

Product Summary

Current- I_{GT} : 200 μ A

I_{TRMS} : 0.8 A

V_{RRM}/V_{DRM} : MCR100-6: 400 V

MCR100-8: 600 V

and stor

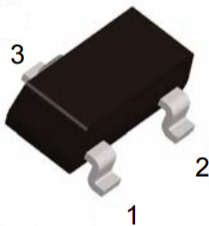
T_{stg} : -55°C to +150°C

Application

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.

Package and Pin Configuration

SOT-23



- 1.KATHODE
- 2. GATE
- 3. ANODE

Circuit diagram



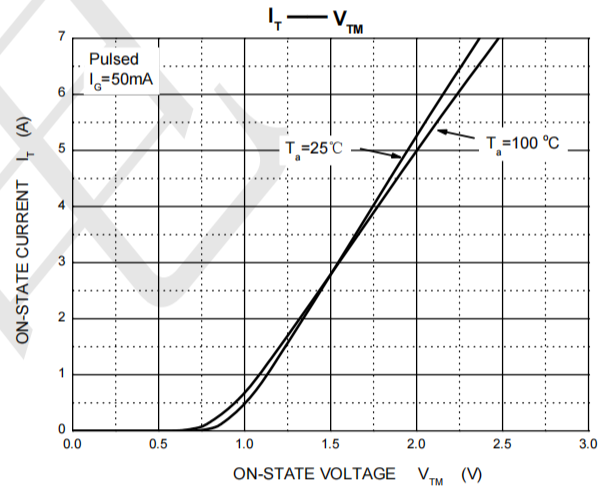
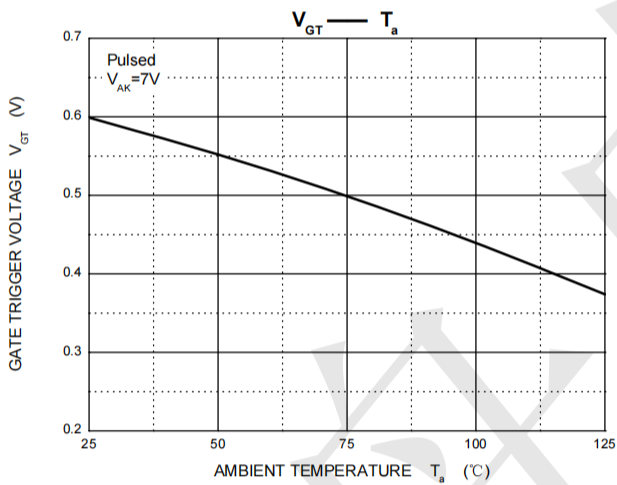
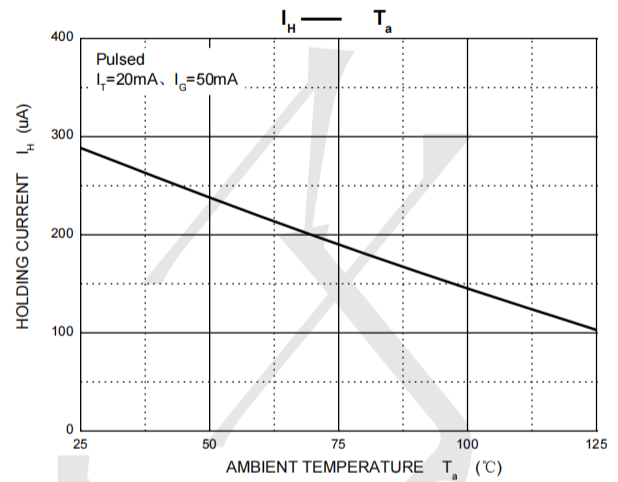
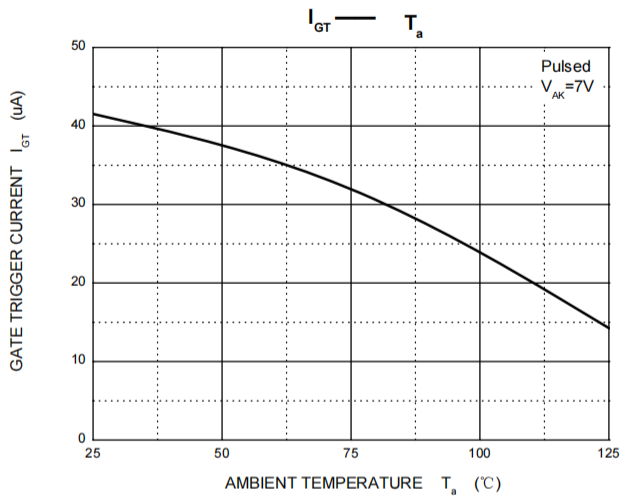
Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Part	Value	Unit
V_{DRM}	Repetitive peak off-state voltage	MCR100-6	400	V
V_{RRM}	Repetitive peak reverse voltage	MCR100-8	600	V
V_{EBO}	Emitter-Base Voltage		7	V
$I_{T(RMS)}$	RMS on-state current($T=60^\circ\text{C}$)		0.8	A
I_{TSM}	Non repetitive surge peak on-state current($t_p=10\text{ms}$)		8	A
I_{GM}	Peak gate current ($t_p=20\mu\text{s}, T_j=110^\circ\text{C}$)		0.2	A
P_{GM}	Peak gate power ($t_p=20\mu\text{s}, T_j=110^\circ\text{C}$)		500	mW
$P_{G(AV)}$	Average gate power dissipation($T_j=110^\circ\text{C}$)		100	mW
T_j	Operation Junction Temperature Range		-40~+110	$^\circ\text{C}$
T_{stg}	Storage Temperature Range		-40~+150	$^\circ\text{C}$

