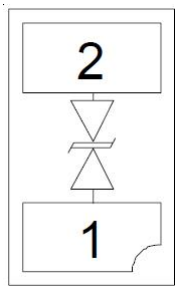
RCLAMP0531T

Features

◇ 30W (8/20μs) Peak Pulse Power
◇ Low Capacitance ESD Protection
◇ SOD-882 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

Circuit Diagram

PIN Diagram



Applications

◇ Communication System
◇ Portable Instrumentation
◇ Audio and Video Equipment
◇ Computers and Peripherals
◇ USB 1.1, USB 2.0 Ports

Ordering information

Device	Package	Reel Size	Qty / Reel
RCLAMP0531T	DFN1006	7 inch	10000

Maximum Ratings (Ta = 25℃)

Symbol	Parameter	Value	Unit
P_{PK}	Peak Pulse Power	30	W
I_{PP}	Peak Pulse Current	2	A
V_{ESD} (Contact)	Contact ESD Voltage per IEC61000-4-2	8	kV
V_{ESD} (Air)	Air ESD Voltage per IEC61000-4-2	15	kV
TJ	Junction Temperature	-55 to +150	℃
TSTG	Storage Temperature	-55 to +150	℃

Electrical Characteristics (Ta = 25℃)

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
VRWM	Reverse Working Peak Voltage				5	V
VBR	Reverse Breakdown Voltage	IT = 1mA	5.5		9.5	V
IR	Reverse Leakage Current	VRWM = 5V			0.1	μA
VC	Clamping Voltage	IPP = 1A (8/20μs)			12	V
VC	Clamping Voltage	IPP = 2A (8/20μs)			15	V
CJ	Capacitance	VR = 0V, f = 1MHz		3.0	3.5	pF

