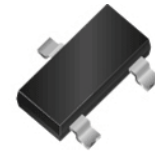


RoHS Device
Halogen Free

Features

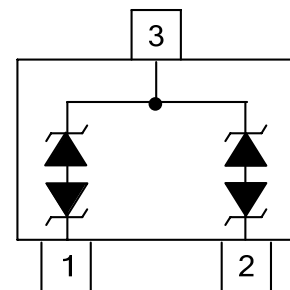
- 350 watts peak pulse power ($t_p = 8/20\mu s$)
- Low clamping voltages
- Low Leakage Current
- Response Time is Typically $< 1\text{ ns}$
- AEC-Q101 Qualified



SOT-23

Mechanical Characteristics

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



Pin Configuration

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)

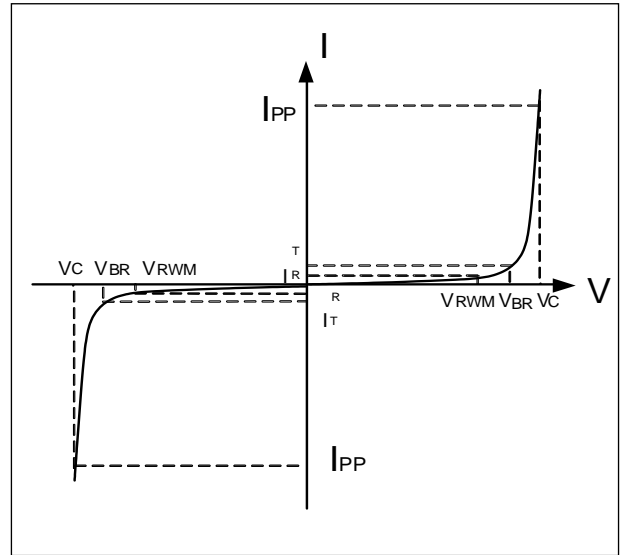
- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 32A(8/20 μs)

Absolute Maximum Rating

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20 μs)	Ppk	350	W
ESD per IEC 61000-4-2 (Air)	VESD	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 30	
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

Electrical Parameters (T=25°C)

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

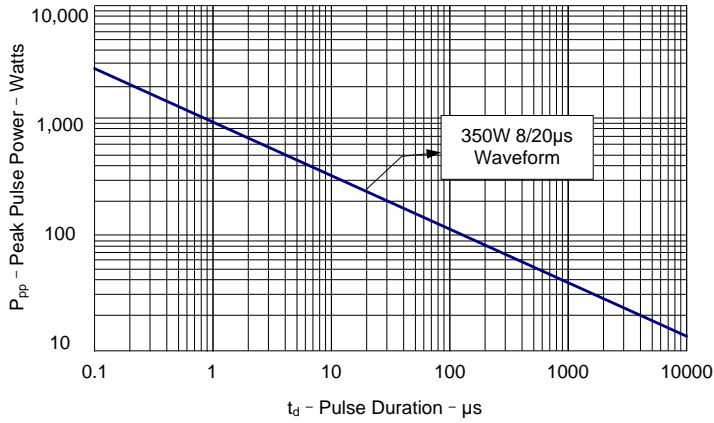


Electrical Characteristics

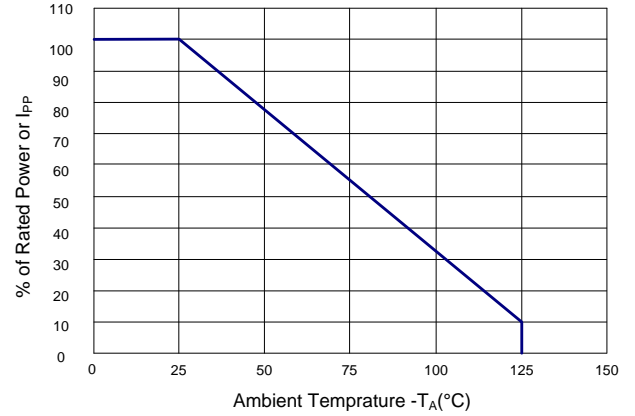
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}			3.3	V	
Breakdown Voltage	V_{BR}	4			V	$I_T = 1\text{mA}$
Reverse Leakage Current	I_R		0.01	0.5	μA	$V_{RWM} = 3.3\text{V}$
Clamping Voltage	V_C		5		V	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)
Clamping Voltage	V_C		10		V	$I_{PP} = 32\text{A}$ (8 x 20 μs pulse)
Peak Pulse Current	I_{PP}			32	A	$t_P = 8/20\mu\text{s}$
Junction Capacitance	C_J			100	pF	$V_R = 0$, $f = 1\text{MHz}$, Pin 1 to Pin 3 or Pin 2 to Pin 3