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

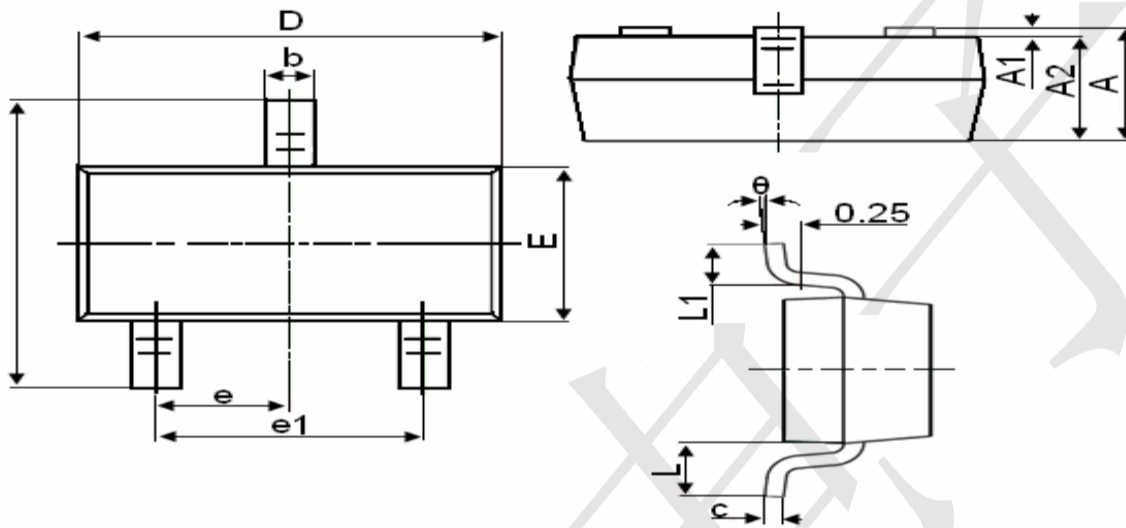
Symbol	Parameter	Test conditions	Part	Min	Typ	Max	Unit
V_{TM}	On state voltage	$I_{TM}=1A, t_p=380\mu S$				1.7	V
V_{GT}	Gate trigger voltage	$V_{AK}=7V$				0.8V	V
$V_{(BR)EBO}$	Peak Repetitive forward and Reverse blocking voltage	$I_{DRM}/I_{RRM}=100\mu A$	MCR100-6 MCR100-8	400 600			V
I_{DRM} I_{RRM}	Peak forward or reverse blocking Current	$V_{AK}=V_{DRM}$ or V_{RRM}				10	μA
I_H	Holding current	$I_{HL}=20mA, V_{AK}=7V$				5	mA
I_{GT}	Gate trigger current	$V_{AK}=7V$		15		60	μA

Typical Characteristic Curves





SOT23 Package Outline Dimensions



Symbol	Dimensions in Millimeters	
	MIN.	MAX.
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950TYP	
e1	1.800	2.000
L	0.550REF	
L1	0.300	0.500
θ	0°	8°