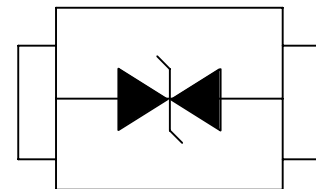


**RoHS Device**  
**Halogen Free**

**Features**

- IEC61000-4-2 ESD 30KV Air, 30KV contact compliance
- SOD-323 surface mount package
- Protects bi-directional line
- Working voltage: 15V
- Low leakage current
- Low clamping voltage
- Solid-state silicon avalanche technology
- Solder reflow temperature: Pure Tin-Sn, 260~270°C
- Flammability rating UL 94V-0
- Meets MSL level 1, per J-STD-020

SOD-323



Pin Configuration

**Applications**

- Cellular handsets & Accessories
- Cordless phones
- Personal digital assistants (PDAs)
- Notebooks & Handhelds
- Portable instrumentation
- Digital cameras
- Peripherals
- MP3 players

**Maximum Ratings**

Rating	Symbol	Value	Unit
Peak pulse power (tp=8/20µs waveform)	P <sub>PP</sub>	350	W
Peak pulse current (tp=8/20µs waveform)	I <sub>PP</sub>	11	A
ESD voltage (Contact discharge)	V <sub>ESD</sub>	±30	kV
ESD voltage (Air discharge)		±30	
Storage & operating temperature range	T <sub>STG</sub> , T <sub>J</sub>	-55~+150	°C

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	$V_{RWM}$				15	V
Reverse breakdown voltage	$V_{BR}$	$I_T = 1mA$	16.7			V
Reverse leakage current	$I_R$	$V_R = 15V$			0.5	$\mu A$
Clamping voltage ( $t_p = 8/20\mu s$ )	$V_C$	$I_{PP} = 1A$			20	V
Clamping voltage ( $t_p = 8/20\mu s$ )	$V_C$	$I_{PP} = 11A$			31	V
Off state junction capacitance	$C_J$	0Vdc, f=1MHz		30		pF

