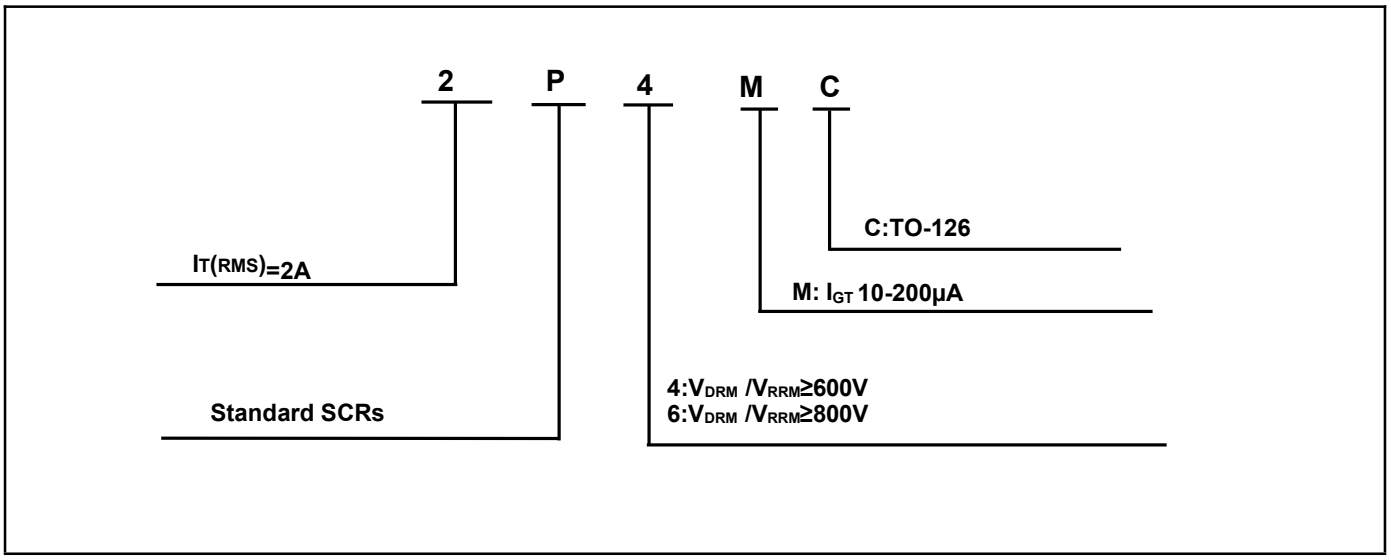
Absolute maximum ratings (Ta=25°C unless otherwise noted)

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	$I_{T(RMS)}$	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}		T_j=110℃			100	μA
THERMAL RESISTANCES							
Thermal 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)

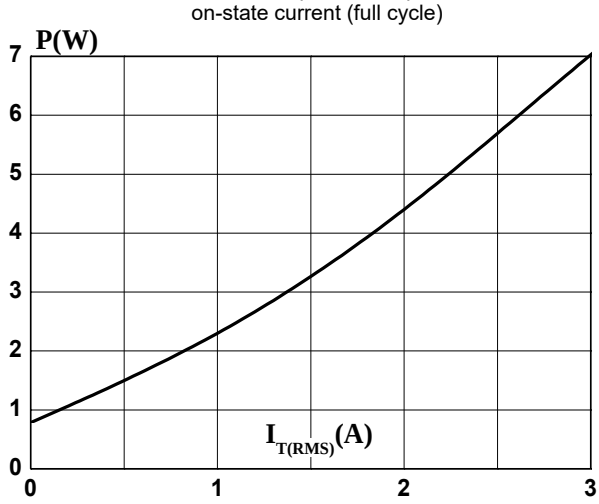


FIG.2: RMS on-state current versus case temperature (full cycle)

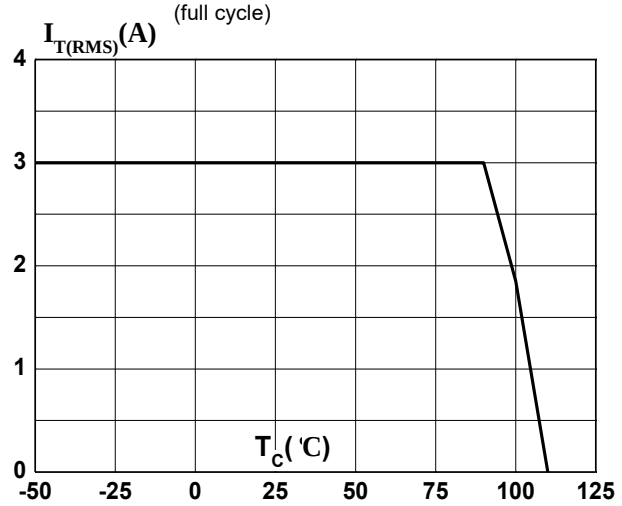


FIG.3: Surge peak on-state current versus number of cycles

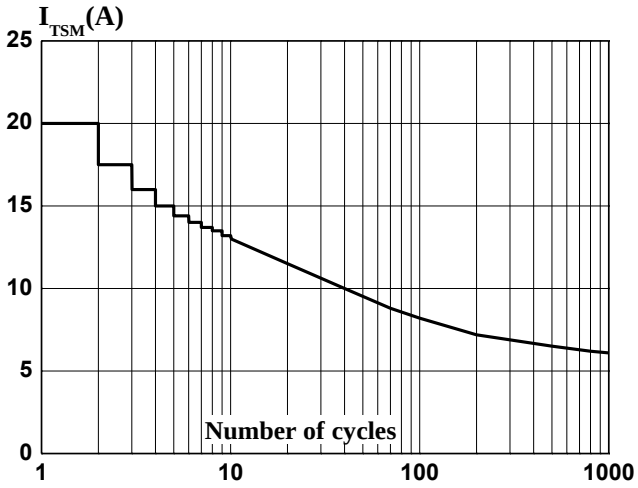


FIG.4: On-state characteristics (maximum values)

