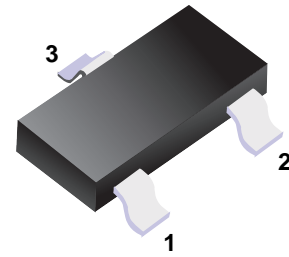


Plastic Encapsulate ESD Protection Diodes

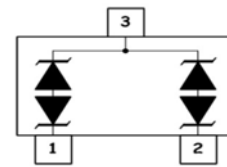
**Features**

- 350 Watts Peak Pulse Power per (8/20μs)
- IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- Protects two bidirectional line
- Low clamping voltage
- Low leakage current
- Working voltages : 3V, 5V, 8V, 12V, 15V, 18V, 20V, 24V, 36V
- Meets MSL 1 Requirements



■ Simplified outline(SOT-23)

**Circuit Diagram**



**Mechanical Characteristics**

- Package: SOT-23
- Flammability Rating: UL 94V-0
- Terminal: Matte tin plated.
- High temperature soldering guaranteed: 260°C /10s
- Packaging: Tape and Reel

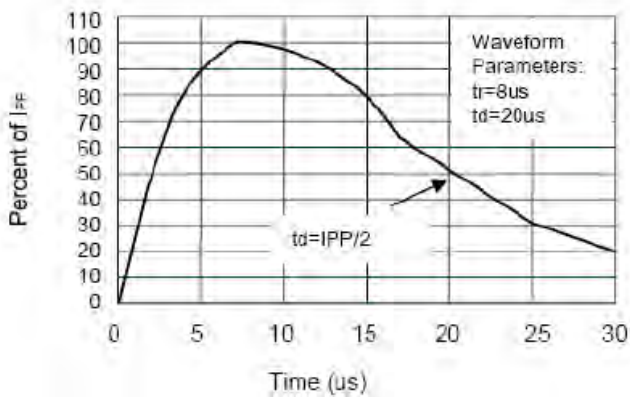
**Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)**

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	± 15	KV
ESD per IEC 61000-4-2 (Contact)		± 8	
Peak Pulse Power(tp=8/20us waveform)	P <sub>PP</sub>	350	W
Operating Temperature	T <sub>OPT</sub>	-55 to +150	°C
Storage Temperature	T <sub>STG</sub>	-55 to +150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	T <sub>L</sub>	260(10 sec.)	°C

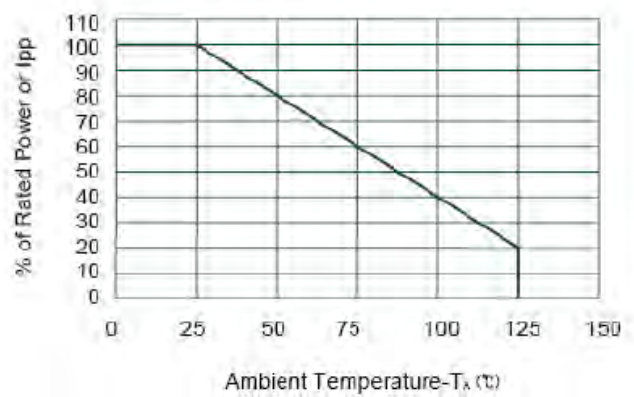
**Electrical Characteristics** ( $T_A=25^{\circ}\text{C}$  unless otherwise specified)

PART NUMBER	$V_{RWM}$ (V) (max.)	$V_B$ (V) (min.)	$I_T$ (mA)	$V_{C@1A}$ (V) (max.)	$V_C$ (V)		$I_R$ ( $\mu\text{A}$ ) (max.)	$C_T$ (pF) (max.)
					(max.)	(@A)		
SM03C	3.3	4	1	7.5	13	20	40	450
SM05C	5	6	1	9.8	18	17	10	200
SM08C	8	8.5	1	13.4	24	15	2	120
SM12C	12	13.3	1	19	32	11	1	75
SM15C	15	16.7	1	24	38	10	1	68
SM18C	18	20.0	1	29	45	9	1	57
SM20C	20	22.3	1	35	50	8	1	52
SM24C	24	26.7	1	43	52	7	1	50
SM36C	36	40	1	60	75	4.5	1	35

**ELECTRICAL CHARACTERISTICS CURVE**



**Pulse Waveform**

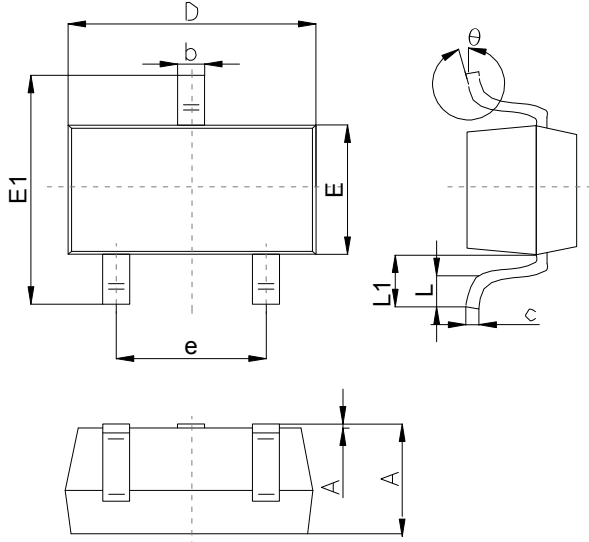


**Power Derating Curve**

Package Outline

SOT-23

Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	1.00		1.40
A1			0.10
b	0.35		0.50
c	0.10		0.20
D	2.70	2.90	3.10
E	1.40		1.60
E1	2.4		2.80
e		1.90	
L	0.10		0.30
L1	0.4		
θ	0°		10°

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1