Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power (tp = 8/20µs)	P_{PK}	300	W
Peak Pulse Current (tp = 8/20µs)	I_{PP}	15	A
ESD per IEC 61000-4-2 (Air)$^{(1)}$ ESD per IEC 61000-4-2 (Contact)$^{(1)}$	V_{ESD}	±30 ±25	kV
Operating Temperature	T_J	-40 to +105	°C
Storage Temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics (T=25°C unless otherwise specified)

Parameter	Symbol	Conditions		Min.	Typ.	Max.	Units
Reverse Stand-Off Voltage	V_{RWM}	Pin 1 or Pin 2 to Pin 3				5	V
Reverse Breakdown Voltage	V_{BR}	I_{BR} = 1mA, Pin 1 to Pin 2 to Pin 3		6		11	V
Reverse Leakage Current	I_R	V_{RWM} = 5V, T=25 °C, Pin 1 or Pin 2 to Pin 3 and between Pin 1 and 2				0.1	µA
Reverse Leakage Current	I_R	V_{RWM} = 5V, T=105 °C, Pin 1 or Pin 2 to Pin 3 and between Pin 1 and 2				0.3	µA
Clamping Voltage	V_C	t_p = 8/20µs Pin 1 or Pin 2 to Pin 3	I_{PP} = 5A			15	V
		t_p = 8/20µs Pin 1 or Pin 2 to Pin 3	I_{PP} = 15A			20	
ESD Clamping Voltage^2	V_C	t_p = 0.2/100ns Pin 1 or Pin 2 to Pin 3	I_{PP} = 4A		14		V
			I_{PP} = 16A		20		
Dynamic Resistance^{2,3}	R_{DYN}	t_p = 0.2/100ns, Pin 1 or Pin 2 to Pin 3			0.52		Ω
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	Pin 1 to Pin 2		0.5	0.8	pF
Junction Capacitance	C_J	V_R = 0V, f = 1MHz	Pin 1 or Pin 2 to Pin 3			1.2	pF

Notes:

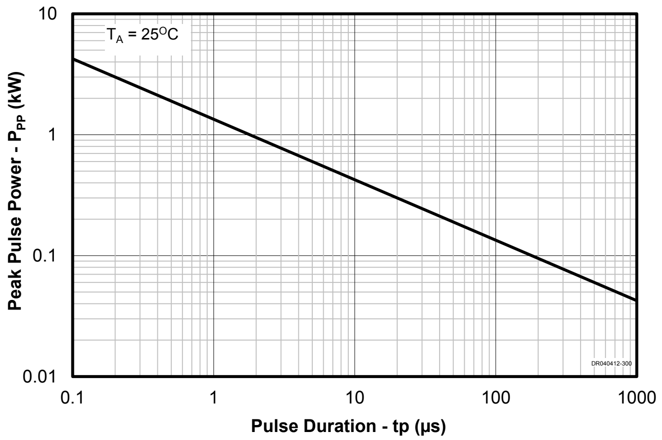
1) ESD gun return path connected to ESD ground plane.

2) Transmission Line Pulse Test (TLP) Settings: tp = 100ns, tr = 0.2ns, I_{TLP} and V_{TLP} averaging window: t1 = 70ns to t2 = 90ns.

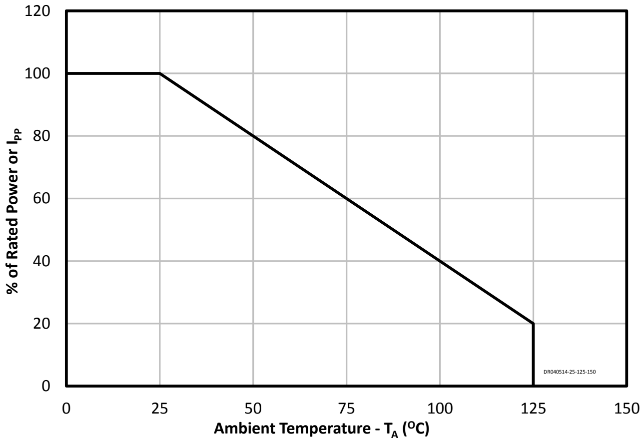
3) Dynamic resistance calculated from I_{TLP} = 4A to I_{TLP} = 16A