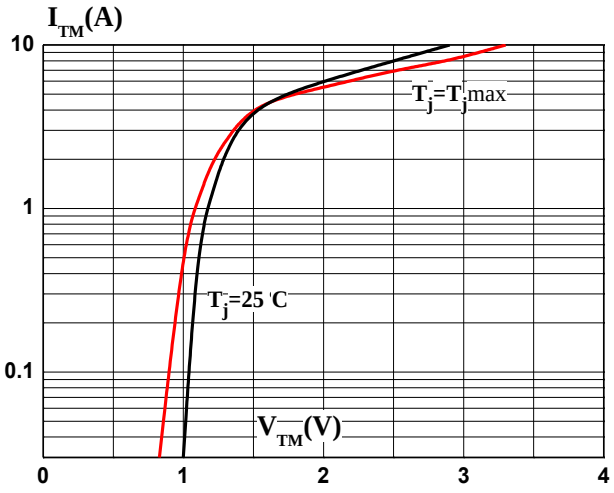


FIG.5: Non-repetitive surge peak on-state current for a sinusoidal pulse with width tp < 10ms

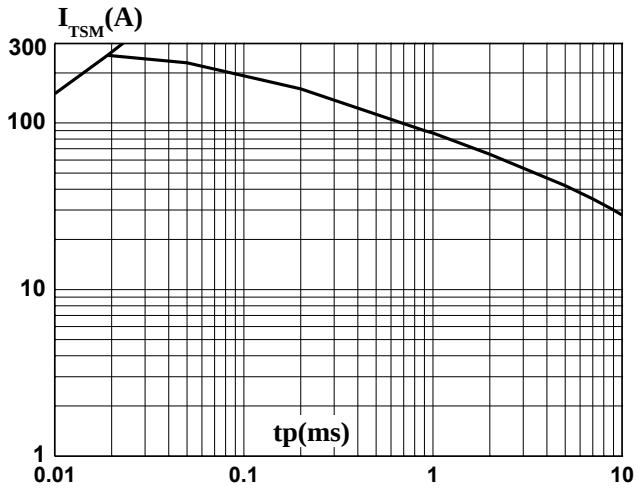
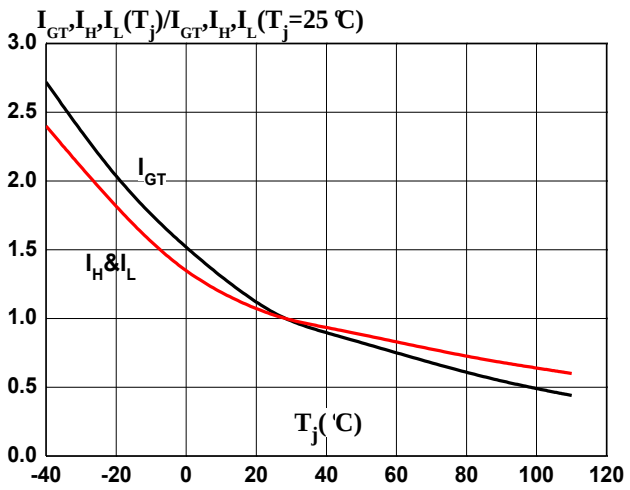


FIG.6: Relative variations of gate trigger current, holding current and latching current versus junction temperature (typical values)

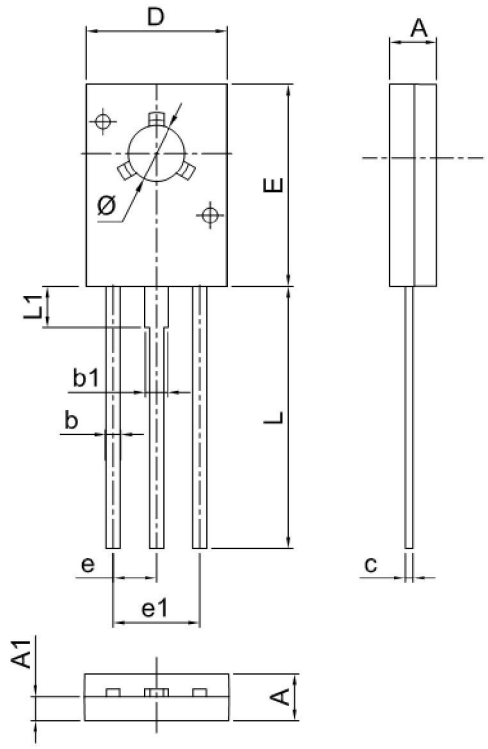


Ordering information

Package	Packing Description	Base Quantity
TO-126	Bulk	500pcs/Bag

Package Dimensions

TO-126



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.40	2.80	0.094	0.110
A1	1.00	1.40	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.17	1.37	0.046	0.054
c	0.40	0.60	0.016	0.024
D	7.30	7.70	0.287	0.303
E	10.60	11.00	0.417	0.433
e	2.25	2.33	0.089	0.092
e1	4.50	4.66	0.177	0.183
L	14.00	15.00	0.551	0.591
L1	1.90	2.50	0.075	0.098
Φ	3.10	3.30	0.122	0.130

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