

LOW CAPACITANCE TVS ARRAY

APPLICATIONS

- ✓ T1/E1 Line Cards
- ✓ ISDN U-Interfaces & ISDN S/T Interfaces
- ✓ xDSL Interfaces
- ✓ Ethernet - 10/100/1000 Base T
- ✓ Set-Top Box

IEC COMPATIBILITY (EN61000-4)

- ✓ 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- ✓ 61000-4-4 (EFT): 40A - 5/50ns
- ✓ 61000-4-5 (Surge): 8/20 μ s - 94A, L4(Line-Gnd), 48A, L1(Power) & 48A, L4(Line-Line)

FEATURES

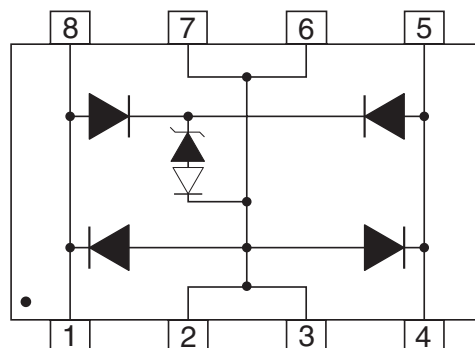
- ✓ 100A (2/10 μ s) per Bellcore GR1089(Intra-Building)
- ✓ ESD Protection > 40 kilovolts
- ✓ 1800 Watts Peak Pulse Power per Line (tp = 8/20 μ s)
- ✓ **LOW CAPACITANCE: 8pF Typical**
- ✓ Telecom/Diode Bridge
- ✓ RoHS Compliant on Lead Free Versions

MECHANICAL CHARACTERISTICS

- ✓ Molded JEDEC SO-8
- ✓ Available in Tin-Lead or Lead-Free Pure-Tin Plating(Annealed)
- ✓ Solder Reflow Temperature:
 - Tin-Lead - Sn/Pb, 85/15: 240-245°C
 - Pure-Tin - Sn, 100: 260-270°C
- ✓ Weight 70mg(Approximate)
- ✓ Flammability Rating UL 94V-0
- ✓ 12mm Tape and Reel Per EIA Standard 481
- ✓ Marking: Marking Code, Logo, Date Code & Pin One Defined By Dot on Top of Package



PIN CONFIGURATION



DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified			
PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	1800	Watts
Operating Temperature	T_J	-55°C to 150°C	°C
Storage Temperature	T_{STG}	-55°C to 150°C	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified							
PART NUMBER	DEVICE MARKING CODE	RATED STAND-OFF VOLTAGE	MINIMUM SNAP-BACK VOLTAGE	MAXIMUM CLAMPING VOLTAGE (Note 1 & 2) (See Fig. 2)	MAXIMUM LEAKAGE CURRENT	MAXIMUM CAPACITANCE (See Note 3)	MAXIMUM CAPACITANCE (See Note 4)
		V_{WM} VOLTS	@ 50mA $V_{(BR)}$ VOLTS	@ 8/20 μs $V_C @ I_{PP}$	@ V_{WM} I_D μA	@ 0V, 1 MHz C pF	@ 0V, 1 MHz C pF
PLC03-3.3	PBC	3.0	2.8	18.0V @ 100.0A	2.0	25	12

<p>MAXIMUM CLAMPING VOLTAGE Line-Ground 8/20μs @ $I_p = 50A$ V_C VOLTS</p>
11

Note 1: For an 8/20 μs waveform, apply positive pulse to pin 1 or 8 to pin 2 or 3(ground).

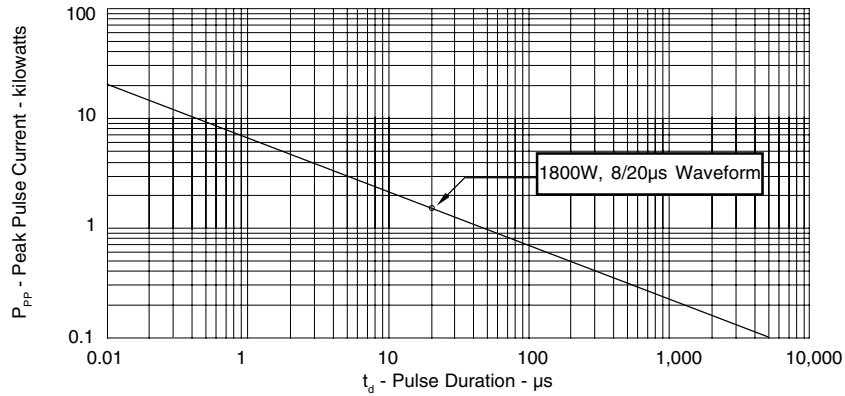
Note 2: Measured between pin 1 or 8 to pin 2 or 3.

