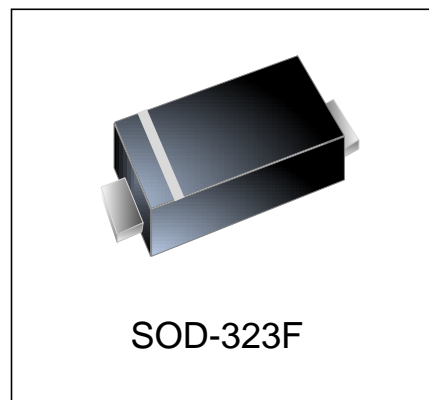


### Features

- 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)  $\pm 30kV$  (air),  $\pm 30kV$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 50A (8/20 $\mu s$ )

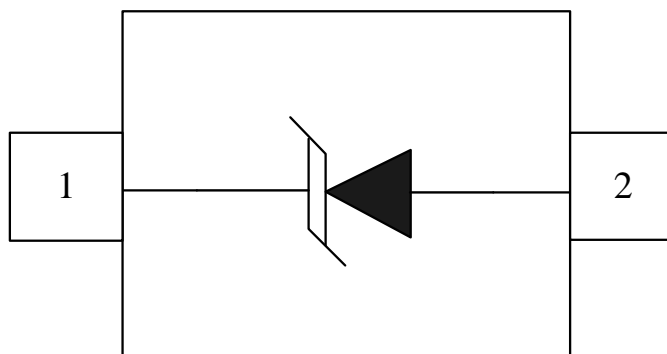
### Mechanical Characteristics

- 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

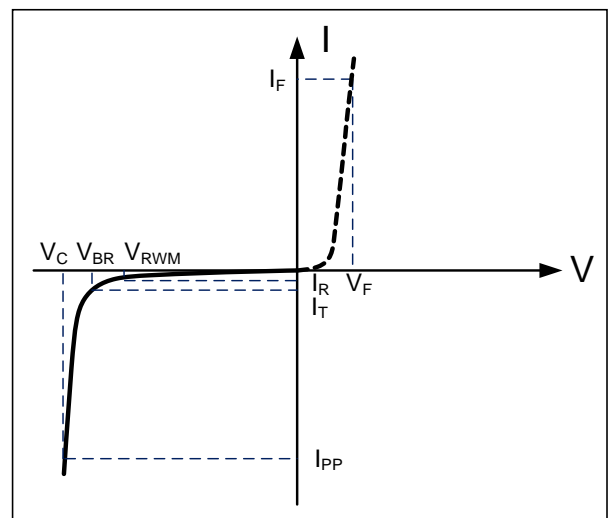


SOD-323F (Top View)

