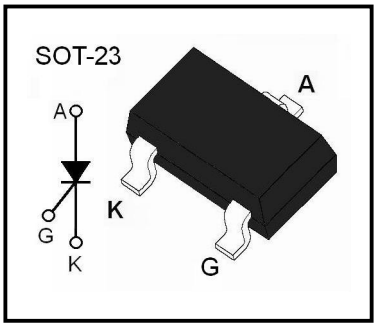
MCR100-8 SCR SOT-23 Plastic-Encapsulate Thyristor

Description

PNPN devices designed for high volume, linepowered consumer applications such as relay and lamp drivers, small motor controls, gate drivers for larger thyristors, and sensing and detection circuits. Supplied in an inexpensive plastic SOT-23 package which isreladily adaptable for use in automatic insertion equipment.



Features

- Sensitive Gate Trigger Current - 200μA Maximum
- Low Reverse and forward Blocking Current-100μA Maximum, Tc=125℃
- Low Holding Current – 5mA Maximum

Marking: 100-8

Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Value	Unit
Peak Repetitive Forward Voltage	V_{DRM}	800	V
Reverse Blocking Voltage	V_{RRM}	800	V
On-State Current	$I_{T(RMS)}$	0.8	A
Peak Forward Surge Current	I_{TSM}	10	A
Peak Reverse Gate Voltage	V_{GRM}	5	V
Peak Gate Current	I_{GM}	0.1	A
Gate Dissipation	$P_{G(AV)}$	0.1	W
Storage Temperature	T_J、T_{STG}	-40～＋125	℃

Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Conditions	Value		Unit
			Min	Max	
Peak Forward and Reverse Blocking Current	I_{DRM} ,I_{RRM}	V_{AK} = 600V		10	μA
On state voltage	V_{TM}	I_{TM} = 1A		1.7	V
Gate trigger voltage	V_{GT}	V_{AK} = 7V, R_L=100Ω		0.8	V
Gate trigger current	I_{GT}	V_{AK} = 7V, R_L=100Ω		200	μA
Holding current	I_H	V_{AK} = 7V ,R_{GK}=1KΩ		5	mA