Typical Characteristics

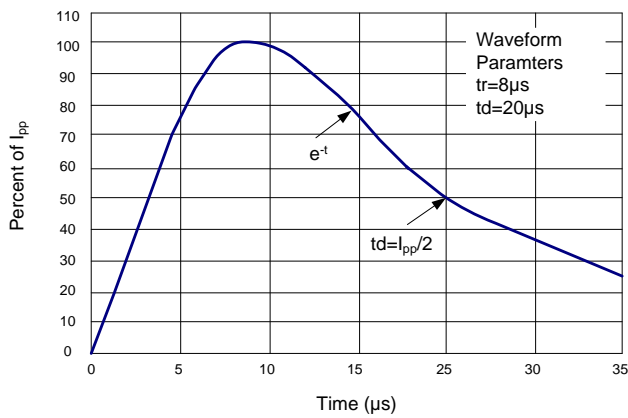
Peak Pulse Power vs. Pulse Time



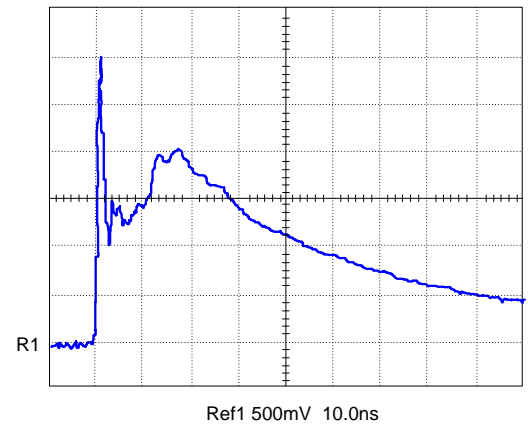
Power Derating Curve



Pulse Waveform

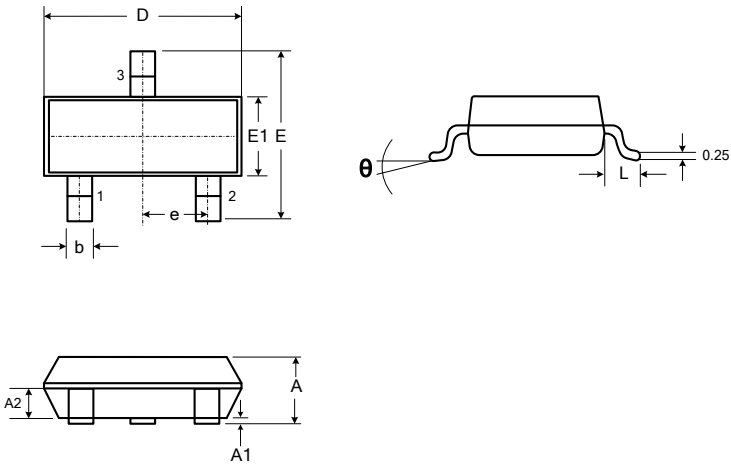


ESD Pulse Waveform (Per IEC 61000-4-2)

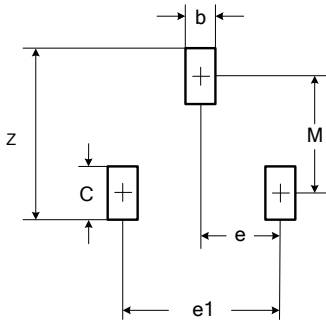


Outline Drawing – SOT-23

PACKAGE OUTLINE



SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
	A	0.89	1.13	0.035
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°



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

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.