

APPLICATIONS

- ◆ USB 2.0 power and data line
- ◆ Digital TV and Digital video interface
- ◆ Industrial Controls
- ◆ Set-Top Box
- ◆ SIM Ports, 10/1000 Ethernet
- ◆ Servers, Notebook, and Desktop PC

IEC COMPATIBILITY

- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 η s)
- ◆ IEC61000-4-5 (Lightning) 12A (8/20 μ s)

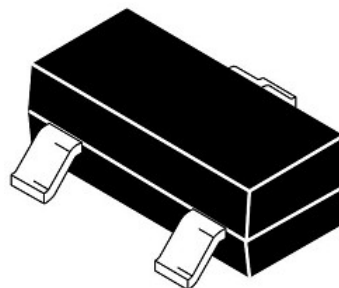
FEATURES

- ◆ 300 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ◆ Protects one bidirectional line or two unidirectional lines
- ◆ Low clamping voltage
- ◆ RoHS Compliant

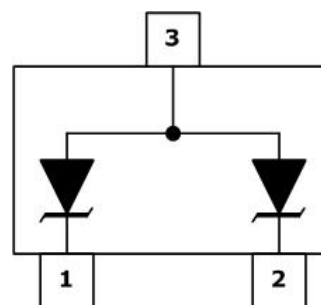
MECHANICAL CHARACTERISTICS

- ◆ JEDEC SOT-23 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 8.0 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free

SOT-23



PIN CONFIGURATION



DEVICE CHARACTERISTICS

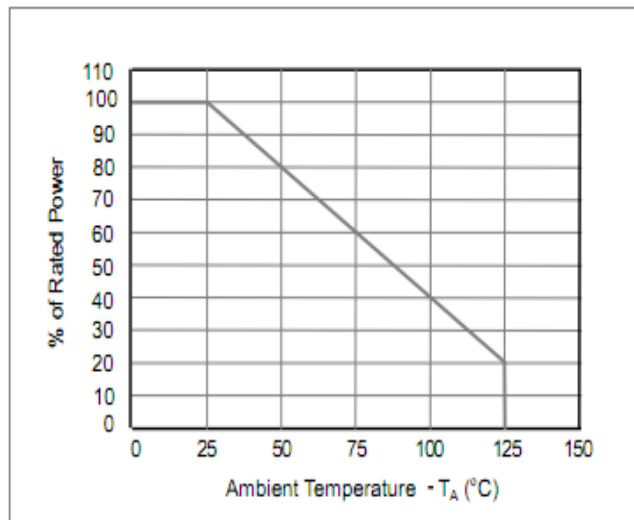
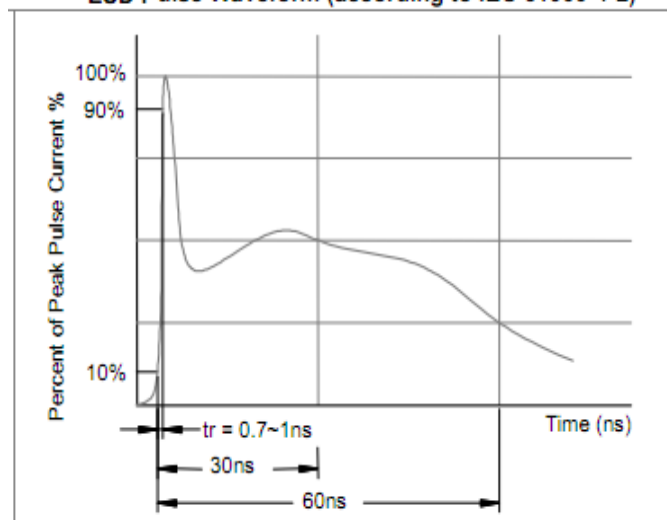
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	300	Watts
Lead Soldering Temperature	T _L	260 (10 sec.)	°C
Operating Temperature Range	T _J	-55 ~ 125	°C
Storage Temperature Range	T _{STG}	-55 ~ 125	°C

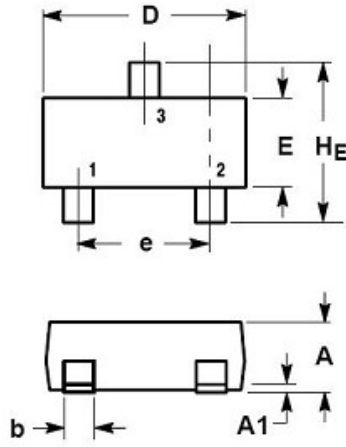
ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

PART NUMBER	DEVICE MARKING	V _{RWM}	V _B	I _T	V _C	V _C		I _R	C _T
		(V) (max.)	(V) (min.)		@1A (max.)	(max.)	(@A)		
SM03	M03	3.3	4.0	1	6.5	10.9	13	100	400
SM05	05C	5	6.0	1	9.8	13.5	10	10	300
SM08	M08	8	8.5	1	13.4	16.9	8	5	250
SM12	M12	12	13.3	1	19	25.9	5	1	150
SM15	M15	15	16.7	1	24	30	4	1	100
SM24	M24	24	26.7	1	43	49	3	1	88
SM36	M36	36	40.0	1	51	76.8	2	1	60

ESD Pulse Waveform (according to IEC 61000-4-2)



SOT-23 PACKAGE OUTLINE & DIMENSIONS



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104

* SOLDERING FOOTPRINT

