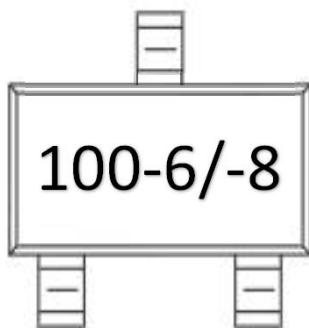


SOT-23 Plastic-Encapsulate Transistors Silicon Controlled Rectifiers

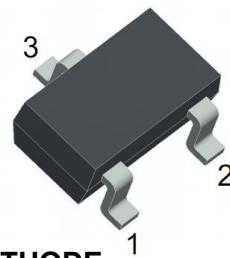
MARKING:



Equivalent Circuit:



SOT-23



1.KATHODE
2.GATE
3.ANODE

DESCRIPTION:

These devices are intended to be interfaced directly to microcontrollers, logic integrated circuits and other low power gate trigger circuits.

Weight : 0.22 gram

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

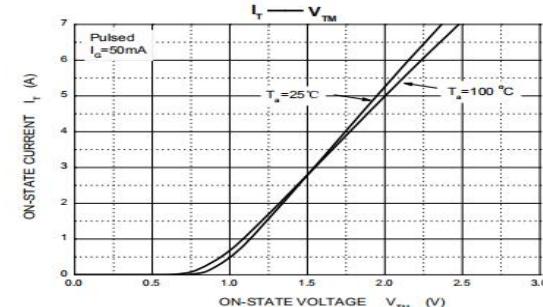
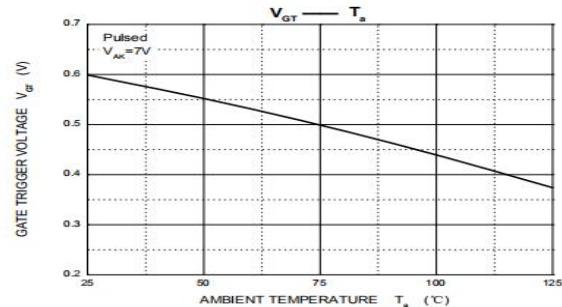
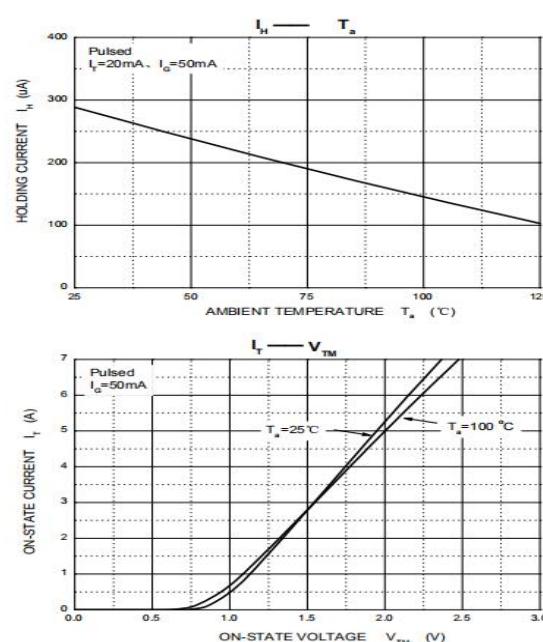
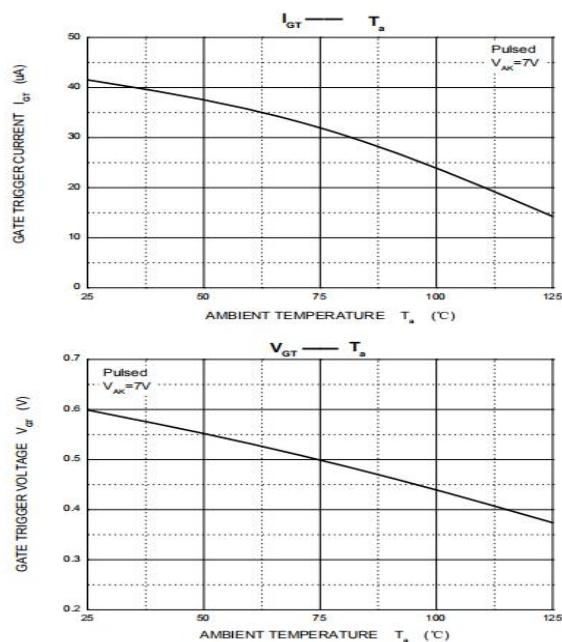
Rating	Symbol	MCR100-6	MCR100-8	Unit
Repetitive Peak Off-stage Voltage	VDRM	400	600	V
Collector-Base Voltage	ITRMS		0.8	A
Gate Trigger Current	IGT(Q1)		200	µA
Junction Temperature Range	TJ		+150	°C
Storage Temperature Range	TStg		-55 to +150	°C