Typical Characteristics

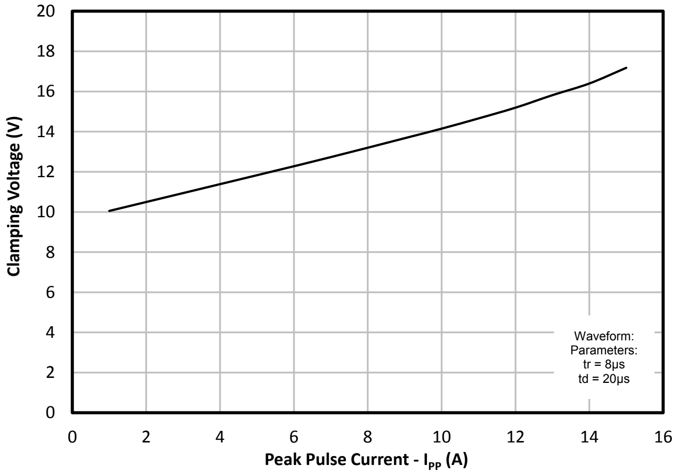
Non Repetitive Peak Pulse Power vs. Pulse Time



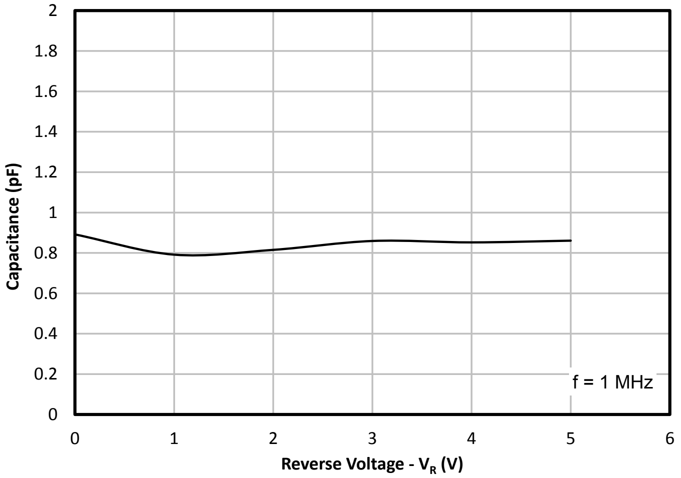
Power Derating Curve



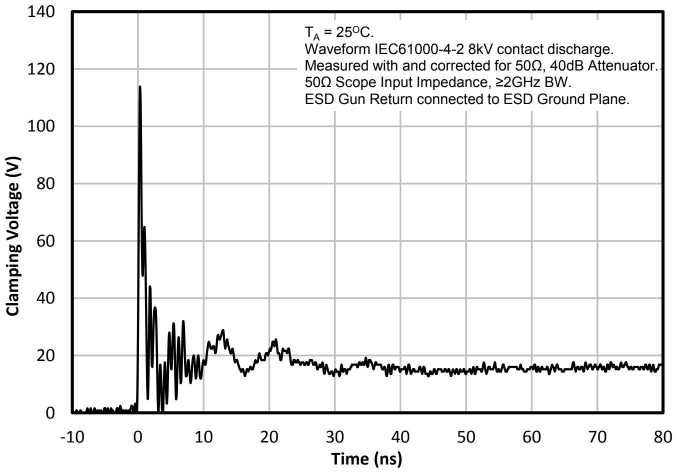
Clamping Voltage vs. Peak Pulse Current (tp=8/20µs)
Pin 1 or Pin 2 to Pin 3



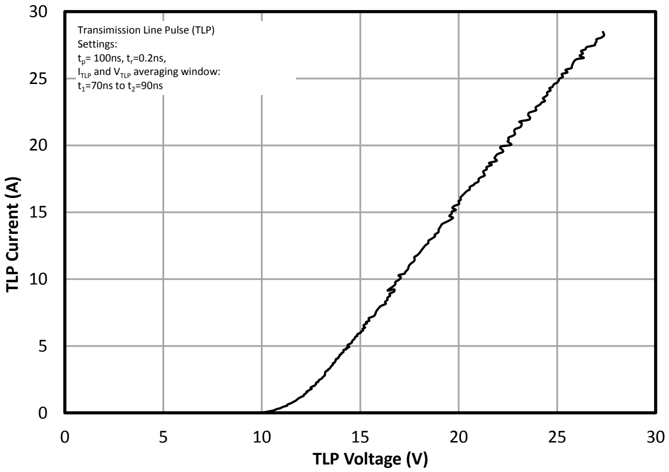
Capacitance vs. Reverse Voltage
Pin 1 or Pin 2 to Pin 3



