SCR

MCR100-6

## FEATURES

- **Sensitive Gate Trigger Current – 200uA Maximum**
- **Low Reverse and forward Blocking Current – 100uA Maximum, Tc=125°C**
- **Low Holding Current – 5mA Maximum**
- **Low On-State Voltage (1.3V(Typ.))**
- **Glass-Passivated Surface for Reliability and Uniformity**

APPLICATIONS

PNPN devices designed for high volume, line-powered consumer applications such as relay and lamp drivers, small motor controls, gate drivers for larger thyristors, and sensing and detection circuits.

SYMBOL
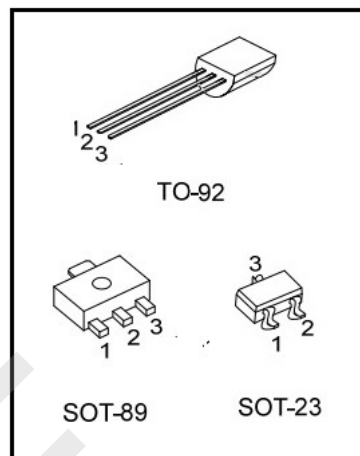
Package	Pin assignment		
	1	**2**	**3**
SOT-23	K	G	A
SOT-89	K	A	G
TO-92	K	G	A

ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Repetitive Peak Off-State Voltages	$V_{DRM,}$ V_{RRM}	400	V
RMS on-State Current	$I_{T(RMS)}$	0.8	A
Non-Repetitive Peak On-State Current	I_{TSM}	8.0	A
Peak gate current	I_{GM}	1.0	A
Peak Gate Power – Forward	P_{GM}	0.1	W
Peak Gate Power	$P_{G(AV)}$	0.01	W
Peak Reverse Gate Voltage	V_{RGM}	5	V
Operating junction temperature	T_J	-40~+125	℃
Storage Temperature	T_{STG}	-40~+150	℃

ELECTRICAL CHARACTERISTICS (TJ=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
Peak Repetitive Forward or Reverse Blocking Current	I_{DRM} I_{RRM}	V_{AK} = Rated V_{DRM} or V_{RRM};		10	uA
Gate Trigger Current	I_{GT}	V_D=12V, R_L=100Ω	30	200	uA
Gate Trigger Voltage	V_{GT}	V_D=12V, R_L=100Ω		0.8	V
Peak Forward On-State Voltage	V_{TM}	I_T= 1.0A		1.7	V
Latch Current	I_L	I_G=1.2I_{GT}		10	mA
Holding Current	I_H	I_T=50mA		5	mA
Critical Rate of Rise of Off-State Voltage	dV/dt	V_D=67%V_{DRM}, R_{GK}=1kΩ,	10		V/μs

