

Features

- ◇ 150W (8/20 μ s) Peak Pulse Power
- ◇ Ultra Low Capacitance ESD Protection
- ◇ Flow Through SOT-563 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead Finish (Pb-Free)
- ◇ Protect Two High Speed Data Lines
- ◇ Meet IEC61000-4-2 Level 4:

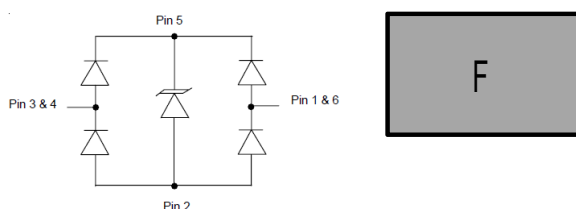
Contact Discharge > 15kV

Air Discharge > 20kV

Applications

- ◇ USB 2.0 High Speed Ports
- ◇ Video Graphics Cards
- ◇ Digital Visual Interface (DVI)
- ◇ 10/100/1000 Ethernet Ports
- ◇ Monitors and Flat Panel Displays
- ◇ IEEE 1394 Firewire Ports High Speed
- ◇ High Definition Multi-Media Interface (HDMI)

Equivalent Circuit



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	150	W
I _{PP}	Peak Pulse Current	5	A
V _{ESD} (Contact)	Contact ESD Voltage per IEC61000-4-2	15	kV
V _{ESD} (Air)	Air ESD Voltage per IEC61000-4-2	20	kV
T _J	Junction Temperature	-55 to +125	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6			V
IR	Reverse Leakage Current	$VRWM = 5\text{V}$			1	μA
VC	Clamping Voltage	$I_{PP} = 1\text{A}$ (8/20 μs)			13	V
CJ	Capacitance	$VR = 0\text{V}$, $f = 1\text{MHz}$ Between I/O pins			0.8	pF
CJ	Capacitance	$VR = 0\text{V}$, $f = 1\text{MHz}$ Any I/O pin to ground			1.5	pF

