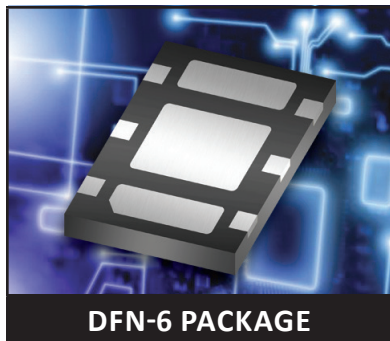


HIGH POWER LOW CAPACITANCE TVS ARRAY


DFN-6 PACKAGE

DESCRIPTION

The PLC03-3.3-DFN is a low capacitance, high powered TVS array available in a six lead DFN package. This device is designed to protect high speed data line applications from the damaging effects of ESD, EFT and secondary transient threats.

The PLC03-3.3-DFN has a peak pulse power rating of 1800 Watts for an 8/20 μ s waveshape. This device meets the IEC 61000-4-2, IEC 61000-4-4 and IEC 61000-4-5 requirements.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A - 5/50ns
- Compatible with IEC 61000-4-5 (Surge): 94A, 8/20 μ s - Level 4 (Line-Gnd), 48A, Level 1 (Power) & 48A, Level 4 (Line-Line)
- 100A (2/10 μ s) per Bellcore GR1089 (Intra-Building)
- ESD Protection > 25 kilovolts
- 1800 Watts Peak Pulse Power per Line ($t_p = 8/20\mu$ s)
- Low Capacitance: 4.5pF Typical
- Telecom/Diode Bridge
- RoHS Compliant
- REACH Compliant

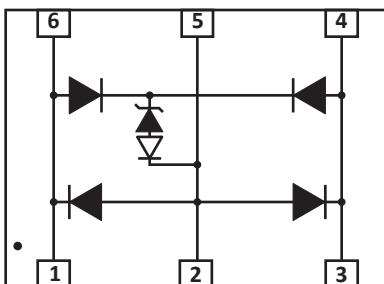
APPLICATIONS

- T1/E1 Line Cards
- xDSL Interfaces
- Ethernet 10/100 Base T
- Set Top Box Interface

MECHANICAL CHARACTERISTICS

- Molded DFN-6 Package
- Approximate Weight: TBA
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
Pure-Tin - Sn, 100: 260-270°C
- 12mm Tape and Reel Per EIA Standard 481
- Flammability Rating UL 94V-0

PIN CONFIGURATION



TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

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

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE V_{WM} VOLTS	MINIMUM SNAPBACK VOLTAGE @50mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) (Note 1-2) @ 8/20 μs $V_C @ I_{PP}$	MAXIMUM CLAMPING VOLTAGE (Line-Gnd) @ 8/20 μs @ $I_p = 50A$ V_C VOLTS	MAXIMUM LEAKAGE CURRENT @ V_{WM} I_D μA	TYPICAL CAPACITANCE (Note 3) @0V, 1MHz C pF	TYPICAL CAPACITANCE (Note 4) @0V, 1MHz C pF
PLC03-3.3-DFN	PBC	3.0	2.8	18.0V@100.0A	11	2.0	8.5	4.5

NOTES

1. For an 8/20 μs waveform, apply positive pulse to pin 1 or 8 to pin 2 or 3 (ground).
2. Measured between pin 1 or 8 to pin 2 or 3.
3. Measured between I/O pins and ground (pin 1 to 2).
4. Measured between I/O pins (pin 1 to 4).