TYPICAL CHARACTERISTICS

Typical Gate Trigger Current vs. Junction Temperature

Typical Gate Trigger Voltage vs. Junction Temperature
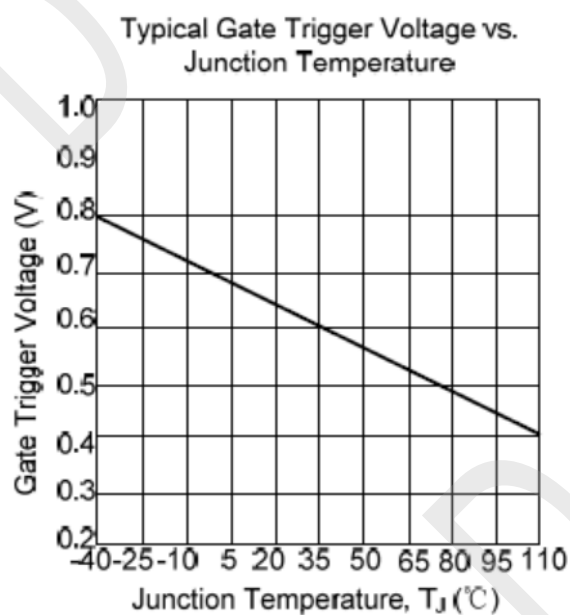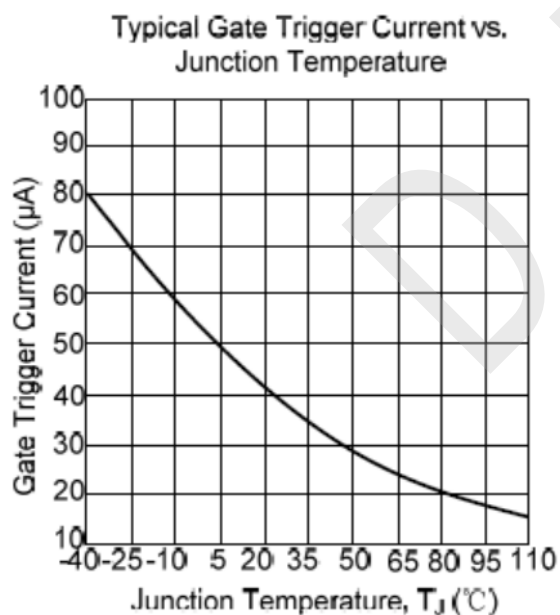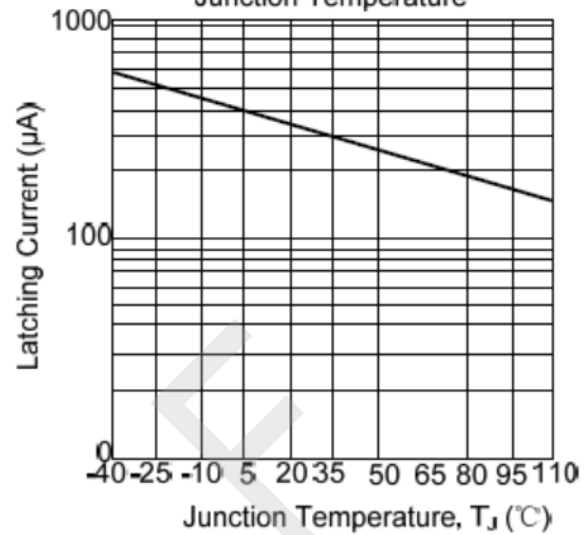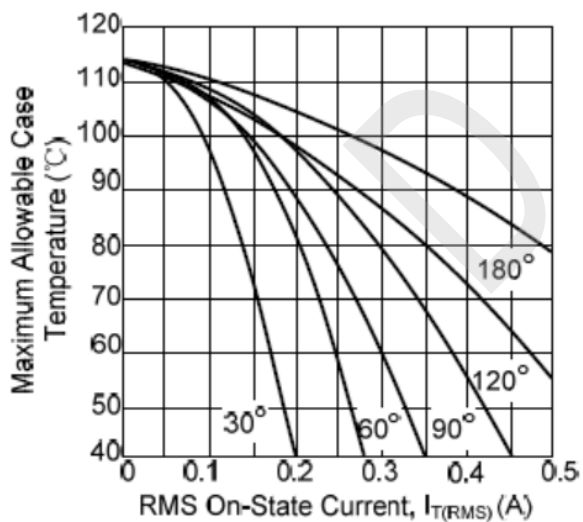
Typical Holding Current vs. Junction Temperature
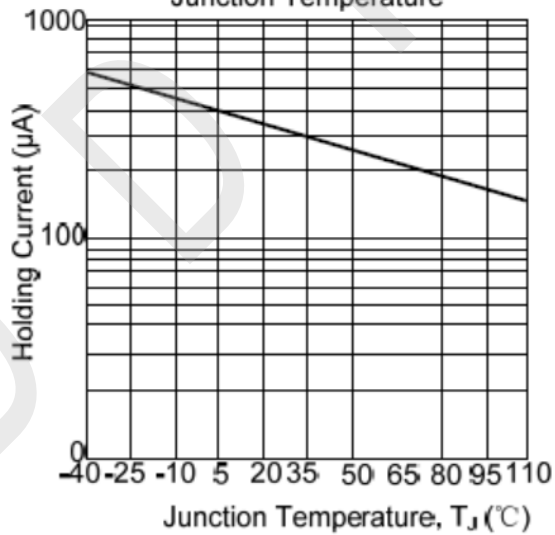
Typical Latching Current vs. Junction Temperature

Typical RMS Current Derating

Typical On-State Characteristics