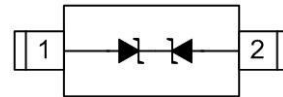


RESD5D5CL

Features

- ◇ 30W (8/20 μ s) Peak Pulse Power
- ◇ Low Capacitance ESD Protection
- ◇ SOD-523 Package
- ◇ RoHS Compliant
- ◇ Matte Tin Lead finish (Pb-Free)
- ◇ Protect One High Speed Data Line
- ◇ Meet IEC61000-4-2 Level 4:
 - Contact Discharge > 8kV
 - Air Discharge > 15kV

PIN Diagram



Marking Diagram



Applications

- ◇ Communication System
- ◇ Portable Instrumentation
- ◇ Audio and Video Equipment
- ◇ Computers and Peripherals
- ◇ USB 1.1, USB 1.0 Ports

B = Date Code*
B = Device Code

Ordering information

Device	Package	Reel Size	Qty / Reel
RESD5D5CL	SOD-523	7 inch	3000

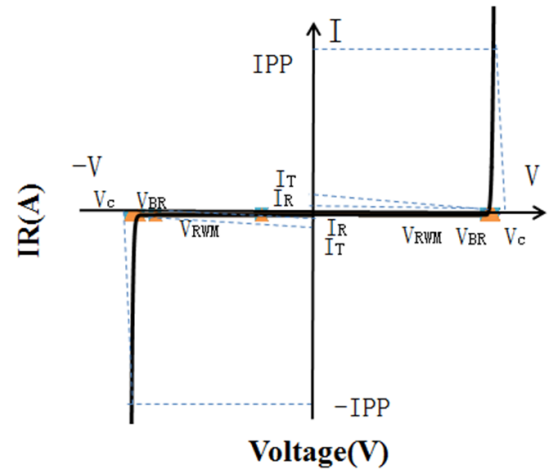
Maximum Ratings (Ta = 25℃)

Symbol	Parameter	Value	Unit
PPK	Peak Pulse Power	30	W
IPP	Peak Pulse Current	2	A
VESD (Contact)	Contact ESD Voltage per IEC61000-4-2	12	kV
VESD (Air)	Air ESD Voltage per IEC61000-4-2	15	kV
TJ	Junction Temperature	-55 to +150	℃
TSTG	Storage Temperature	-55 to +150	℃

RES5D5CL

Portion Electronics Parameter

Symbol	Parameter
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_C

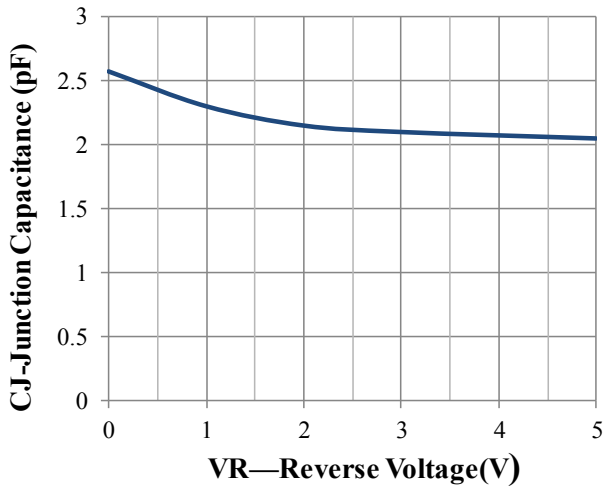


Electrical Characteristics ($T_a = 25^\circ\text{C}$)

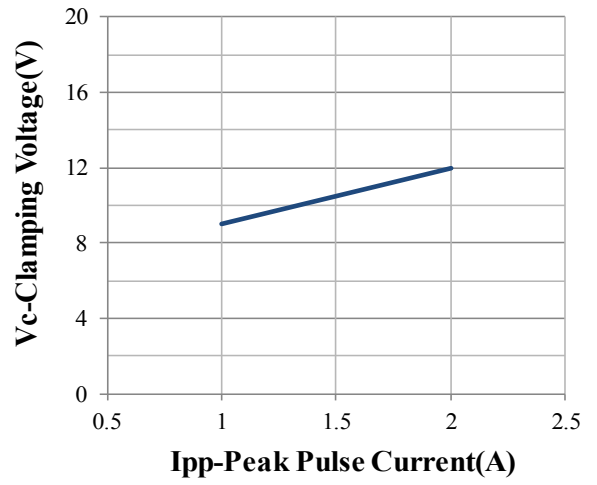
Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6		9	V
IR	Reverse Leakage Current	$VRWM = 5\text{V}$			0.2	μA
VC	Clamping Voltage	$I_{PP} = 2\text{A}$ (8/20 μs)			15	V
CJ	Capacitance	$VR = 0\text{V}$, $f = 1\text{MHz}$		2.5	3.5	pF