Typical Performance Curves

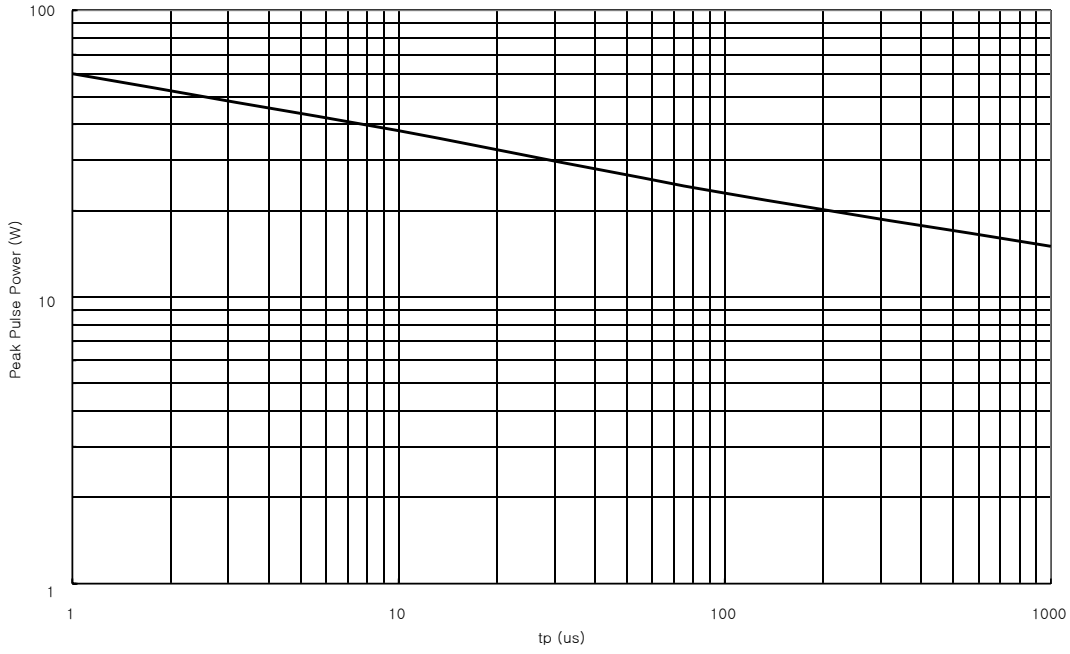


Figure 1. Peak Pulse Power Derating

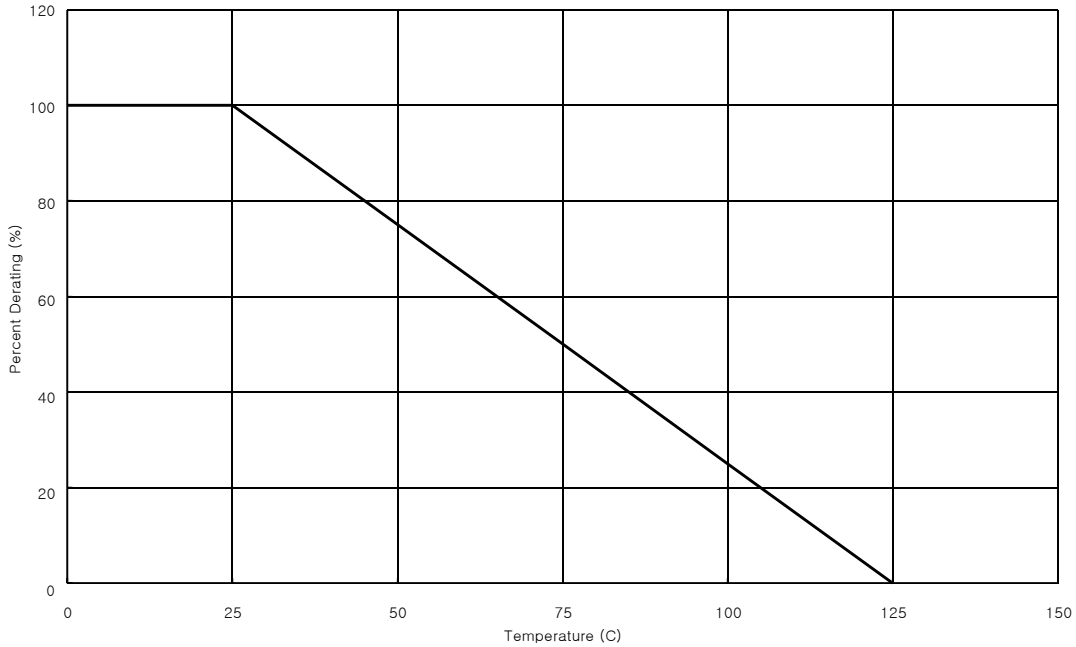


Figure 2. Peak Pulse Power Derating vs Temperature

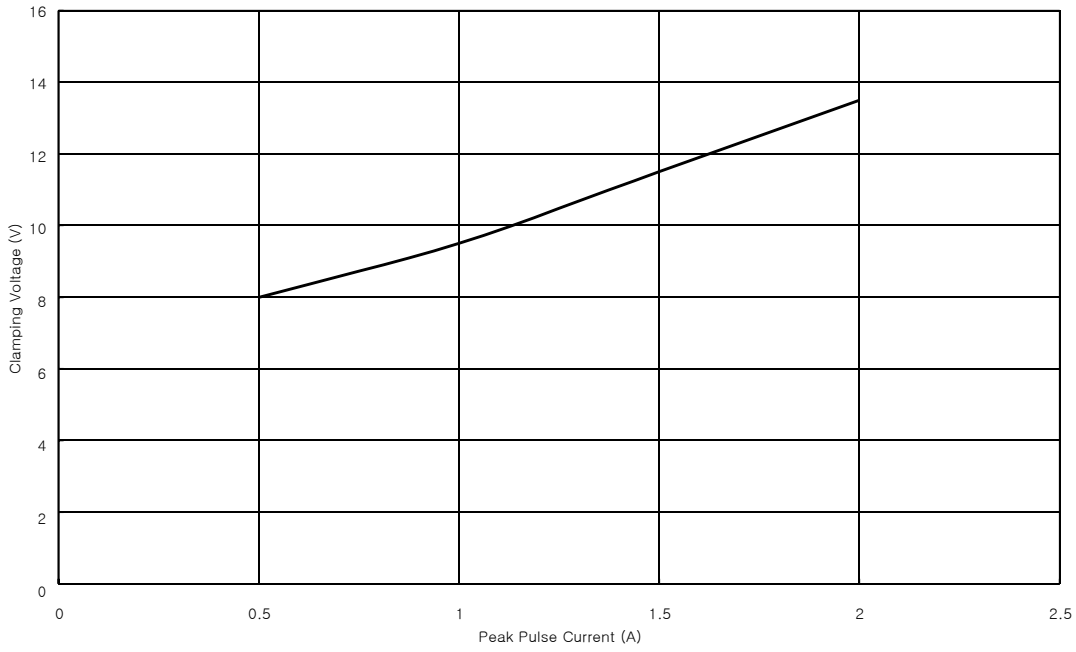


Figure 3. Peak Pulse Current vs Clamping Voltage

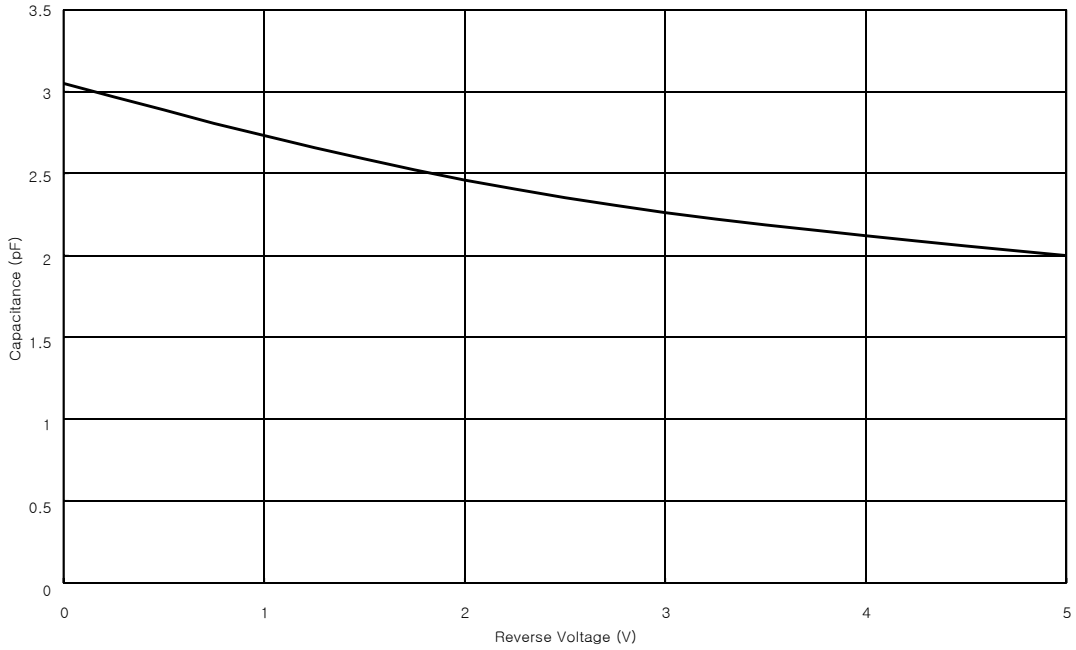
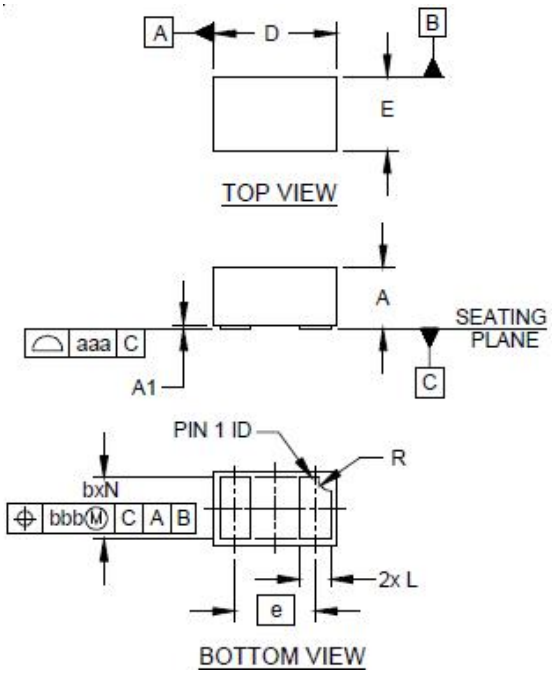


Figure 4. Reverse Voltage vs Capacitance

SOD-882 Dimension



DIMENSIONS						
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
A	.016	.020	.022	0.40	0.50	0.55
A1	.000	.001	.002	0.00	0.03	0.05
b	.018	.020	.022	0.45	0.50	0.55
D	.035	.039	.043	0.90	1.00	1.10
E	.020	.024	.028	0.50	0.60	0.70
e	.026 BSC			0.65 BSC		
L	.008	.010	.012	0.20	0.25	0.30
R	.002	.004	.006	0.05	0.10	0.15
N	2			2		
aaa	.003			0.08		
bbb	.004			0.10		