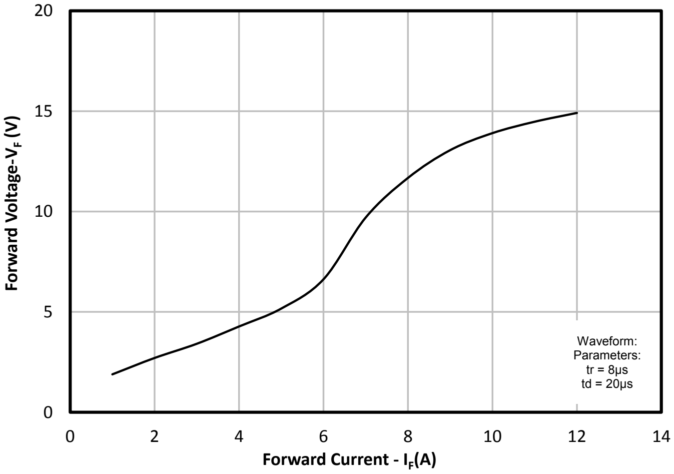
ESD Clamping (8kV Contact per IEC 61000-4-2)
Pin 1 or Pin 2 to Pin 3



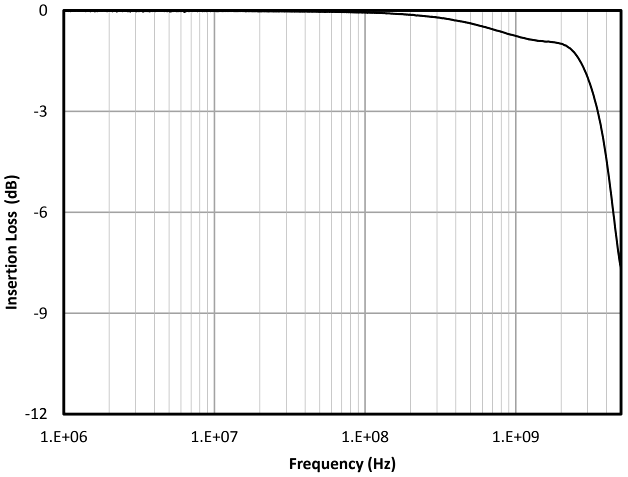
TLP Characterisitic
Pin 1 or Pin 2 to Pin 3



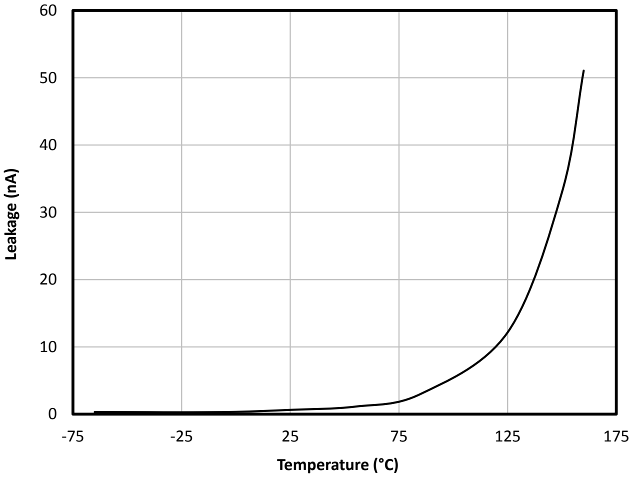
Typical Characteristics (Continued)



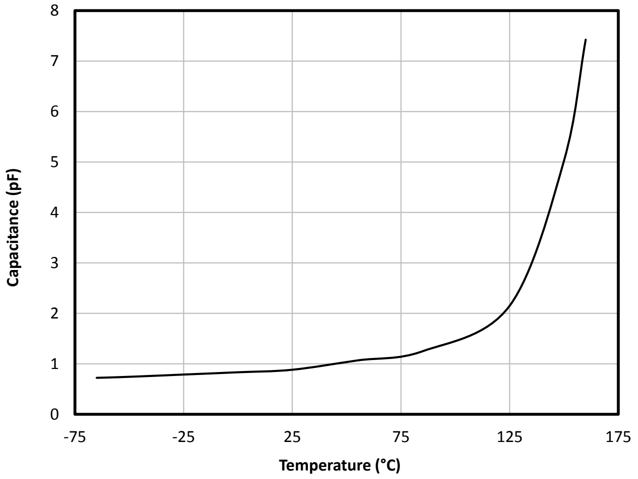
Forward Voltage vs. Forward Current (tp=8/20μs)
Pin 1 or Pin 2 to Pin 3



