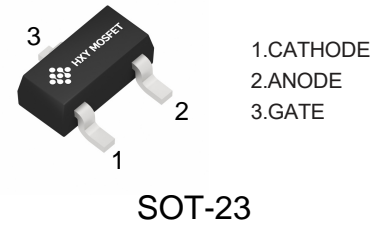




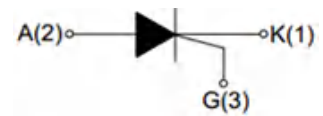
Features

- RMS on-state current to 0.8A
- General purpose switching



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
MCR100-6	SOT-23	100-6	3000
MCR100-8	SOT-23	100-8	3000



Maximum Ratings (Ta=25 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($T=60^{\circ}C$)		0.8	A
I_{TSM}	Non repetitive surge peak on-state current($t_p=10ms$)		8	A
I_{GM}	Peak gate current ($t_p=20\mu s, T_j=110^{\circ}C$)		0.2	A
P_{GM}	Peak gate power ($t_p=20\mu s, T_j=110^{\circ}C$)		500	mW
$P_{G(AV)}$	Average gate power dissipation($T_j=110^{\circ}C$)		100	mW
T_J	Operation Junction Temperature Range		$-40 \sim +110$	$^{\circ}C$
T_{stg}	Storage Temperature Range		$-40 \sim +150$	$^{\circ}C$

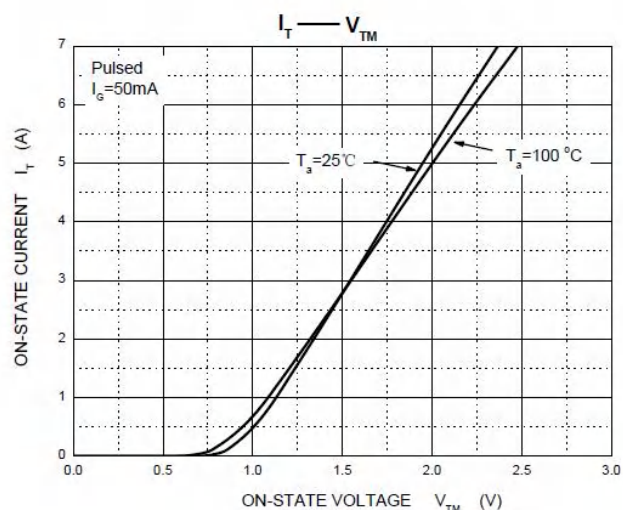
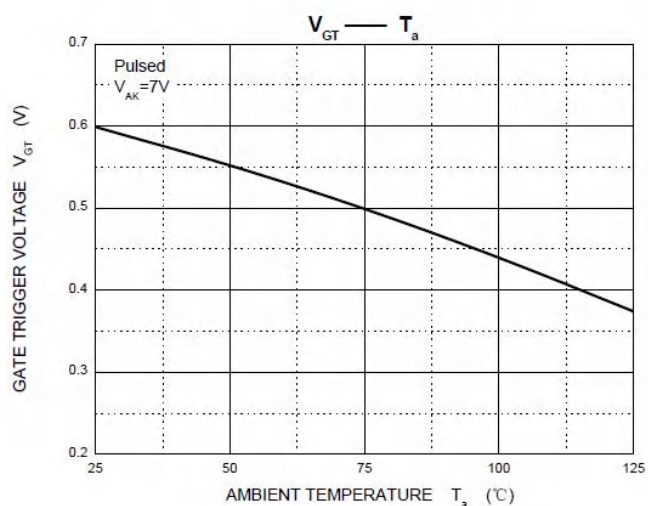
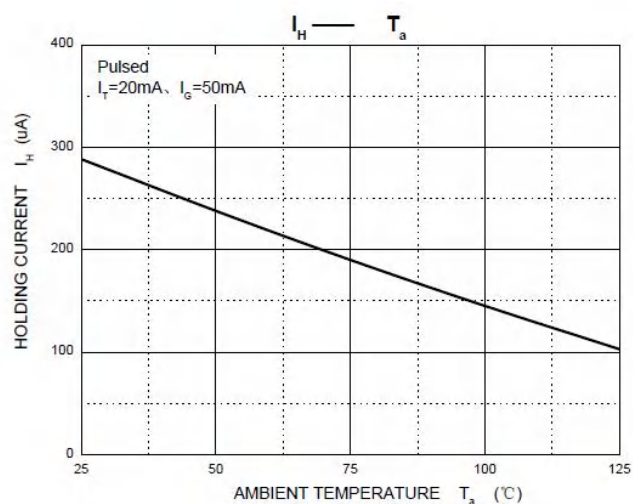
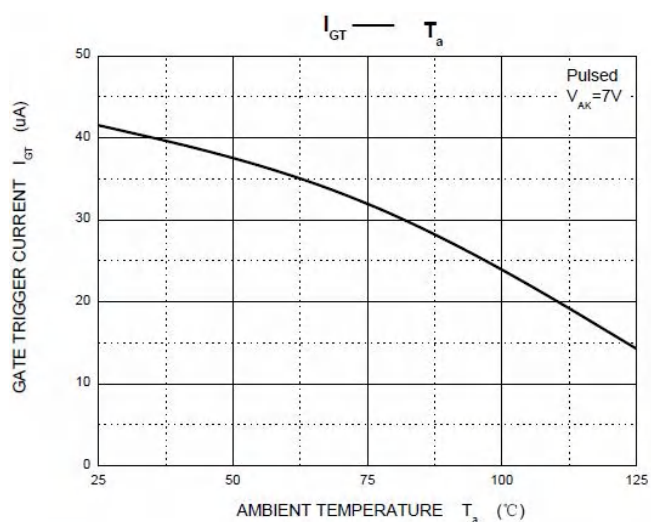


Electrical Characteristics (Ta=25°C unless otherwise specified)

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

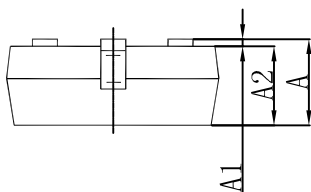
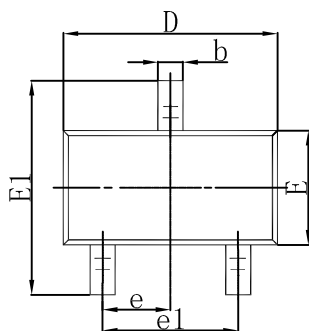
* Forward current applied for 1 ms maximum duration duty cycle1%.

Typical Characteristics





SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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