

Features

- 1500 Watts Peak Pulse Power per Line ($t_p = 8/20\mu s$)
- Replacement for MLV (0805)
- Protects one I/O or power line
- Low Clamping Voltage
- Working Voltage: 12 V
- Low Leakage Current
- Response Time is Typically < 1 ns



IEC COMPATIBILITY (EN61000-4)

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

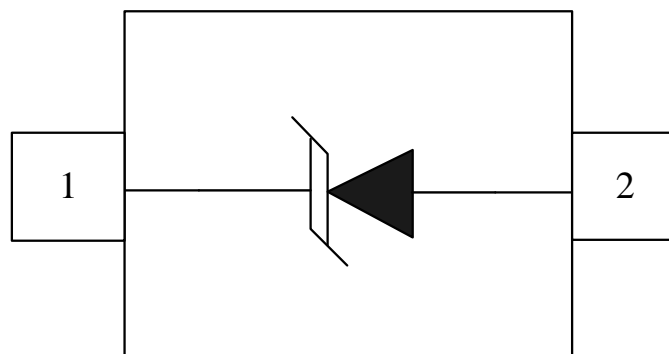
Mechanical Characteristics

- JEDEC SOD-323F package
- Molding compound flammability rating: UL 94V-0
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

Schematic & PIN Configuration

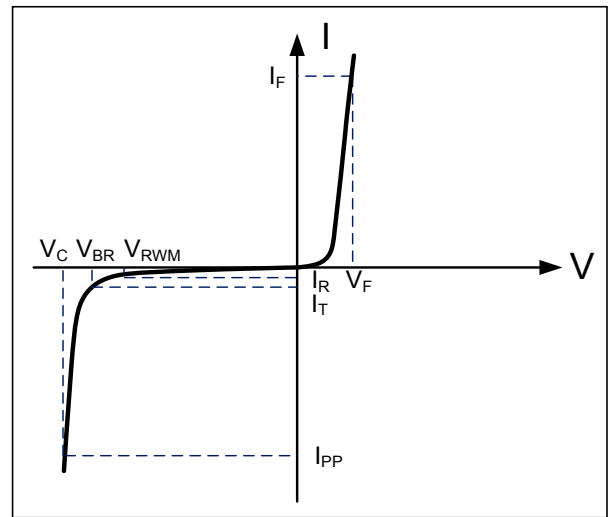


SOD-323F (Top View)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	1500	Watts
Maximum Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	50	A
Operating Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{STG}	-55 to +125	$^{\circ}C$

Electrical Parameters (T=25 $^{\circ}C$)

Symbol	Parameter
I_{PP}	Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	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

US12D3HP						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Forward Voltage	V_F	$I_F=1mA$		0.7		V
Reverse Stand-Off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13	14.5	16	V
Reverse Leakage Current	I_R	$V_{RWM}=12V, T=25^{\circ}C$			200	nA
Clamping Voltage	V_C	$I_{PP}=50A, t_p=8/20\mu s$			30	V
Junction Capacitance	C_j	$V_R=0V, f=1MHz$		265		pF

