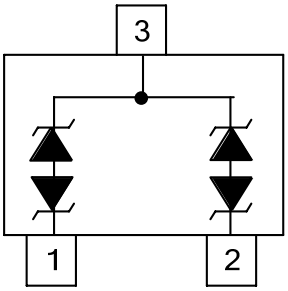
RoHS Device
Halogen Free

Features

- 350 watts peak pulse power (t_p = 8/20μs)
- Low clamping voltages
- Low Leakage Current
- Response Time is Typically < 1 ns
- AEC-Q101 Qualified

SOT-23



Pin Configuration

Mechanical Characteristics

- JEDEC SOT-23 package
- Molding compound flammability rating:
- UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481

Applications

- RS-232, RS-422 & RS-485
- Cellular Handsets and Accessories
- Control & Monitoring Systems
- Portable Electronics
- Set-Top Box
- Servers, Notebook, and Desktop PC
- Wireless Bus Protection

IEC COMPATIBILITY (EN61000-4)

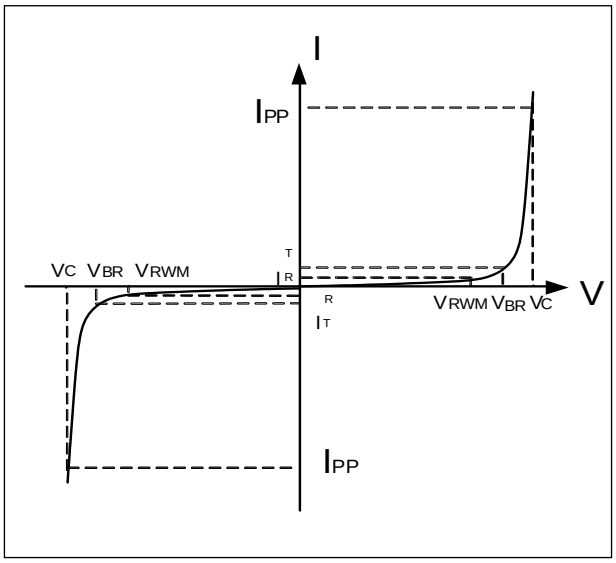
- IEC 61000-4-2 (ESD) ±30kV (air), ± 30kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 12A(8/20μs)

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power（t_p=8/20μs）	P_{PP}	350	Watts
Lead Soldering Temperature	T_L	260(10sec)	℃
Operating Temperature	T_J	-55 to + 125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Parameters (T=25℃)

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F

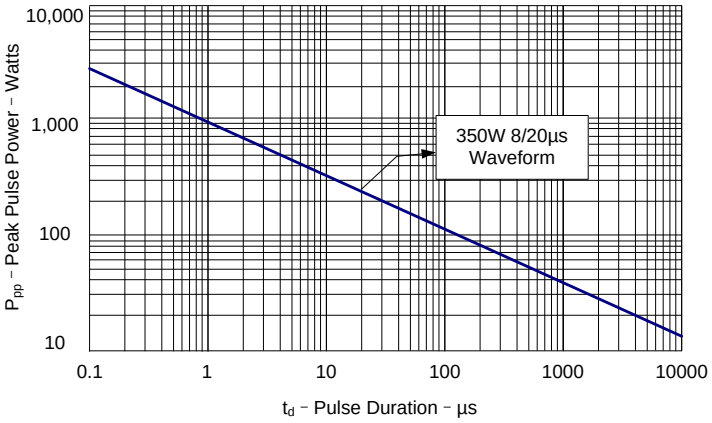


Electrical Characteristics

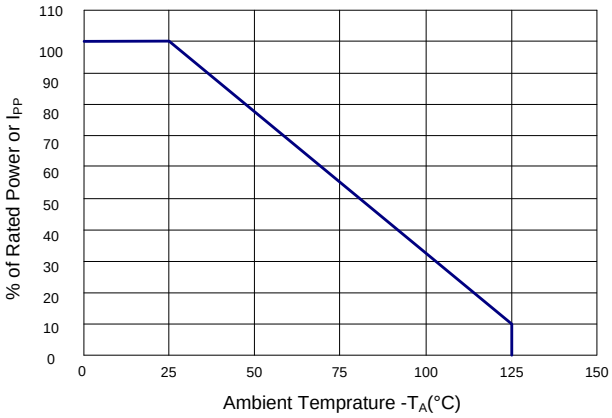
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	V_{RWM}				15	V
Reverse Breakdown Voltage	V_{BR}	I_T=1mA	16.7			V
Reverse Leakage Current	I_R	V_{RWM}=15V, T=25℃			0.5	μA
Peak Pulse Current	I_{PP}	t_p=8/20μs			12	A
Maximum Clamping Voltage	V_C	I_{PP}=12A, tp=8/20μs		30		V
Junction Capacitance	C_j	Pin 1 to 3 or Pin 2 to 3 V_R = 0V, f = 1MHz		35		pF

