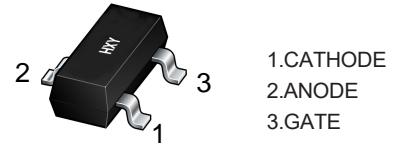




### FEATURES

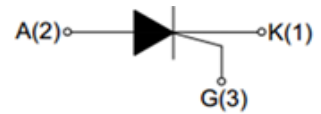
- RMS on-state current to 0.8A
- General purpose switching



SOT-23

### 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



### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25 unless otherwise specified)

Symbol	Parameter	Part	Value	Unit
V <sub>DRM</sub>	Repetitive peak off-state voltage	MCR100-6	400	V
V <sub>RRM</sub>	Repetitive peak reverse voltage	MCR100-8	600	V
V <sub>EBO</sub>	Emitter-Base Voltage		7	V
I <sub>T(RMS)</sub>	RMS on-state current(T=60℃)		0.8	A
I <sub>TSM</sub>	Non repetitive surge peak on-state current(tp=10ms)		8	A
I <sub>GM</sub>	Peak gate current (tp=20μs,T <sub>j</sub> =110℃)		0.2	A
P <sub>GM</sub>	Peak gate power (tp=20μs,T <sub>j</sub> =110℃)		500	mW
P <sub>G(AV)</sub>	Average gate power dissipation(T <sub>j</sub> =110℃)		100	mW
T <sub>J</sub>	Operation Junction Temperature Range		-40~+110	℃
T <sub>stg</sub>	Storage Temperature Range		-40~+150	℃

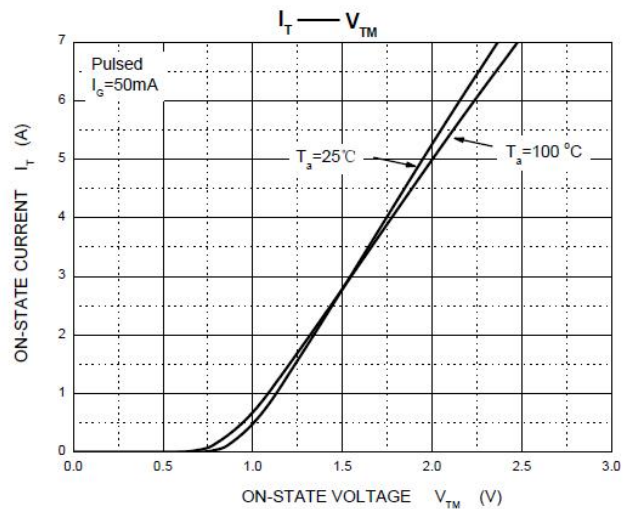
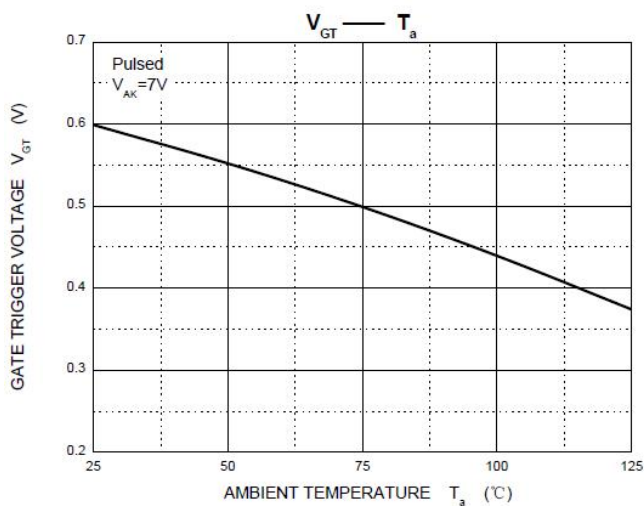
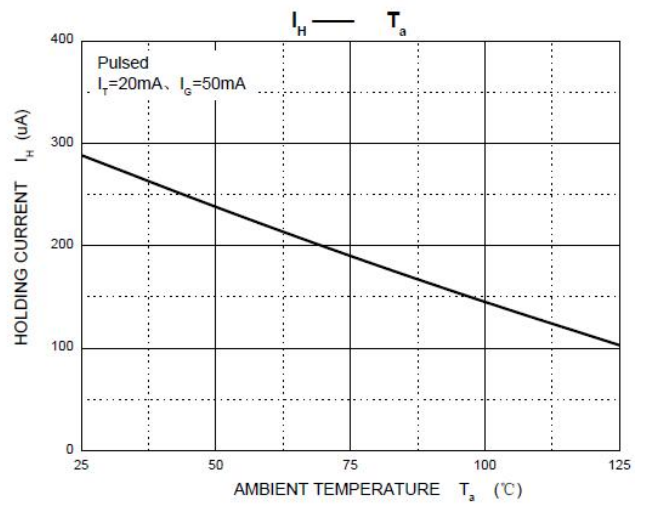
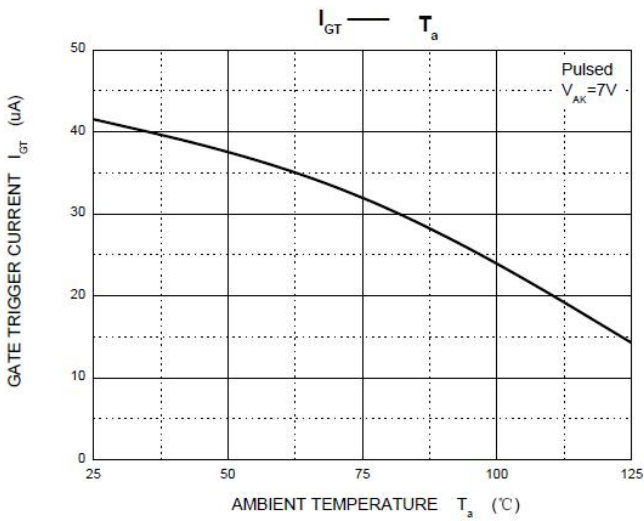


**Electrical Characteristics (Ta=25°C unless otherwise specified)**

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	$\mu A$
$I_H$	Holding current	$I_{HL}=20mA, V_{AK}=7V$				5	mA
$I_{GT}$	Gate trigger current	$V_{AK}=7V$		15		60	$\mu A$

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

**Typical Characteristics**



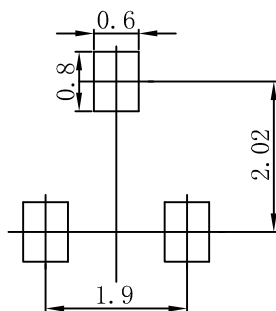


### SOT-23 Package Outline Dimensions



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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