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

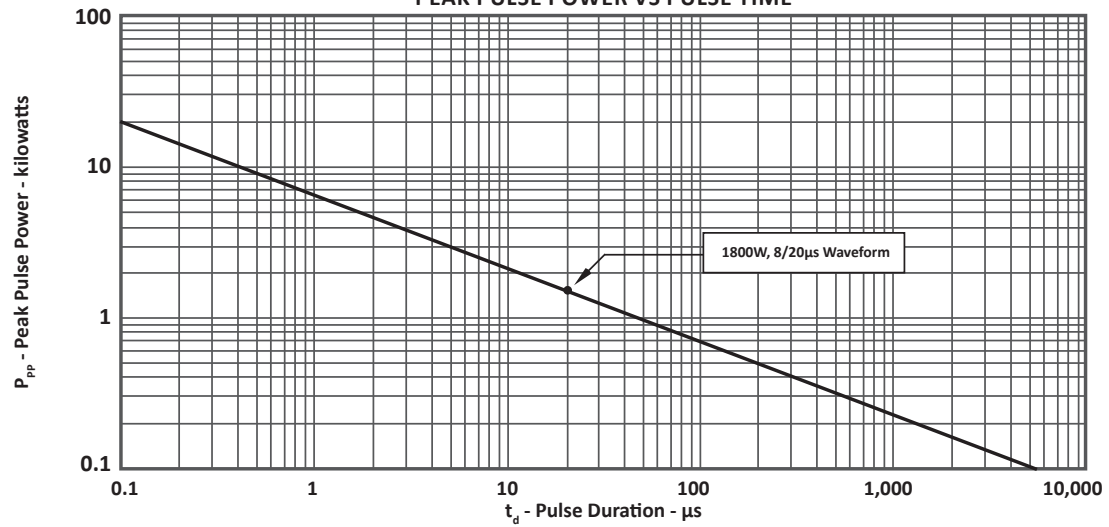


FIGURE 2
PULSE WAVE FORM

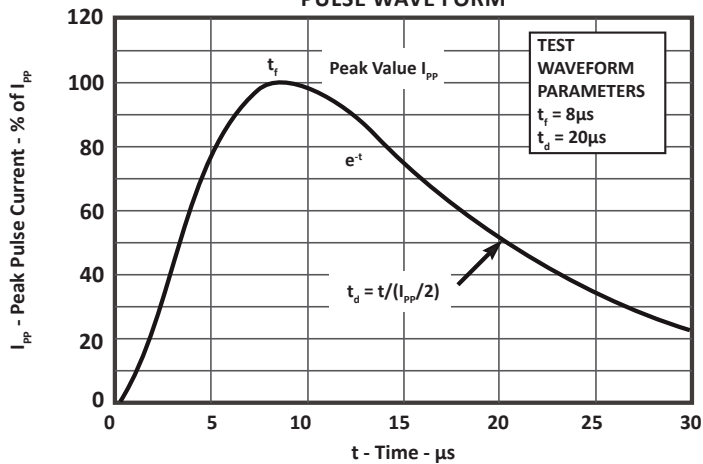
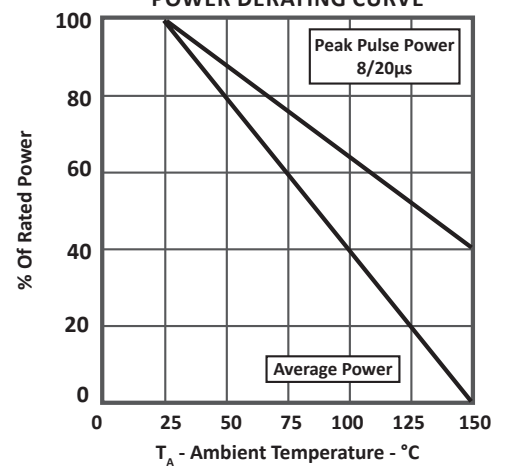


