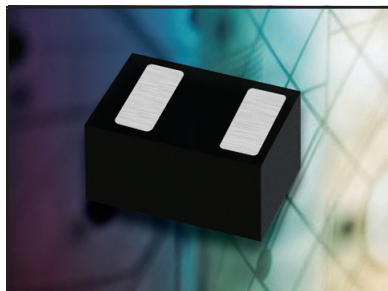


ULTRA LOW CAPACITANCE TVS ARRAY



DFN-0603-2L PACKAGE

DESCRIPTION

The PESD05BULC is an ultra low capacitance TVS array that is designed to protect components from damage or upset due to electrostatic discharge (ESD). The device is offered in a bidirectional configuration and is available in two lead DFN-0603 package. The PESD05BULC features a large cross sectional area junction for conducting high transient currents, fast response time and low operating voltage. This device meets the IEC 61000-4-2 and IEC 61000-4 requirements.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air $\pm 15\text{kV}$, Contact $\pm 8\text{kV}$
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- 60 Watts Peak Pulse Power per Line ($t_p = 8/20\mu\text{s}$)
- Bidirectional Configuration
- Protects 1 Data Line
- Low Clamping Voltage
- Easy Placement for Manufacturing
- Replacement for MLV (0201)
- Ultra Low Capacitance: 0.35pF (Typical)
- Fast Response Time: $< 1\text{ns}$
- RoHS Compliant
- REACH Compliant

APPLICATIONS

- Cellular Phones
- Portable Devices
- Digital Cameras
- Power Supplies

MECHANICAL CHARACTERISTICS

- Molded DFN-0603-2L Package
- Approximate Weight: 0.8 milligrams
- Lead-Free Plating: 100% Matte Sn(Tin)
- Solder Reflow Temperature - 260-270°C
- 8mm Tape and Reel Per EIA Standard 481
- Meets MSL 1 Requirements
- Flammability Rating UL 94V-0

PIN CONFIGURATION



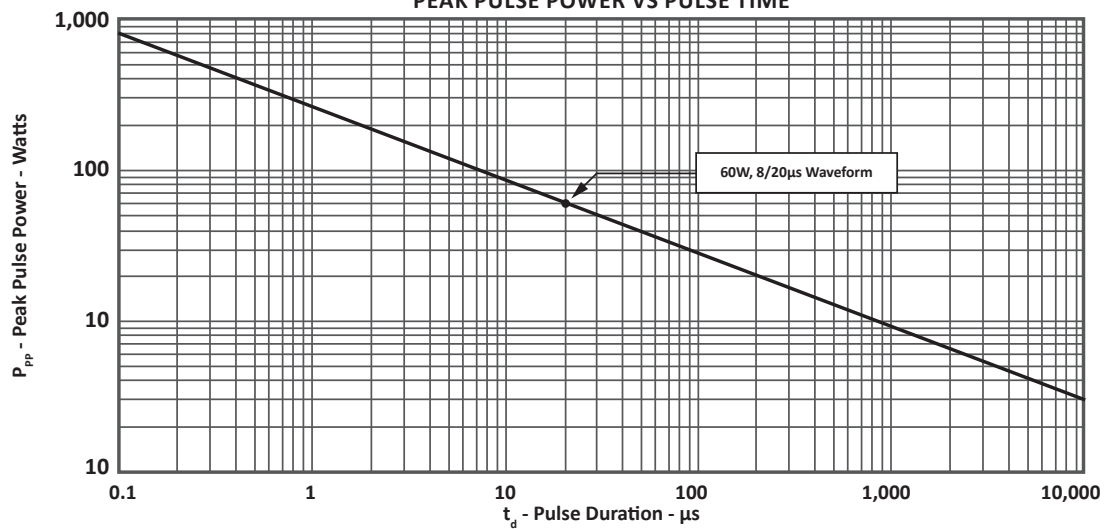
TYPICAL DEVICE CHARACTERISTICS
MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Storage Temperature	T_{STG}	-55 to 150	°C
Junction Temperature	T_J	-55 to 125	°C
Peak Pulse Power ($t_p = 8/20\mu s$) - See Figure 1	P_{PP}	60	Watts
Peak Pulse Current	I_{PP}	10	Amps