RES5D5CL

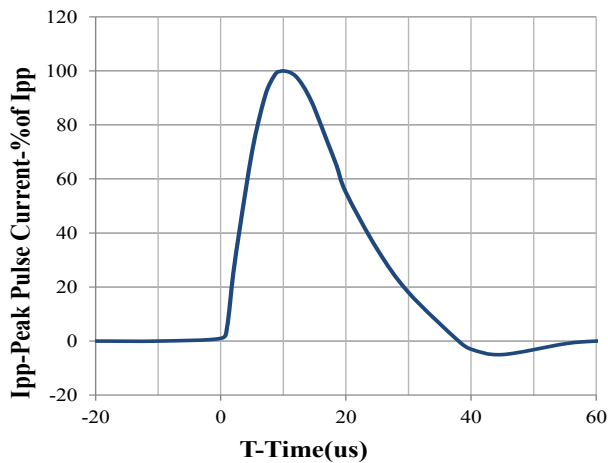
Typical Performance Curves



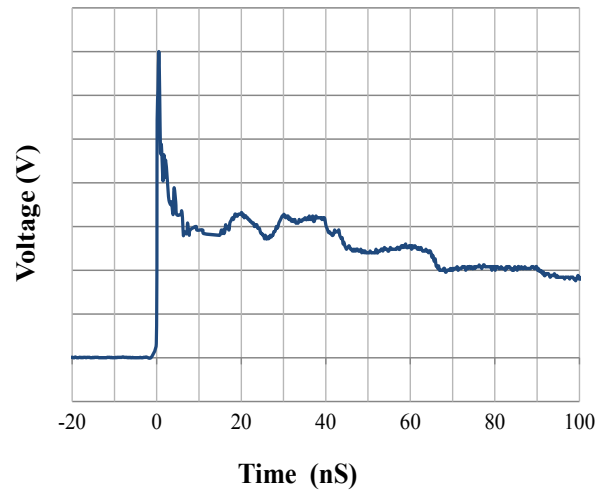
Junction Capacitance vs. Reverse Voltage



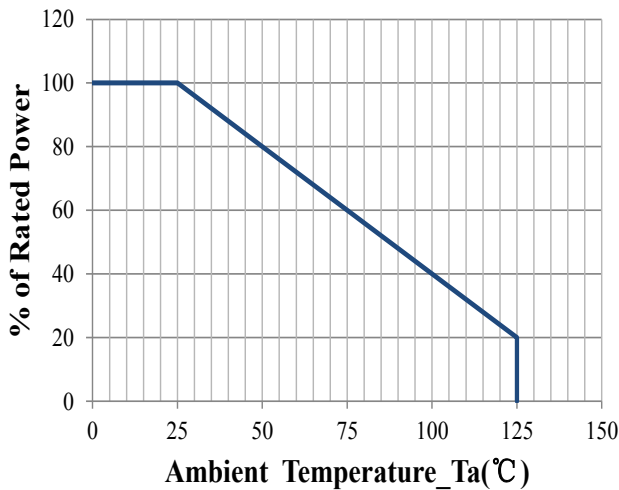
Clamping Voltage vs. Peak Pulse Current



8 X 20us Pulse Waveform



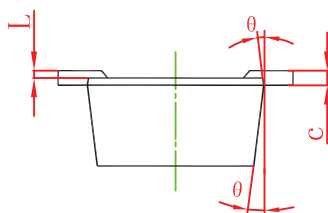
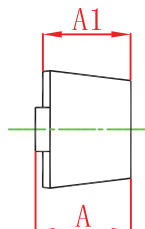
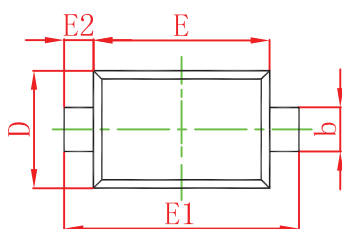
IEC61000-4-2 Pulse Waveform



Power Derating Curve

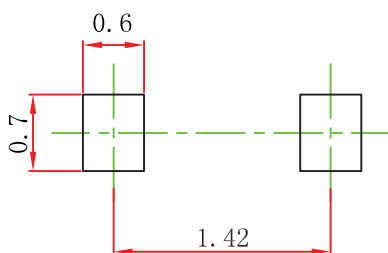
RESD5D5CL

SOD-523 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

SOD-523 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.