Insertion Loss S21
Pin 1 or Pin 2 to Pin 3



Reverse Leakage Current vs. Temperature
Pin 1 or Pin 2 to Pin 3



Capacitance vs. Temperature

Application Information

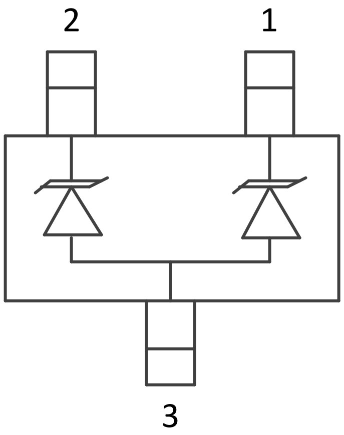
Device Connection Options

This device is optimized for protection of two high speed data lines. The device is connected as follows: Protection of two lines is achieved by connecting data lines at pins 1 & 2. Pin 3 is connected to ground. The connection to ground should be made directly to a ground plane. The path length should also be kept as short as possible to minimize parasitic inductance.

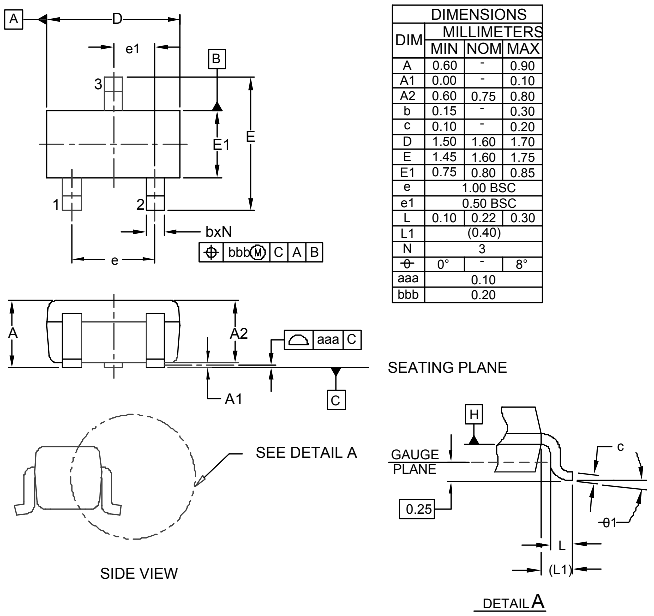
Matte Tin Lead Finish

Matte tin has become the industry standard lead-free replacement for SnPb lead finishes. A matte tin finish is composed of 100% tin solder with large grains. Since the solder volume on the leads is small compared to the solder paste volume that is placed on the land pattern of the PCB, the reflow profile will be determined by the requirements of the solder paste. Therefore, these devices are compatible with both lead-free and SnPb assembly techniques. In addition, unlike other lead-free compositions, matte tin does not have any added alloys that can cause degradation of the solder joint.

Figure 1. Pin Configuration



Outline Drawing - SC75 3L

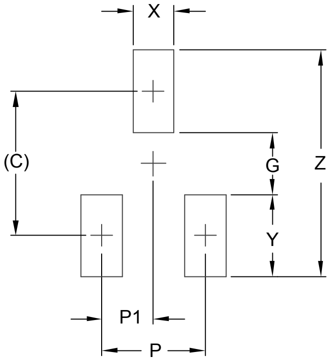


DIM	DIMENSIONS MILLIMETERS		
	MIN	NOM	MAX
A	0.60	-	0.90
A1	0.00	-	0.10
A2	0.60	0.75	0.80
b	0.15	-	0.30
c	0.10	-	0.20
D	1.50	1.60	1.70
E	1.45	1.60	1.75
E1	0.75	0.80	0.85
e	1.00 BSC		
e1	0.50 BSC		
L	0.10	0.22	0.30
L1	(0.40)		
N	3		
~~θ~~	0°	-	8°
aaa	0.10		
bbb	0.20		

NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. DATUMS -A- AND -B- TO BE DETERMINED AT DATUM PLANE -H-
3. DIMENSIONS "E1" AND "D" DO NOT INCLUDE MOLD FLASH, PROTRUSIONS OR GATE BURRS.