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

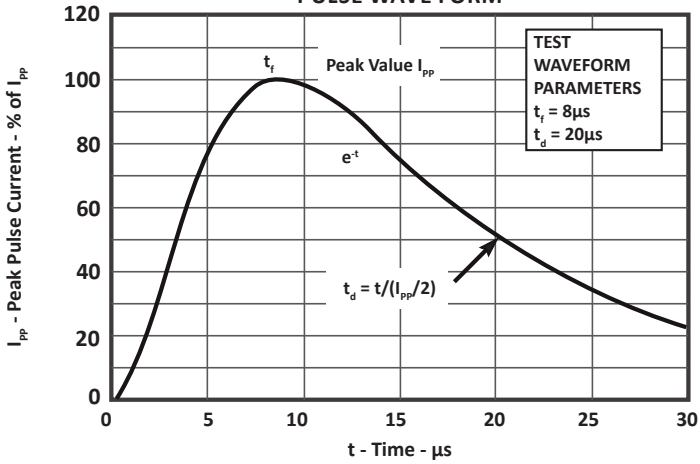
PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE	MINIMUM BREAKDOWN VOLTAGE	MAXIMUM CLAMPING VOLTAGE (Fig. 2)	MAXIMUM LEAKAGE CURRENT	TYPICAL CAPACITANCE
		V_{WM} VOLTS	@ 1mA $V_{(BR)}$ VOLTS	@ $I_P = 10A$ V_C VOLTS	@ 5V I_D μA	@ 0V, 1MHz C pF
PESD05BULC	5	5.0	5.5	9.0	0.05	0.35