Typical Characteristics

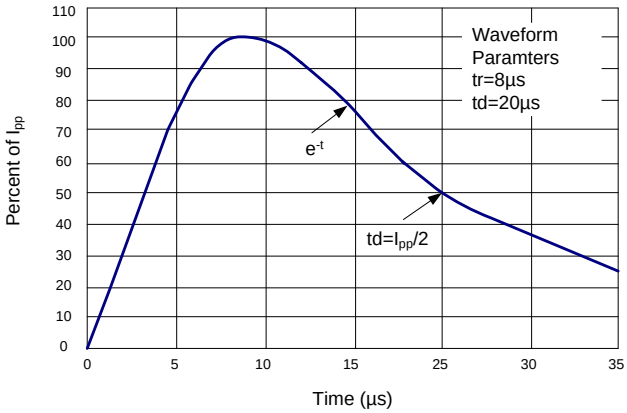
Peak Pulse Power vs. Pulse Time



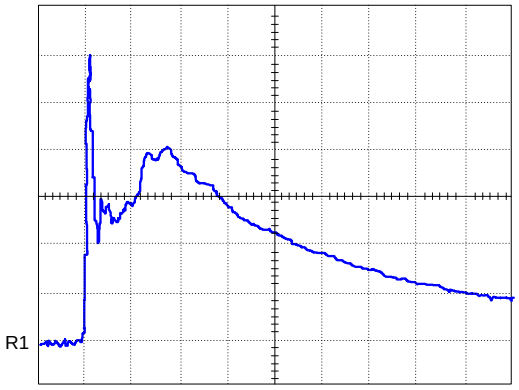
Power Derating Curve



Pulse Waveform

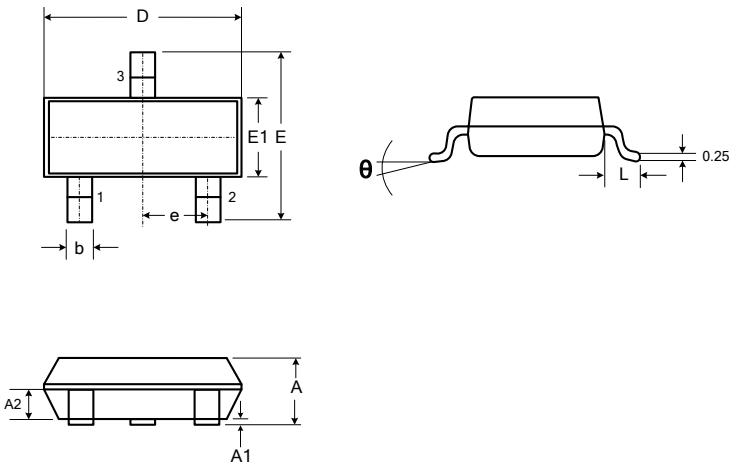


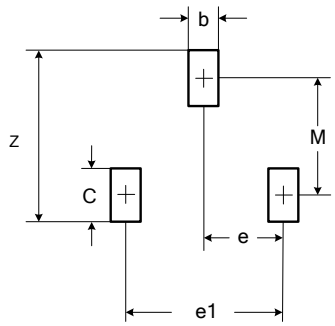
ESD Pulse Waveform (Per IEC 61000-4-2)



Outline Drawing – SOT-23

PACKAGE OUTLINE





DIMENSIONS		
DIM	**INCHES**	**MILLIMETERS**
M	**0.101**	**2.60**
C	**0.0058**	**0.15**
Z	**0.109**	**2.80**
e	**0.037 BSSC**	**0.95 BSC**
e1	**0.074 BSC**	**1.9 BSC**
b	**0.0389**	**0.35**

DIMENSIONS				
SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.89	1.13	0.035	0.044
A1	0.015	0.11	0.0006	0.0043
A2	0.60	0.70	0.0236	0.0275
D	2.72	3.12	0.1070	0.1228
E	2.60	3.00	0.1024	0.118
E1	1.40	1.80	0.0551	0.0709
e	0.95 BSC		0.0374 BSC	
L	0.30	0.60	0.0118	0.0236
θ	0	8°	0	8°

Notes

1. Dimensioning and tolerances per ANSI Y14.5M, 1985.
2. Controlling Dimension: Inches
3. Pin 3 is the cathode (Unidirectional Only).
4. Dimensions are exclusive of mold flash and metal burrs.