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 +150	$^{\circ}C$

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

DW12D3HP-S						
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

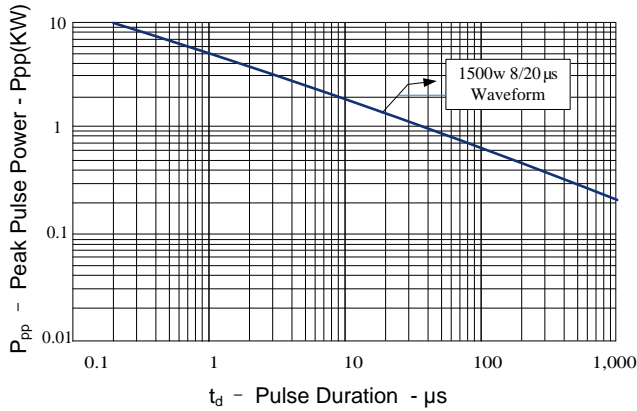


Figure 2: Power Derating Curve

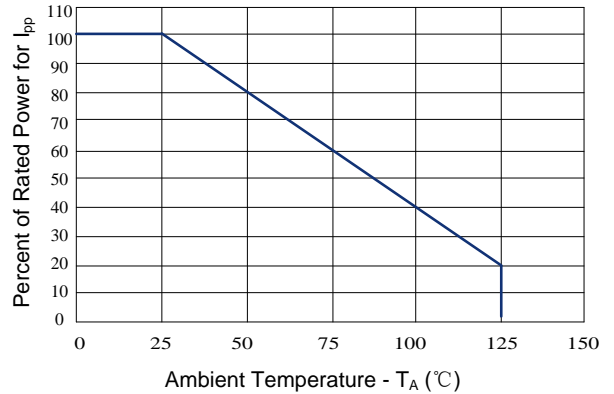


Figure 3: Clamping Voltage vs. Peak Pulse Current

