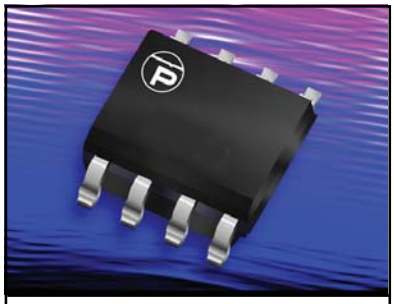
PROTEK DEVICES
Only One Name Means ProTek'Tion™

PLC03-3.3

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



SO-8

IEC COMPATIBILITY (EN61000-4)

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

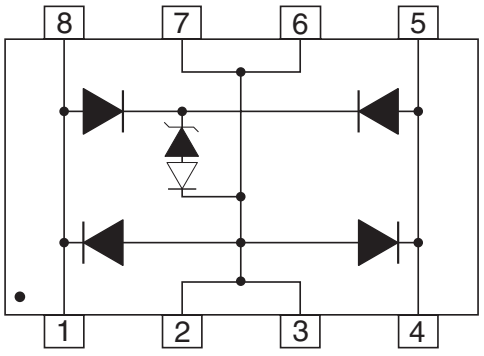
FEATURES

✔ 100A (2/10µs) per Bellcore GR1089(Intra-Building)
✔ ESD Protection > 40 kilovolts
✔ 1800 Watts Peak Pulse Power per Line (tp = 8/20µs)
✔ ***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 = 8/20µs) - 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 V_{WM} VOLTS	MINIMUM SNAP-BACK VOLTAGE @ 50mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (Note 1 & 2) (See Fig. 2) @8/20µs V_C @ I_{PP}	MAXIMUM LEAKAGE CURRENT @V_{WM} I_D µA	MAXIMUM CAPACITANCE (See Note 3) @0V, 1 MHz C pF	MAXIMUM CAPACITANCE (See Note 4) @0V, 1 MHz C pF
PLC03-3.3	PBC	3.0	2.8	18.0V @ 100.0A	2.0	25	12

MAXIMUM CLAMPING VOLTAGE Line-Ground 8/20µs @I_P = 50A V_C VOLTS
11

Note 1: For an 8/20µs 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

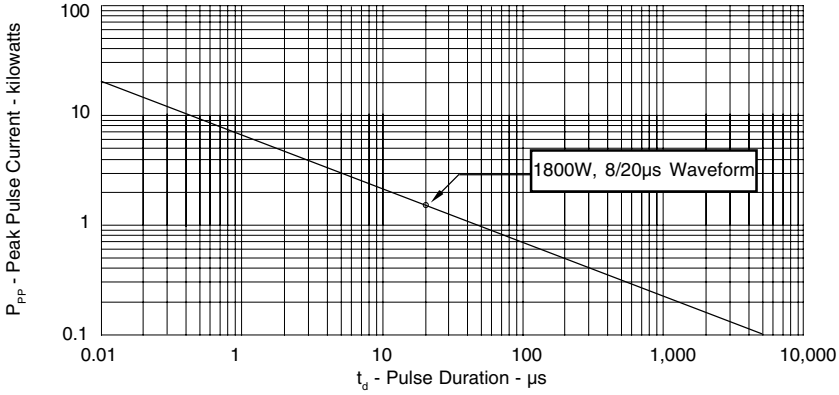


FIGURE 2
PULSE WAVE FORM

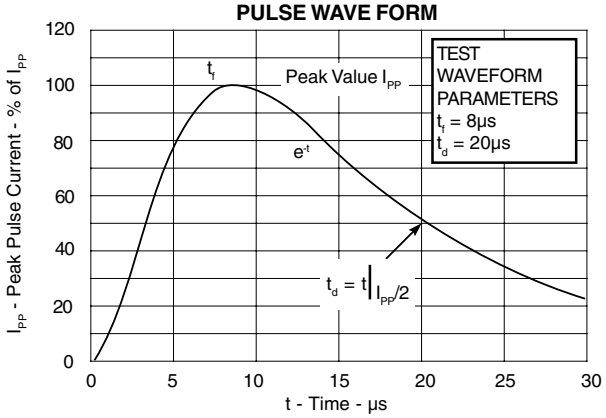
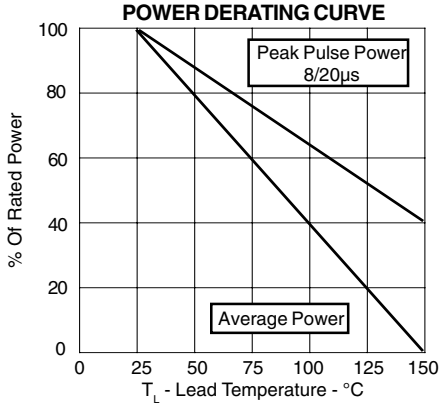
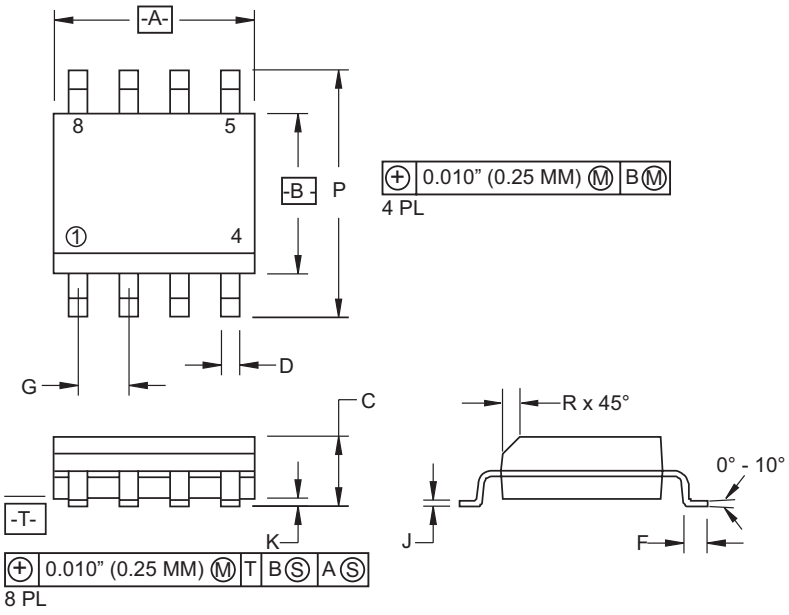


FIGURE 3
POWER DERATING CURVE

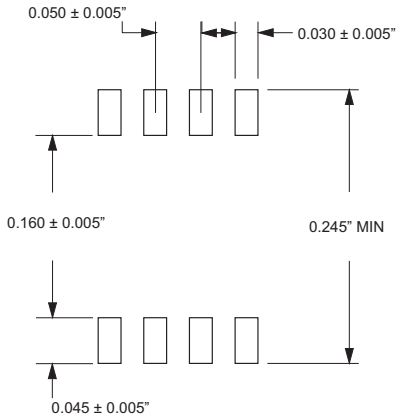


PACKAGE OUTLINE & DIMENSIONS

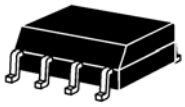
PACKAGE OUTLINE



MOUNTING PAD



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

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

TAPE & REEL/BULK ORDERING NOMENCLATURE

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

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

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