RATING AND CHARACTERISTIC CURVES

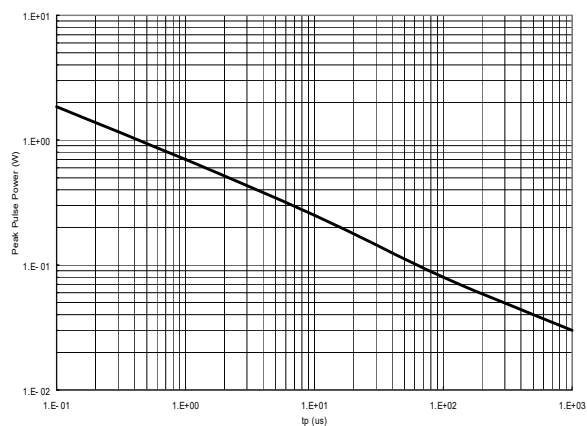


Figure 1. Peak Pulse Power Derating

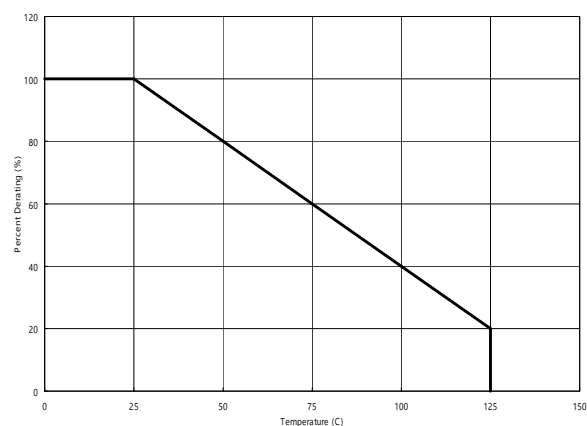


Figure 2. Peak Pulse Power Derating vs Temperature

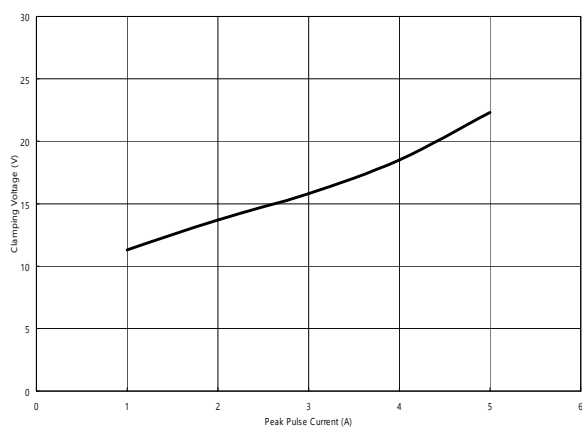


Figure 3. Peak Pulse Current vs Clamping Voltage

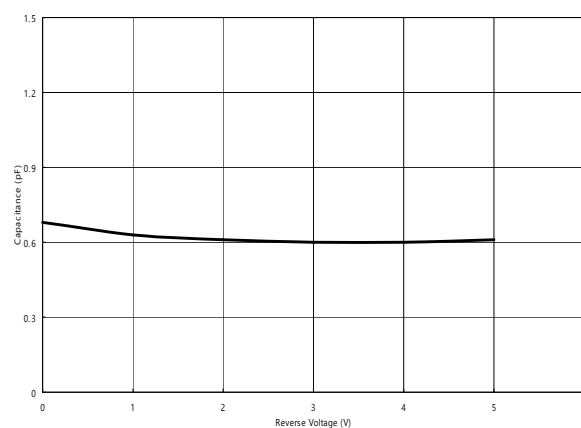
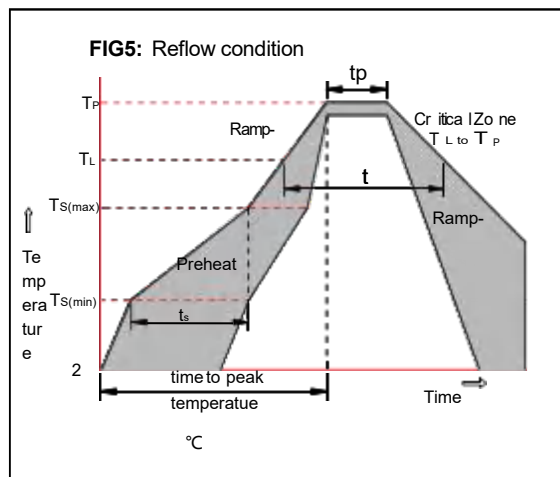


Figure 4. Reverse Voltage vs Capacitance

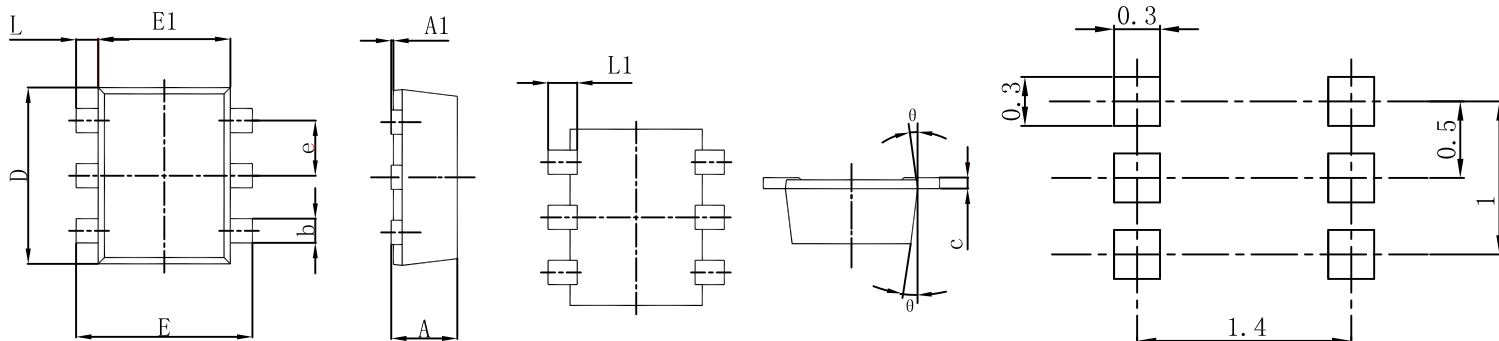
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150 °C
	-Temperature Max($T_{s(max)}$)	+200 °C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3 °C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3 °C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217 °C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5) °C
Time within 5 °C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6 °C/sec. Max
Time 25 °C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260 °C



Package Dimensions & Suggested Pad Layout

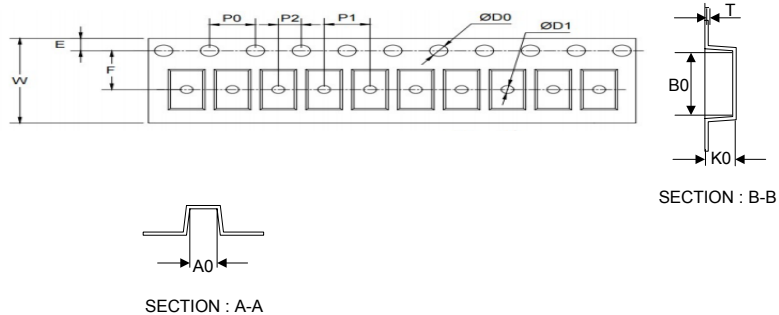
SOT-563



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.525	0.600	0.021	0.024
A1	0.000	0.050	0.000	0.002
e	0.450	0.550	0.018	0.022
c	0.090	0.160	0.004	0.006
D	1.500	1.700	0.059	0.067
b	0.170	0.270	0.007	0.011
E1	1.100	1.300	0.043	0.051
E	1.500	1.700	0.059	0.067
L	0.100	0.300	0.004	0.012
L1	0.200	0.400	0.008	0.016
θ	7 °REF.		7 °REF.	

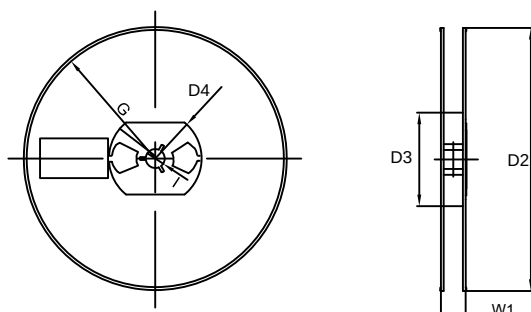
Tape & reel specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.20
E	1.75±0.25
F	3.60±0.20
W	8.00±0.20
A0	1.75±0.20
B0	1.75±0.20
K0	0.69±0.20
T	0.20±0.20

7" Reel



D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0
Quantity: 3000PCS	