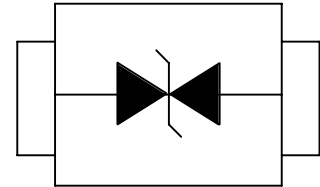


## RoHS Device Halogen Free

### Features

- IEC61000-4-2 ESD 30KV Air, 30KV contact compliance
- SOD-323 surface mount package
- Protects bi-directional line
- Working voltage: 36V
- 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>	300	W
Peak pulse current (tp=8/20μs waveform)	I <sub>PP</sub>	4	A
ESD voltage (Contact discharge) ESD voltage (Air discharge)	V <sub>ESD</sub>	±30	kV
Storage & operating temperature range	T <sub>STG</sub> , T <sub>J</sub>	-55~+150	°C

Electrical Characteristics ( $T_J=25^\circ\text{C}$ )

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	$V_{RWM}$				36	V
Reverse breakdown voltage	$V_{BR}$	$I_{BR}=1\text{mA}$	40			V
Reverse leakage current	$I_R$	$V_R=36\text{V}$			0.5	$\mu\text{A}$
Clamping voltage ( $t_p=8/20\mu\text{s}$ )	$V_C$	$I_{PP}=4\text{A}$		60		V
Off state junction capacitance	$C_J$	$0\text{Vdc}, f=1\text{MHz}$		10		pF