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

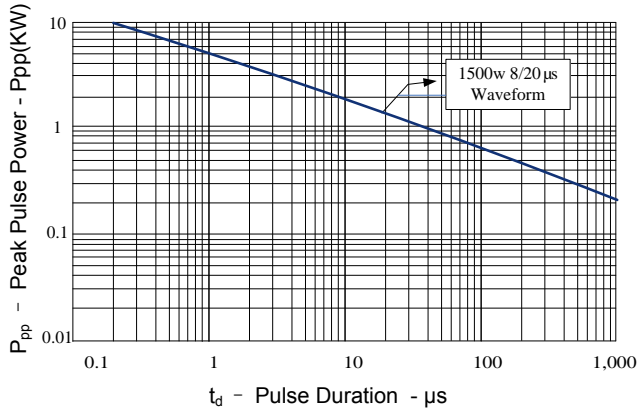


Figure 2: Power Derating Curve

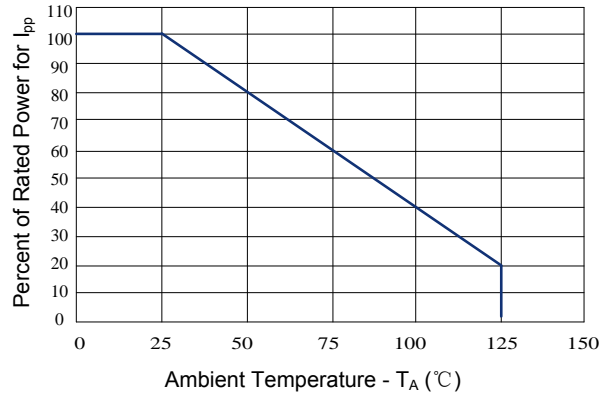


Figure 3: Clamping Voltage vs. Peak Pulse Current

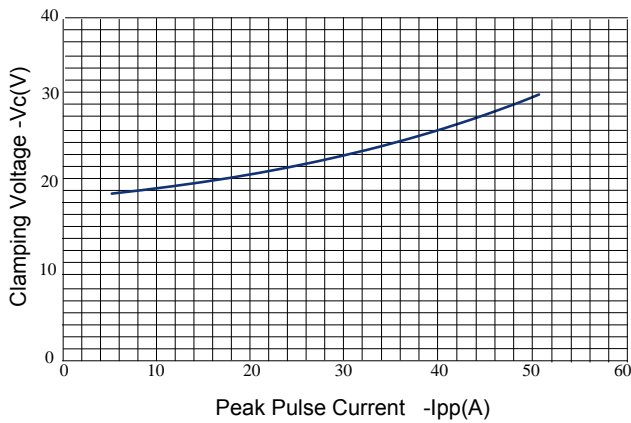


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

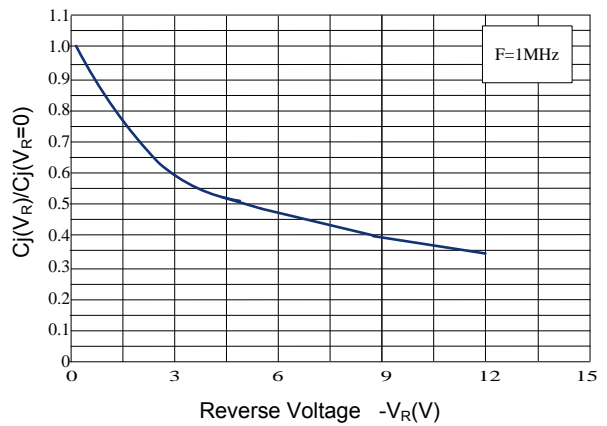
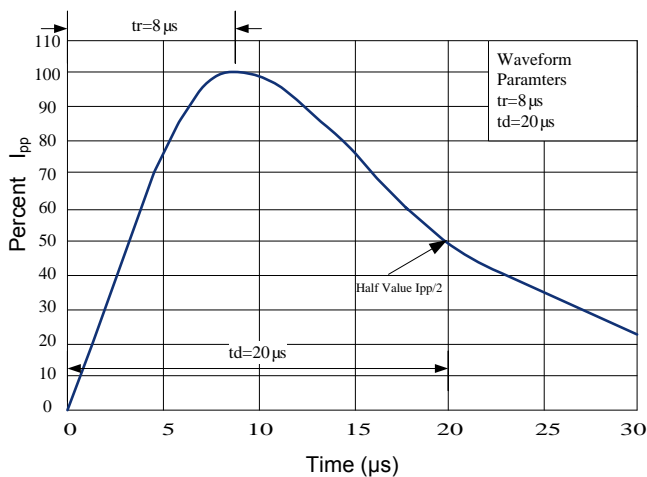
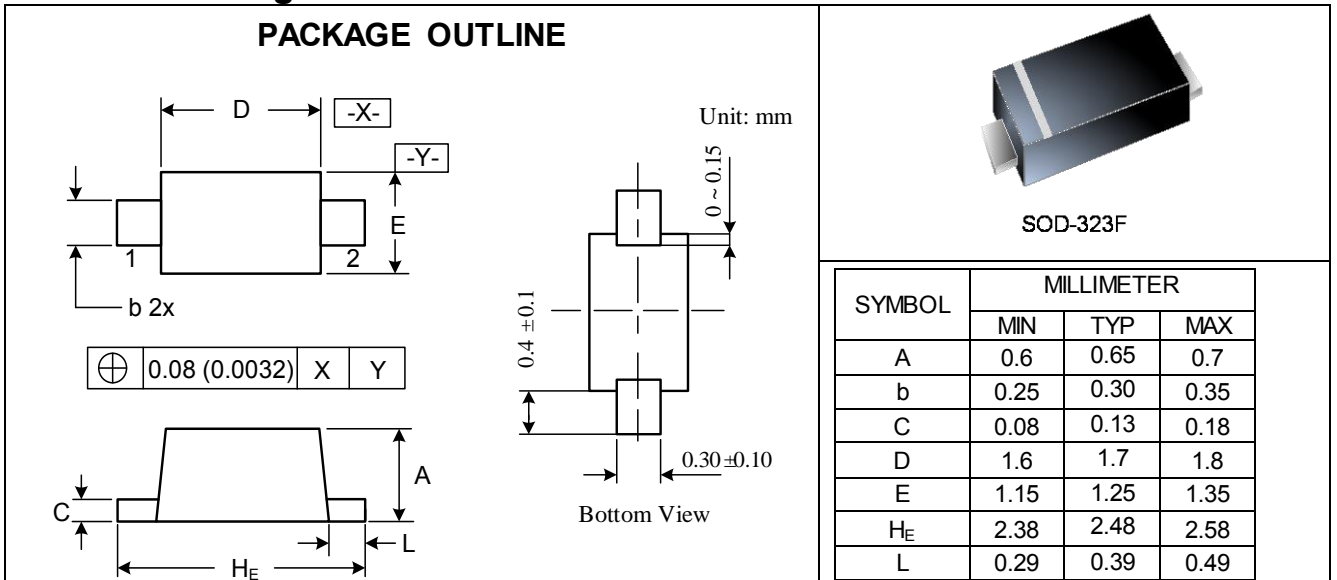