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

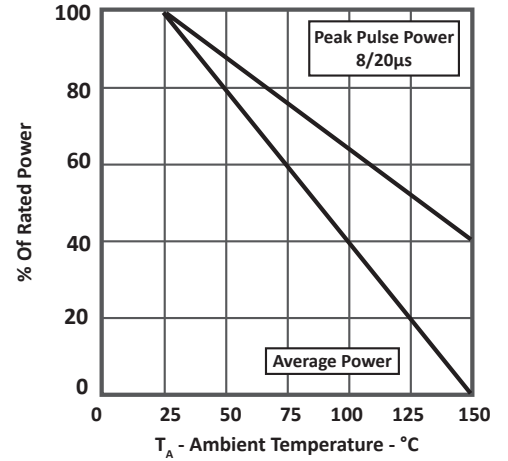


TYPICAL DEVICE CHARACTERISTICS

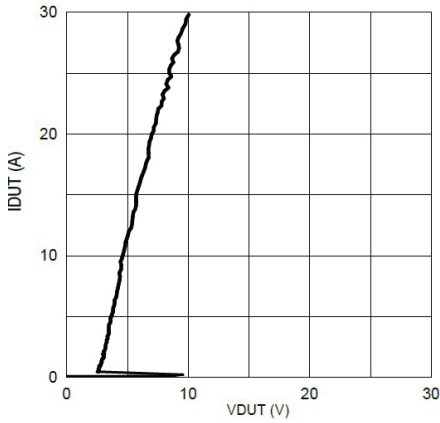
**FIGURE 2
PULSE WAVE FORM**



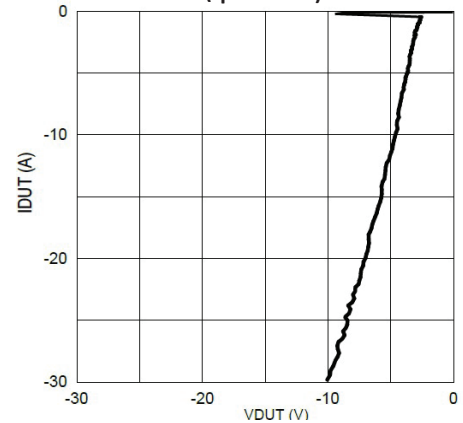
**FIGURE 3
POWER DERATING CURVE**

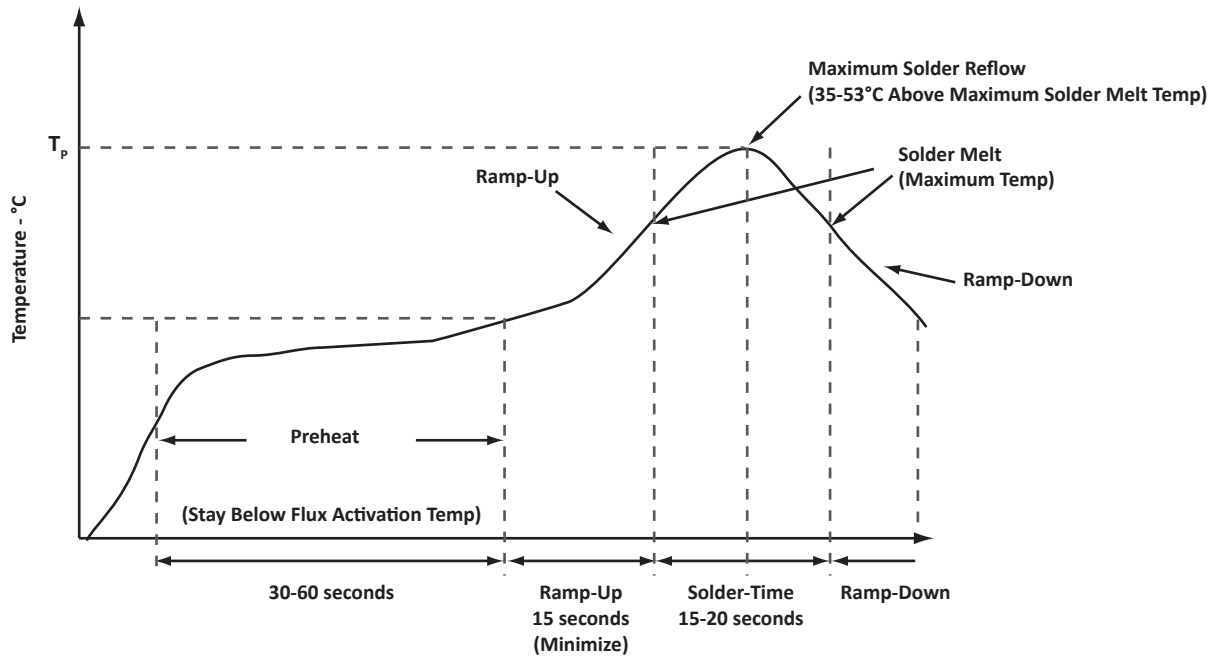


**FIGURE 4
TLP ($t_p = 100ns$)**



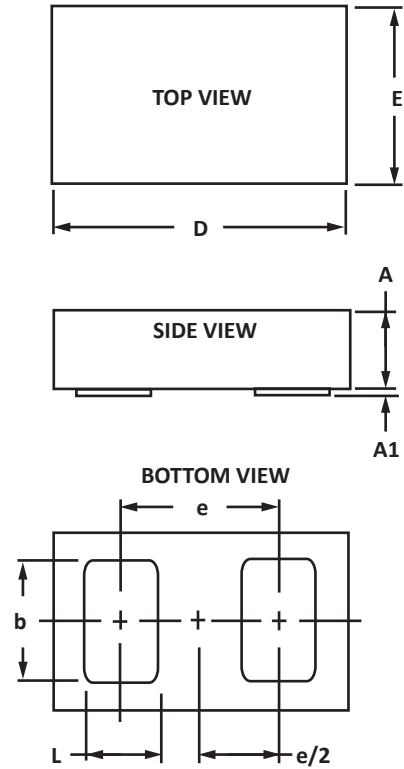
**FIGURE 5
TLP ($t_p = 100ns$)**



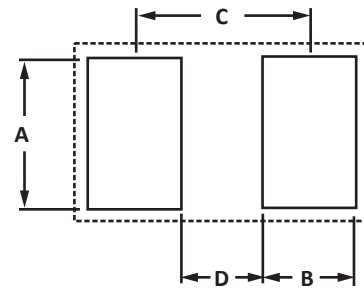
PACKAGE INFORMATION

PACKAGE INFORMATION
OUTLINE DIMENSIONS

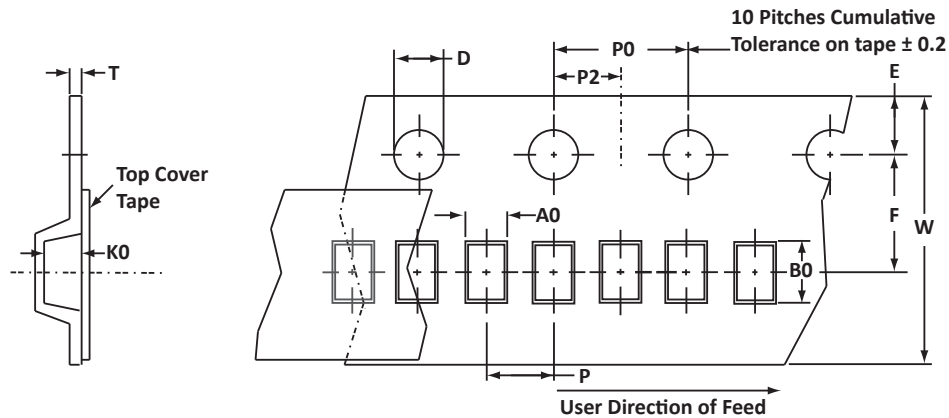
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.185	0.227	0.007	0.009
A1	0.000	0.050	0.000	0.002
b	0.200	0.240	0.008	0.009
D	0.590	0.640	0.023	0.025
E	0.290	0.340	0.011	0.013
e	0.355 BSC		0.014	
L	0.140	0.180	0.006	0.007


PAD LAYOUT DIMENSIONS

DIM	MILLIMETERS	INCHES
A	0.65	0.025
B	0.32	0.013
C	0.25	0.010
D	0.15	0.006



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	0.45 ± 0.10	0.76 ± 0.010	0.25 ± 0.010	1.55 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	2.00 ± 0.05	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).

ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PESD05BULC	N/A	-T710	10,000	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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