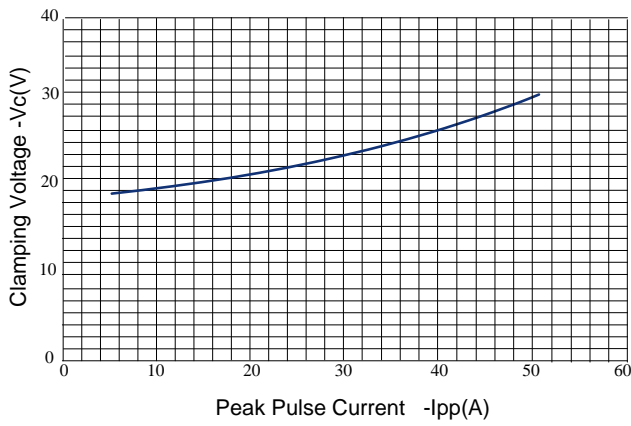


Figure 4: Normalized Junction Capacitance vs. Reverse Voltage

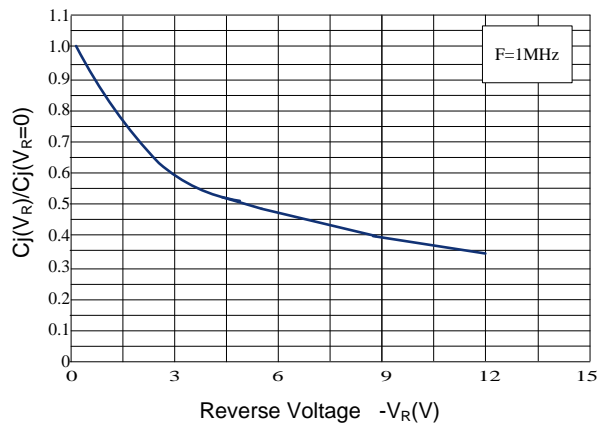
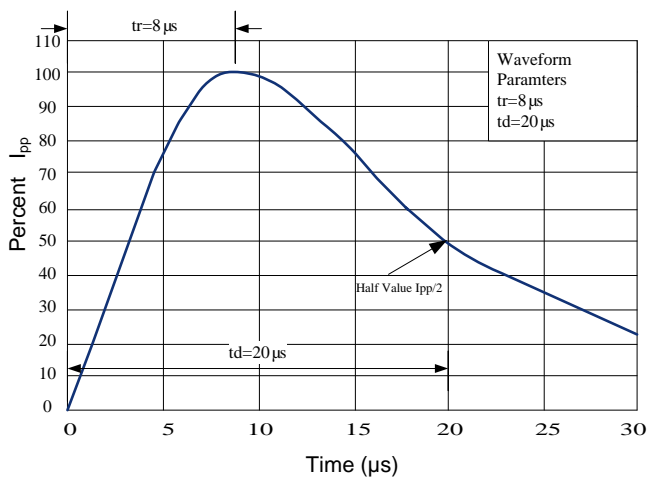
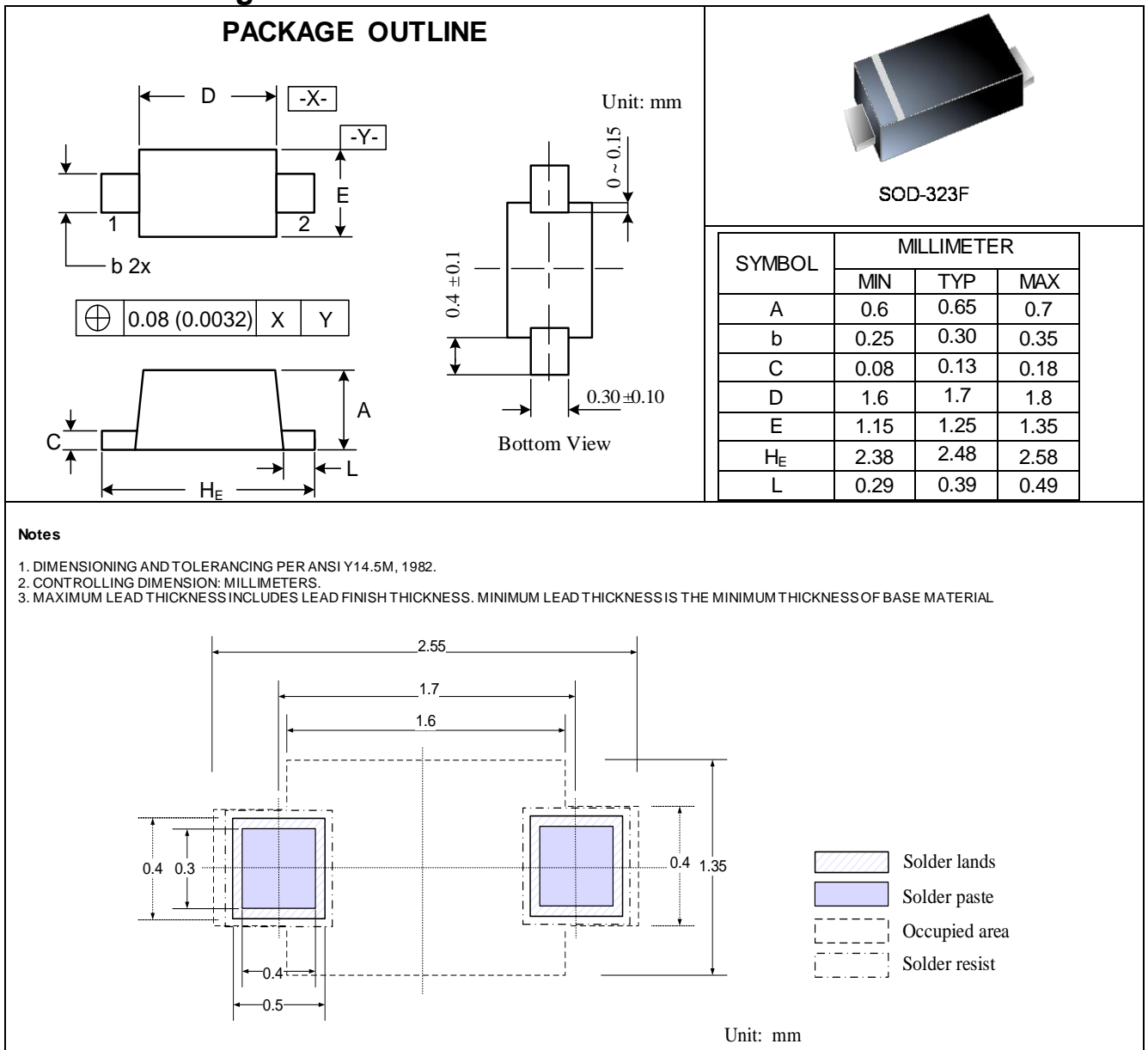


Figure 5: 8/20μs Pulse Waveform



Outline Drawing – SOD-323F



Marking Codes



Package Information

Qty: 3k/Reel