Typical Characteristics Curves

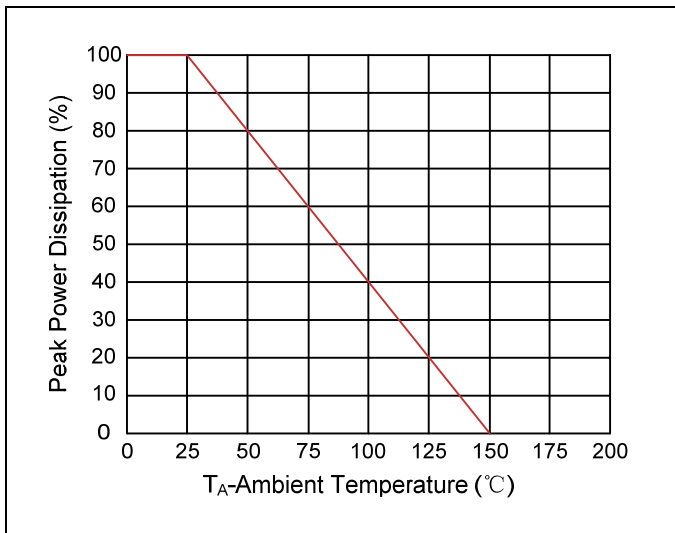


Figure 1. Power Derating Curve

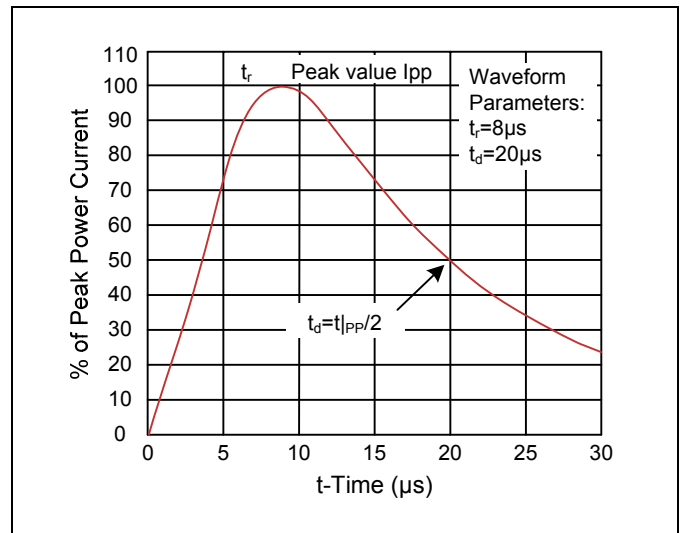


Figure 2. Pulse Waveform

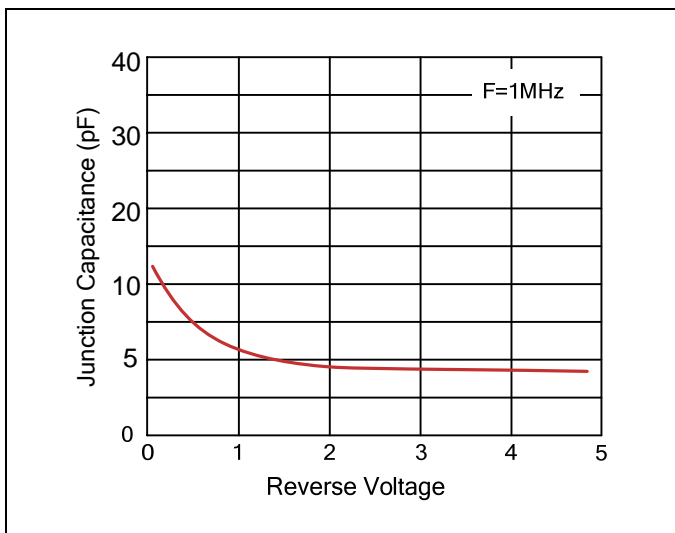
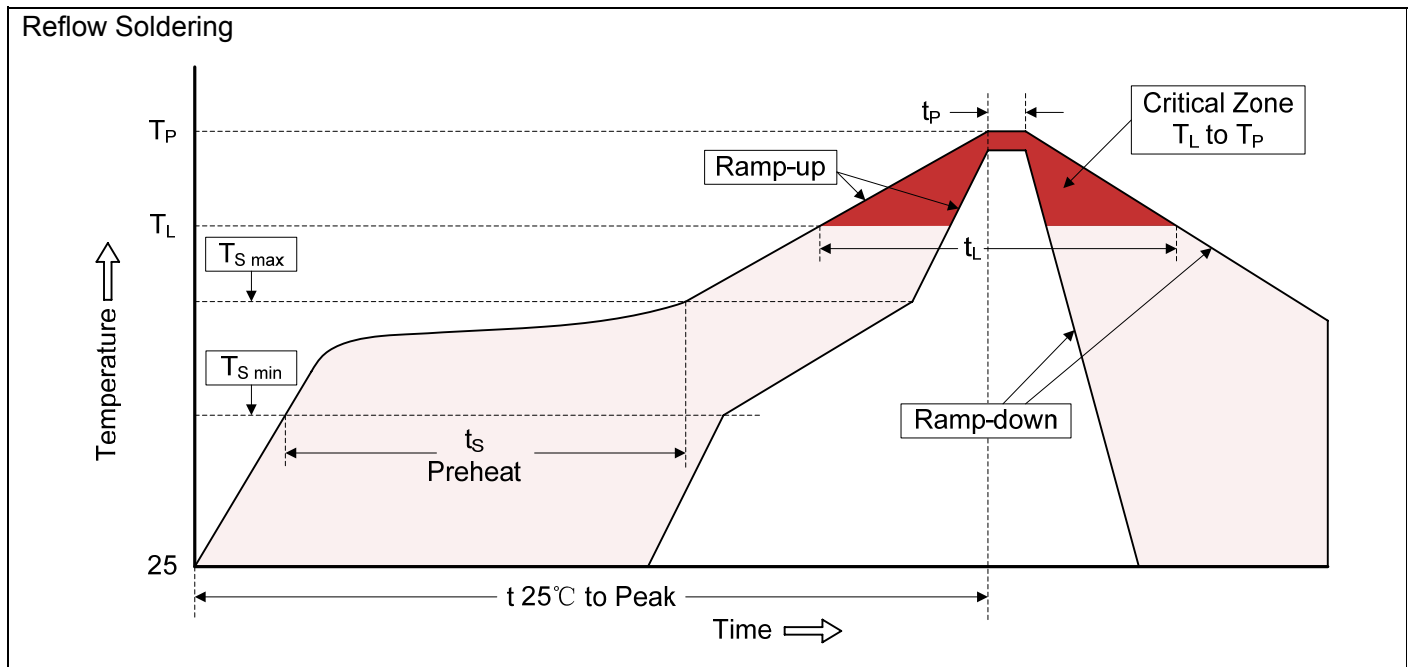


Figure 3. Capacitance vs. Reverse Voltage

**Recommended Soldering Conditions**

**Recommended Condition**

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat -Temperature Min ( $T_{S\ min}$ ) -Temperature Max ( $T_{S\ max}$ ) -Time (min to max) ( $t_s$ )	150°C 200°C 60-180 seconds
$T_{S\ max}$ to $T_L$ -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature ( $T_L$ ) -Time ( $t_L$ )	217°C 60-150 seconds
Peak Temperature ( $T_P$ )	260°C
Time within 5°C of actual Peak Temperature ( $t_p$ )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

**Dimensions (SOD-323)**

<p style="text-align: center;">Recommended Soldering Pad Layout</p>	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

**Packaging**

<p>Tape</p>	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	
<p>Reel</p>	D	Φ178.0±2.0
	D2	Φ13.0
	W1	9.5
	Quantity: 3000PCS	

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