FIGURE 3
POWER DERATING CURVE

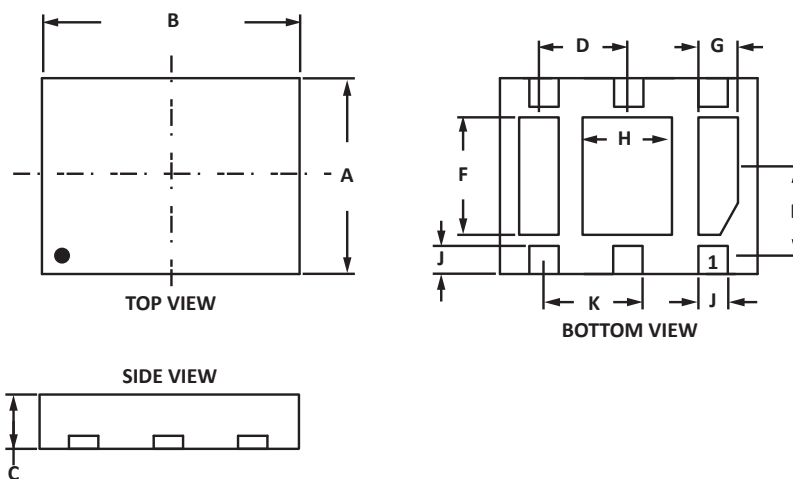


DFN-6 PACKAGE INFORMATION
OUTLINE DIMENSIONS

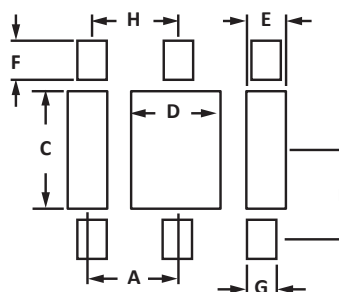
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	3.42	3.58	0.134	0.140
B	3.92	4.08	0.154	0.160
C	0.67	0.83	0.027	0.033
D	1.36	1.46	0.053	0.057
E	1.47	1.57	0.058	0.062
F	2.11	2.21	0.083	0.087
G	0.54	0.64	0.021	0.025
H	1.42	1.52	0.055	0.061
H	0.35	0.41	0.014	0.016
K	1.27 BSC		0.050 BSC	

NOTES

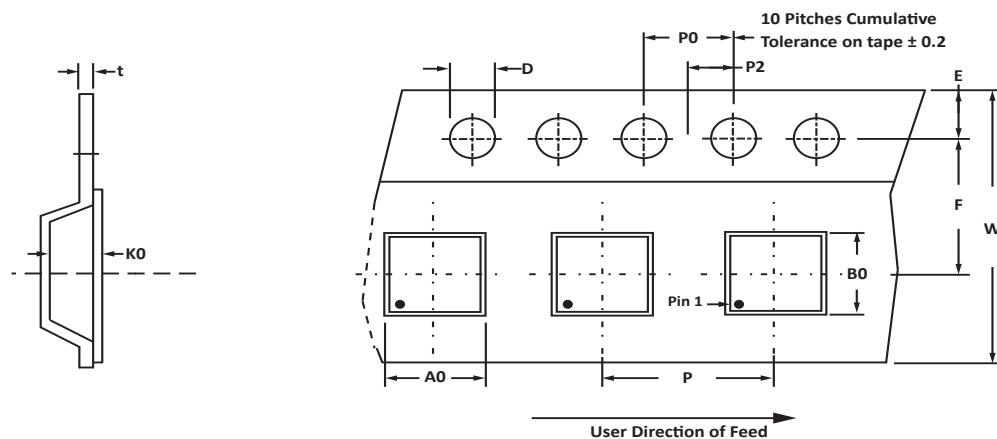
1. Dimensions are exclusive of mold flash and metal burrs.


PAD LAYOUT

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.38	1.44	0.053	0.057
B	1.67	1.73	0.063	0.070
C	2.18	2.25	0.084	0.090
D	1.60	1.66	0.062	0.066
E	0.71	0.77	0.028	0.032
F	0.69	0.73	0.026	0.030
G	0.50	0.56	0.019	0.023
H	1.27 BSC		0.050 BSC	



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	12mm	1.65 ± 0.1	1.45 ± 0.1	0.66 ± 0.1	1.50 ± 0.10	1.75 ± 0.10	5.50 ± 0.05	12.00 ± 0.30	4.00 ± 0.12	2.00 ± 0.10	4.00 ± 0.10	0.25

NOTES

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Marking on Part - marking code (see page 2), date code, logo and pin one defined by dot on top of package.

ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PLC03-3.3-DFN	N/A	-T7	1,000	7"	N/A

This device is only available in a Lead-Free configuration.

COMPANY INFORMATION

COMPANY PROFILE

In business more than 30 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection that include Transient Voltage Suppressor (TVS) Arrays, Steering Diode Array Hybrids, High-power Components and Modules, as well as Steering Diodes, EMI Filter/TVS Arrays and Thyristor Surge Suppressors. These components deliver circuit protection in electronic systems from numerous overvoltage events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices is an ISO 9001 certified company.

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