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

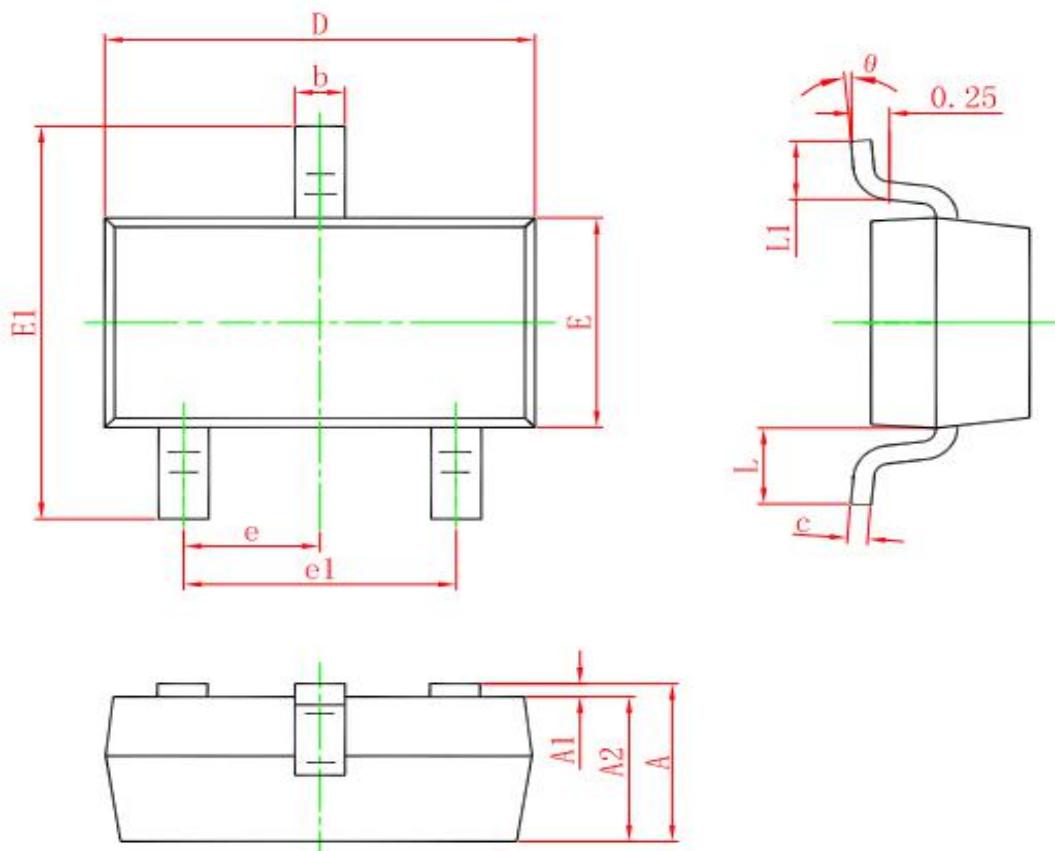
Parameter	Symbol	Test Condition	Min	Max	Unit
On state voltage	VTM *	ITM=1A			V
Gate trigger voltage	VGT	VAK=7V			V
Peak Repetitive forward and reverse blocking voltage MCR100-6 MCR100-8	VDRM AND VRRM	IDRM=10 μA	400 600		V
Peak forward or reverse blocking Current	IDRM IRRM	VAK=Rated VDRM or VRRM		10	μA
Holding current	IH	IHL=20mA VAK=7V		5	mA
Gate trigger current	IGT	A2	VAK=7V	5	μA
		A1		10	μA
		A		60	μA
		B		80	μA

* Forward current applied for 1 ms maximum duration, duty cycle \leq 1%.

TYPICAL ELECTRICAL AND THERMAL 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°

Flow (wave) soldering (solder dipping)

Product	Peak Temperature	Dipping Time
Pb device	245°C±5°C	5sec±1sec
Pb-Free device	260°C+0/-5°C	5sec±1sec



This integrated circuit can be damaged by ESD. BYSEMI Corporation recommends that all integrated circuits be handled with appropriate precautions. Failure to observe proper handling and installation procedure can cause damage. ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.