### Typical Characteristics Curves

Figure 1. Power Derating Curve

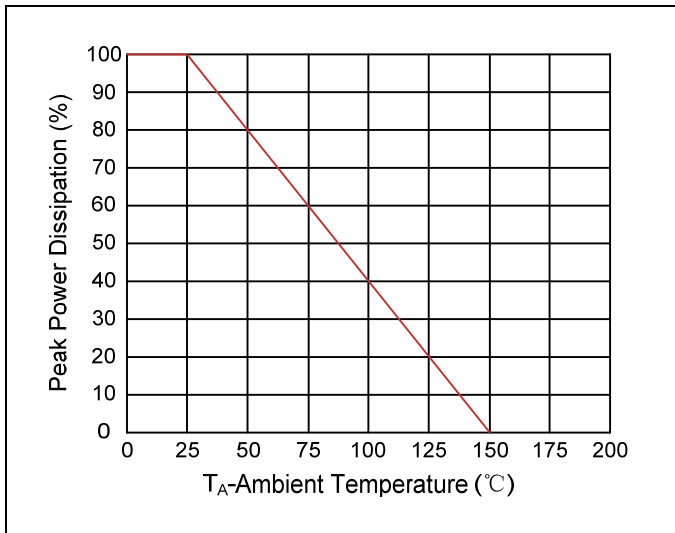


Figure 2. Pulse Waveform

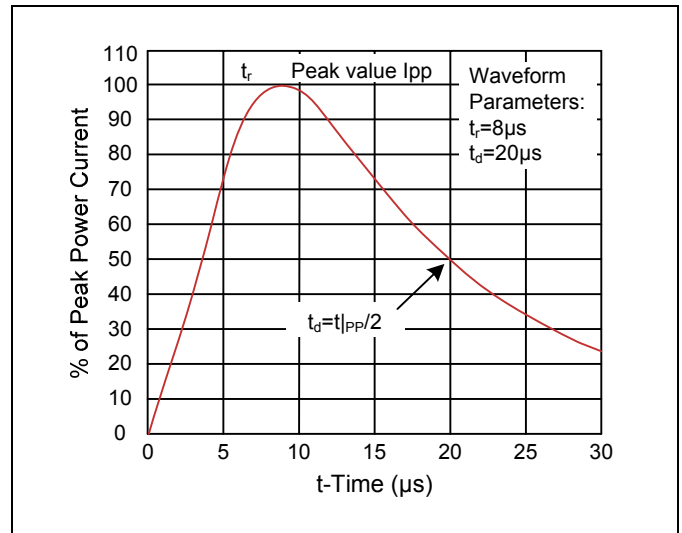
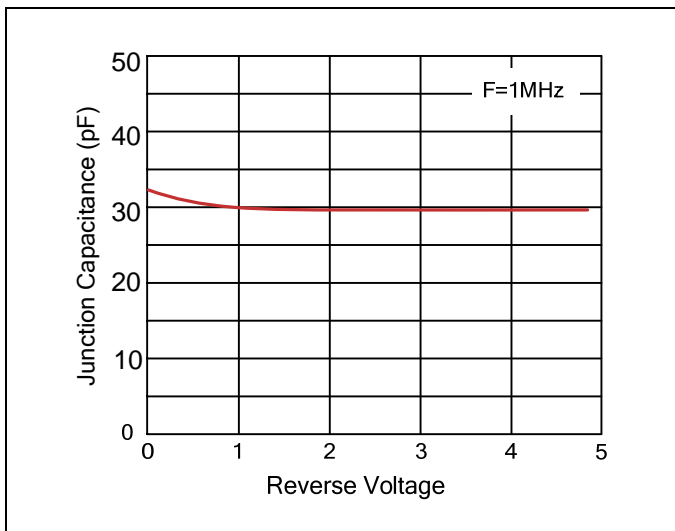
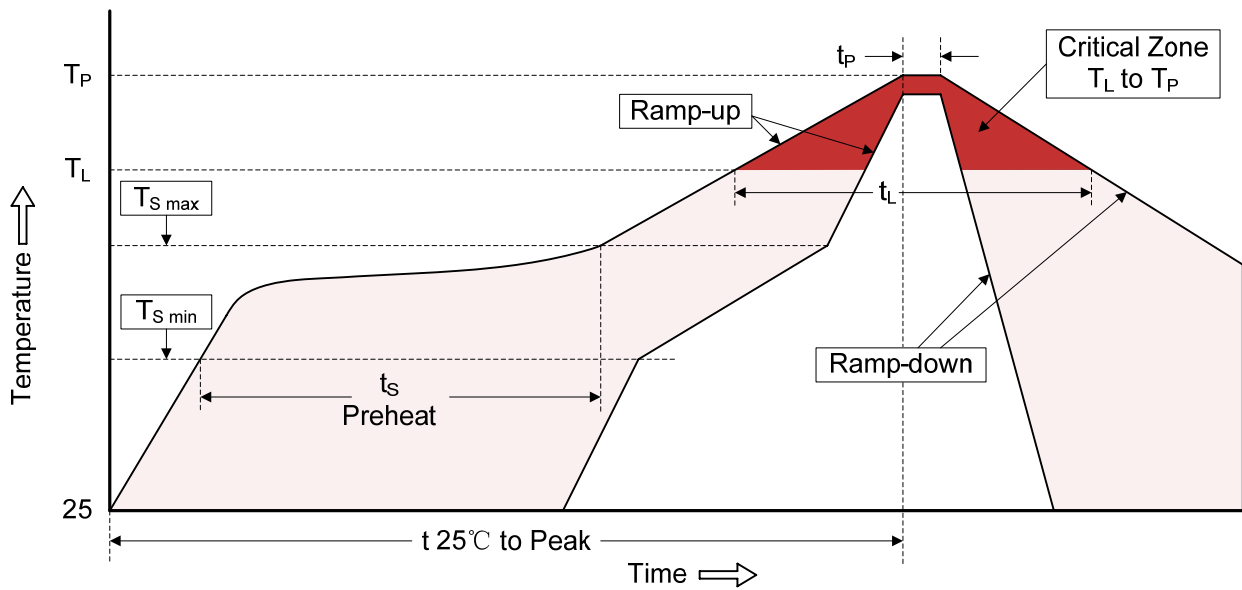


Figure 3. Capacitance vs. Reverse Voltage



### Recommended Soldering Conditions

Reflow Soldering



Recommended Condition

Profile Feature	Pb-Free Assembly
Average ramp-up rate (TL to TP)	3°C/second max.
Preheat -Temperature Min (TSmin) -Temperature Max (TSmax) -Time (min to max) (ts)	150°C 200°C 60-180 seconds
TSmax to TL -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (TL) -Time (tL)	217°C 60-150 seconds
Peak Temperature (TP)	260°C
Time within 5°C of actual Peak Temperature (tp)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

**Dimensions (SOD-323)**

Symbol	Dimension			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.80	1.10	0.031	0.043
B	-	0.10	-	0.004
C	0.20	-	0.008	-
D	0.11	0.20	0.004	0.008
E	1.15	1.35	0.045	0.053
F	-	0.35	-	0.014
G	1.60	1.80	0.063	0.071
H	2.40	2.60	0.094	0.102

Recommended Soldering Pad Layout

**Packaging**

Tape	Symbol	Dimension (mm)
	W	8.00±0.30
	P0	4.00±0.10
	P1	4.00±0.10
	P2	2.00±0.10
	D0	Φ1.55±0.10
	D1	Φ1.00±0.05
	E	1.75±0.10
	F	3.50±0.10
	A	1.48±0.10
	A0	0.80±0.10
	B	3.00±0.10
	B0	1.80±0.10
	K	1.05±0.10
	t	0.25±0.05

Reel	Symbol	Dimension (mm)
	D	Φ178.0±2.0
	D2	Φ13.0
	W1	9.5
	Quantity: 3000PCS	