Land Pattern - SC75 3L

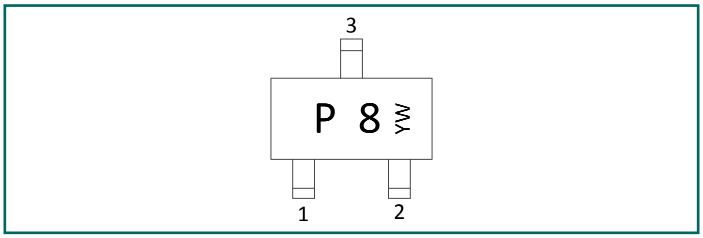


DIM	DIMENSIONS MILLIMETERS
C	(1.40)
G	0.60
P	1.00
P1	0.50
X	0.40
Y	0.80
Z	2.20

NOTES:

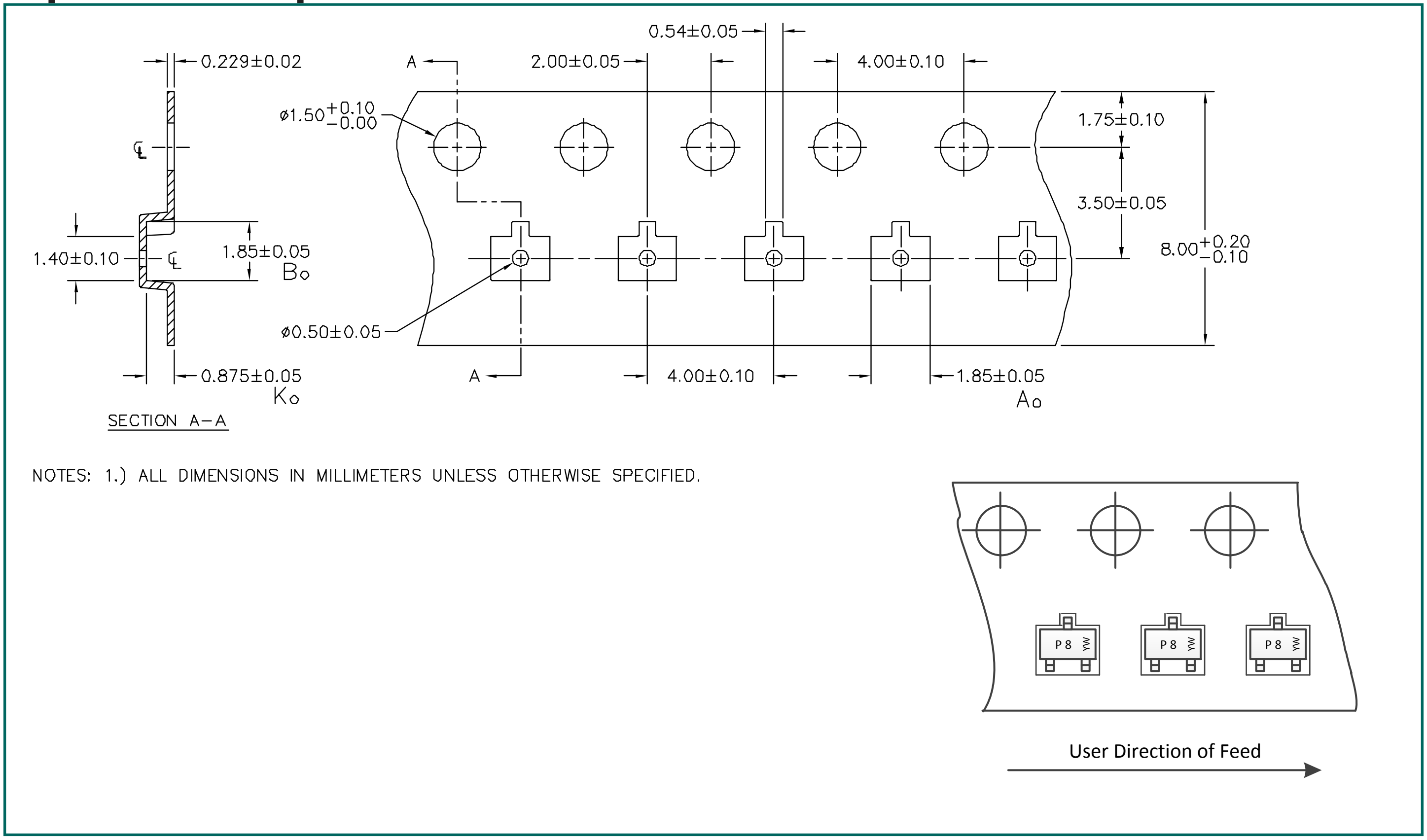
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

Marking Code



Note:
YW= Date Code

Tape and Reel Specification



NOTES: 1.) ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.

Ordering Information

Part Number	Qty per Reel	Reel Size
RClamp0582B.TCT	3,000	7″

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