Note 3: Measured between I/O pins and ground (pin 1 to 2).

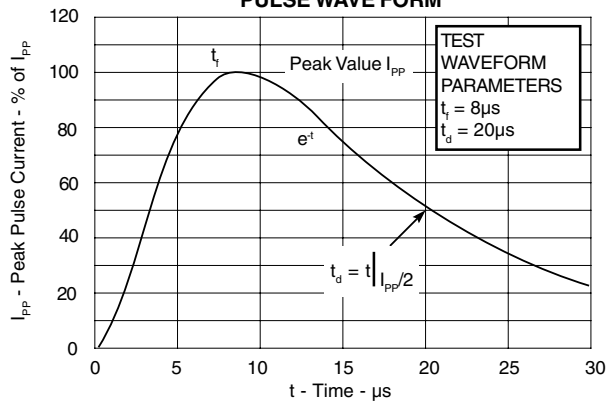
Note 4: Measured between I/O pins (pins 1 to 4).

GRAPHS

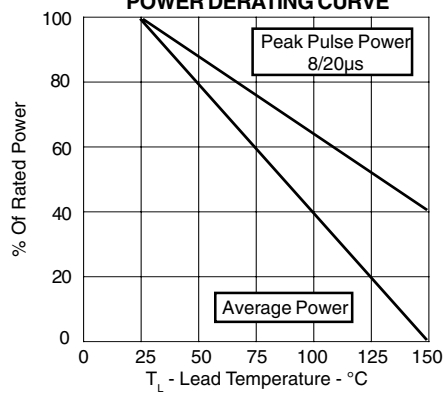
**FIGURE 1
PEAK PULSE POWER VS PULSE TIME**



**FIGURE 2
PULSE WAVE FORM**



**FIGURE 3
POWER DERATING CURVE**



PACKAGE OUTLINE & DIMENSIONS

PACKAGE OUTLINE

$\oplus 0.010'' (0.25 \text{ MM}) \text{ (M) B (M)}$
 4 PL

$\oplus 0.010'' (0.25 \text{ MM}) \text{ (M) T B (S) A (S)}$
 8 PL

SO-8

PACKAGE DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.80	5.00	0.189	0.196
B	3.80	4.00	0.150	0.157
C	1.35	1.75	0.054	0.068
D	0.35	0.49	0.014	0.019
F	0.40	1.250	0.016	0.049
G	1.27 BSC	1.27 BSC	0.05 BSC	0.05 BSC
J	0.18	0.25	0.007	0.009
K	0.10	0.25	0.004	0.008
P	5.80	6.20	0.229	0.244
R	0.25	0.50	0.010	0.019

NOTES

- T - = Seating Plane and Datum Surface.
- Dimensions "A" and "B" are Datum.
- Dimensions "A" and "B" do not include mold protrusion.
- Maximum mold protrusion is 0.015" (0.380 mm) per side.
- Dimensioning and tolerances per ANSI Y14.5M, 1982.
- Dimensions are exclusive of mold flash and metal burrs.

TAPING & REEL/BULK ORDERING NOMENCLATURE

- Surface mount product is taped and reeled in accordance with EIA-481.
- Suffix-T7 = 7 Inch Reel - 1,000 pieces per 12mm tape, i.e., *PLC03-3.3-T7*.
- Suffix-T13 = 13 Inch Reel - 2,500 pieces per 12mm tape, i.e., *PLC03-3.3-T13*.
- Suffix-LF = Lead-Free, Pure Tin Plating, i.e., *PLC03-3.3-LF-T13*.
- No Suffix = Product Shipped in Tubes of 98 pcs per Tube.

Outline & Dimensions: Rev 1 - 11/01, 06009

MOUNTING PAD

$0.050 \pm 0.005''$
 $0.030 \pm 0.005''$
 $0.160 \pm 0.005''$
 $0.245'' \text{ MIN}$
 $0.045 \pm 0.005''$

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