Typical Characteristics

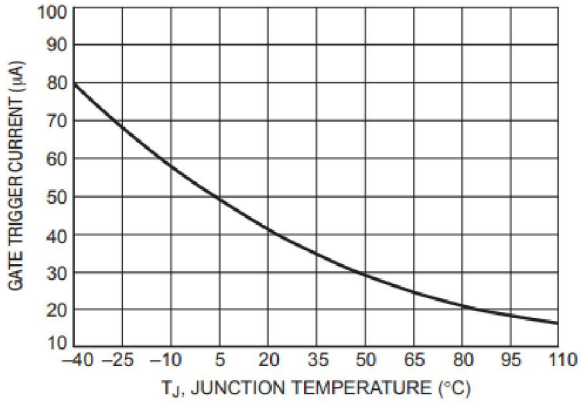


Figure 1. Typical Gate Trigger Current versus Junction Temperature

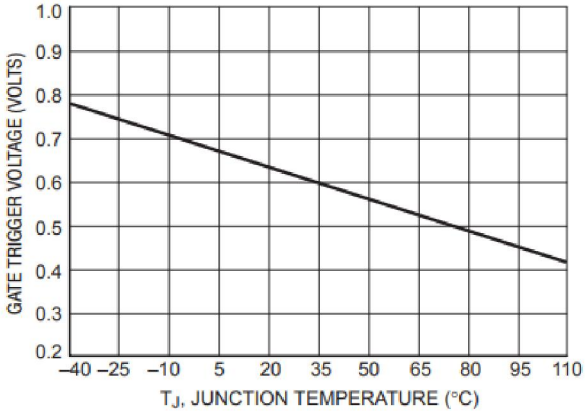


Figure 2. Typical Gate Trigger Voltage versus Junction Temperature

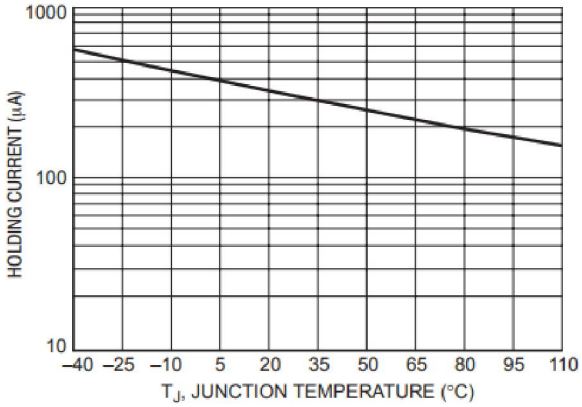


Figure 3. Typical Holding Current versus Junction Temperature

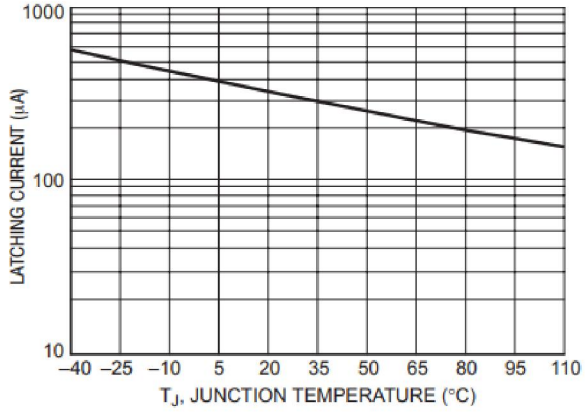


Figure 4. Typical Latching Current versus Junction Temperature

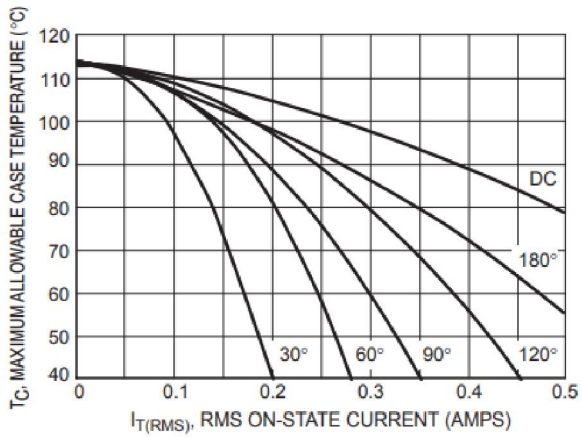


Figure 5. Typical RMS Current Derating

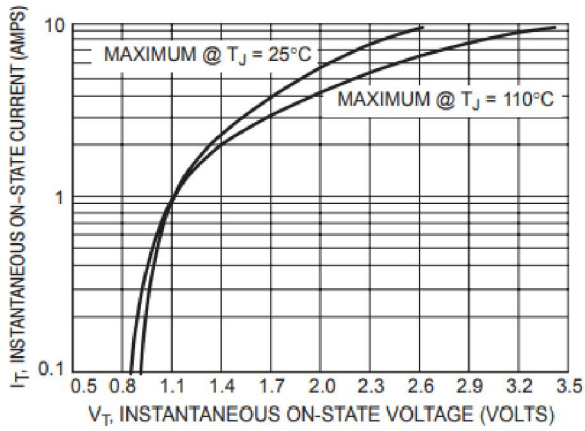
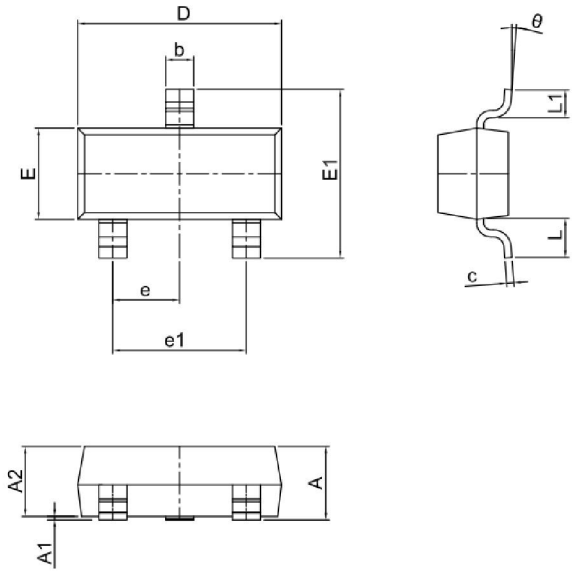


Figure 6. Typical RMS Current Derating

Package Dimensions



Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	0.90	1.15	0.035	0.045
A1	0.00	0.10	0.000	0.004
A2	0.90	1.05	0.035	0.041
b	0.30	0.50	0.012	0.020
c	0.08	0.15	0.003	0.006
D	2.80	3.00	0.110	0.118
E	1.20	1.40	0.047	0.055
E1	2.25	2.55	0.089	0.100
e	0.90	1.00	0.035	0.039
e1	1.80	2.00	0.071	0.079
L	0.50	0.60	0.020	0.024
L1	0.30	0.50	0.012	0.020