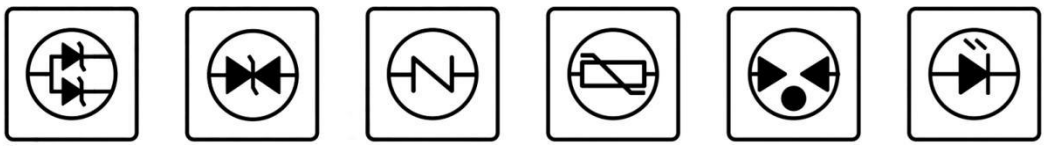
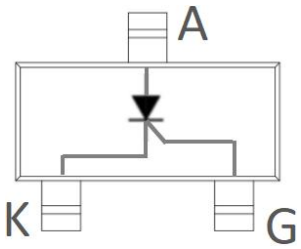
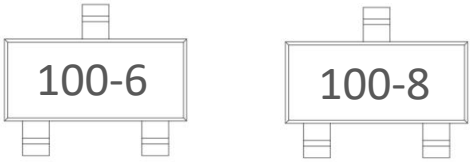
MSKSEMI
SEMICONDUCTOR



Product data sheet



Marking



Features

Blocking voltage to 600V (400V @MCR100-6).

RMS on-state current to 0.8A.

Features

General purpose switching.

Phase control applications.

Solid state relays.

Absolute Maximum Ratings(Ta=25℃)

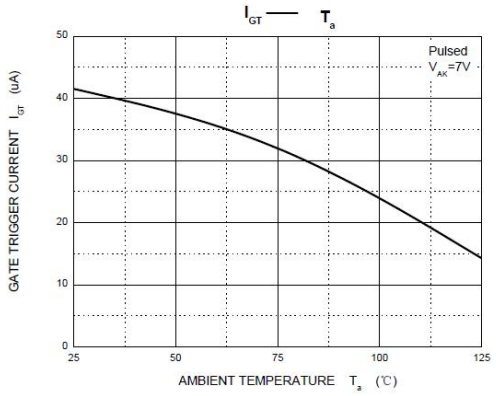
Symbol	Parameter	Part	Value	Unit
V_{DRM}	Repetitive peak off-state voltage	MCR100-6	400	V
V_{RRM}	Repetitive peak reverse voltage	MCR100-8	600	V
V_{EBO}	Emitter-Base Voltage		7	V
$I_{T(RMS)}$	RMS on-state current(T=60℃)		0.8	A
I_{TSM}	Non repetitive surge peak on-state current(tp=10ms)		8	A
I_{GM}	Peak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

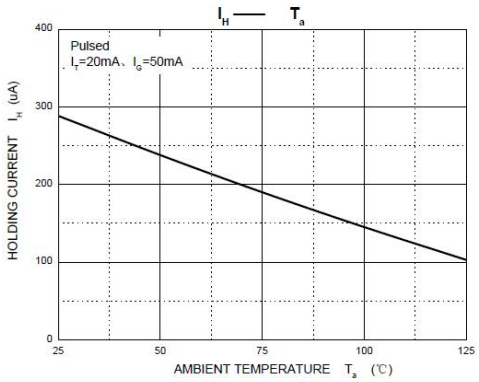
Electrical Characteristics (Ta=25℃ unless otherwise specified)

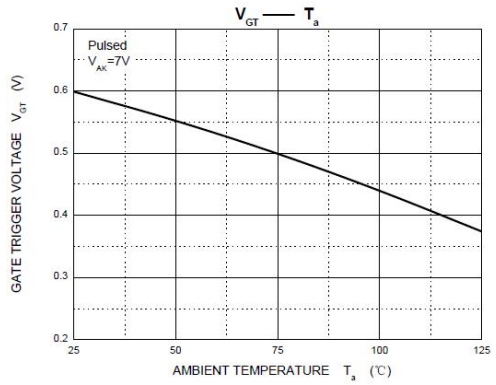
Symbol	Parameter	Test conditions	Part	Min	Typ	Max	Unit
V_{TM}	On state voltage	I_{TM}=1A ,tp=380μS				1.7	V
V_{GT}	Gate trigger voltage	V_{AK}=7V				0.8V	V
$V_{(BR)EBO}$	Peak Repetitive forward and Reverse blocking voltage	I_{DRM}/I_{RRM}=100μA	MCR100-6 MCR100-8	400 600			V
I_{DRM} I_{RRM}	Peak forward 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

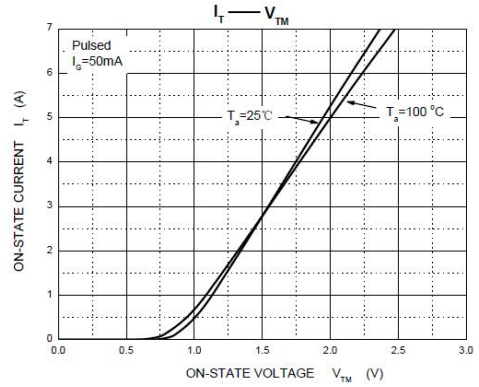
* Forward current applied for 1 ms maximum duration duty cycle1%.

TypicalCharacteristics

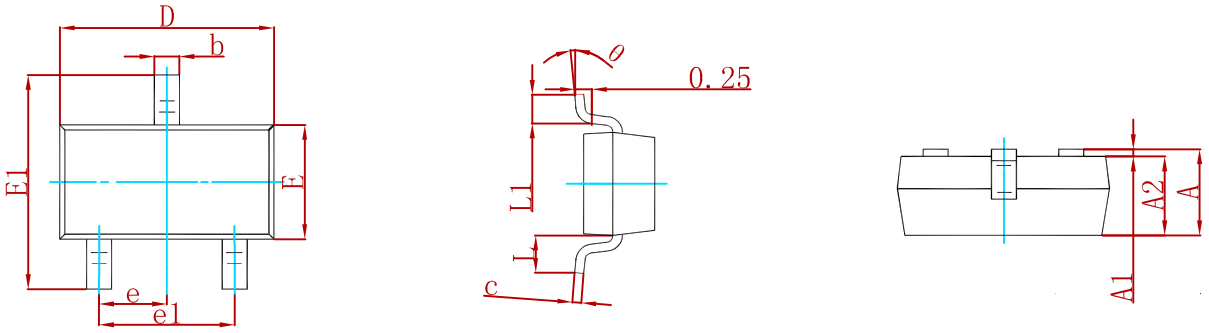






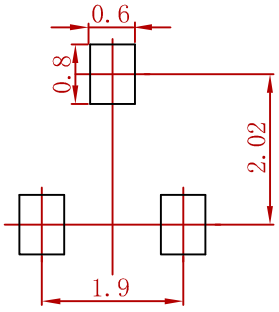


PACKAGE MECHANICAL DATA



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°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MCR100-6 MCR100-8	SOT-23	3000

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