Figure 5: 8/20μs Pulse Waveform

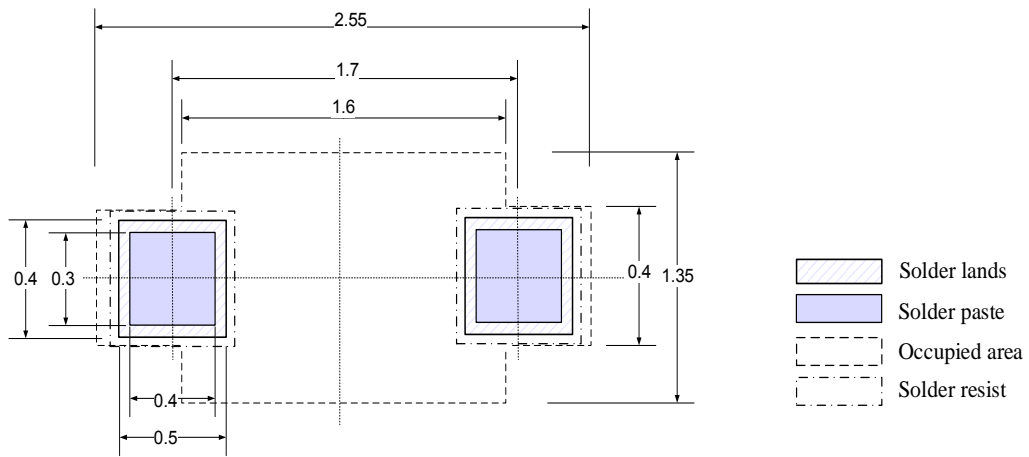


Outline Drawing – SOD-323F



Notes

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: MILLIMETERS.
3. MAXIMUM LEAD THICKNESS INCLUDES LEAD FINISH THICKNESS. MINIMUM LEAD THICKNESS IS THE MINIMUM THICKNESS OF BASE MATERIAL.



Marking Codes



Package Information

Qty: 3k/Reel