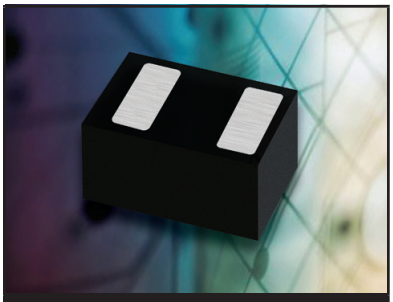
ULTRA LOW CAPACITANCE TVS ARRAY



DFN-0603-2L PACKAGE

DESCRIPTION

The PLR03331-0201 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 PLR03331-0201 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 ±15kV, Contact ±8kV
- Compatible with IEC 61000-4-4 (EFT): 40A, 5/50ns
- 60 Watts Peak Pulse Power per Line (tp = 8/20µs)
- 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: < 1ns
- 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
- Solder Reflow Temperature - 260-270°C
- 8mm Tape and Reel Per EIA Standard 481
- Meets MSL 1 Requirements
- Flammability Rating UL 94V-0

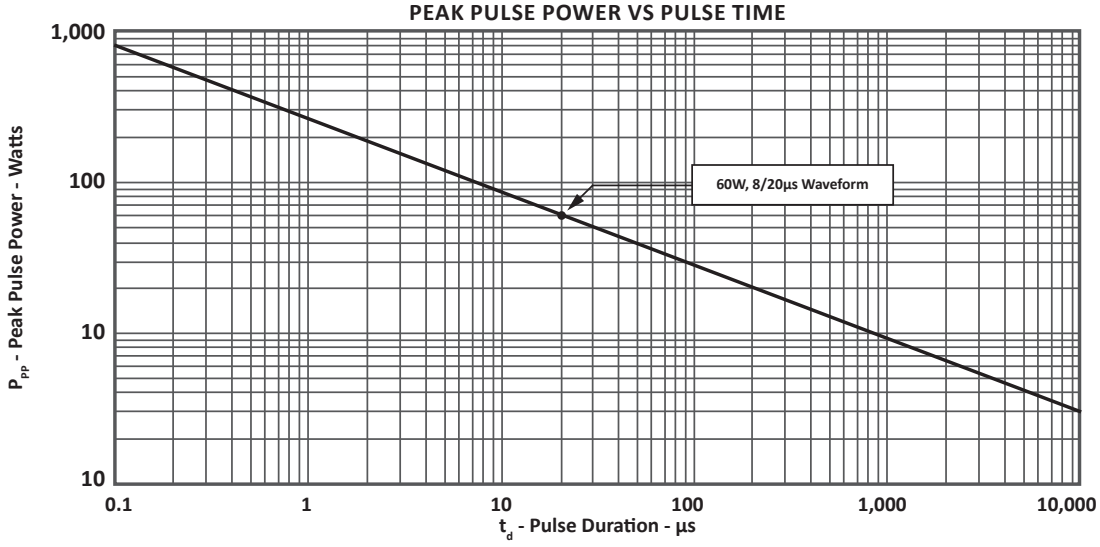
PIN CONFIGURATION

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 (tp = 8/20µs) - 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 V_{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE @ 1mA $V_{(BR)}$ VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) @ IP = 10A V_C VOLTS	MAXIMUM LEAKAGE CURRENT @ 3.3V I_D µA	TYPICAL CAPACITANCE @0V, 1MHz C pF
PLR03331-0201	5	3.3	5.5	9.0	0.05	0.35

FIGURE 1
PEAK PULSE POWER VS PULSE TIME



TYPICAL DEVICE CHARACTERISTICS

FIGURE 2
PULSE WAVE FORM

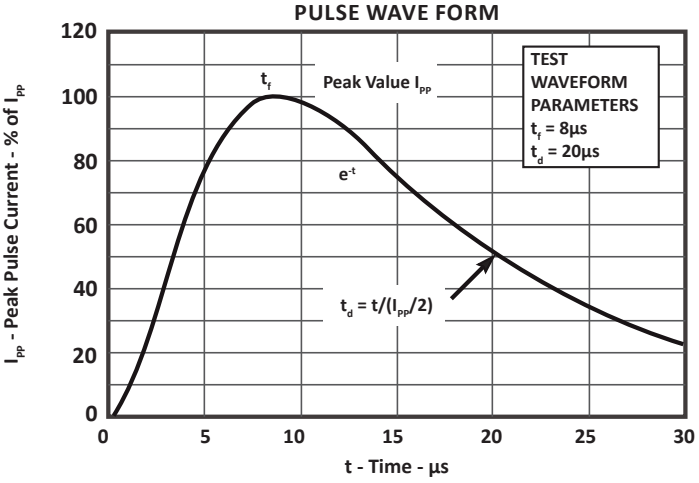


FIGURE 3
POWER DERATING CURVE

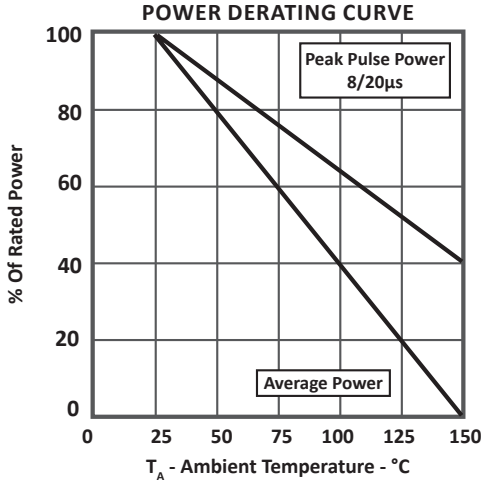


FIGURE 4
TLP (tp = 100ns)

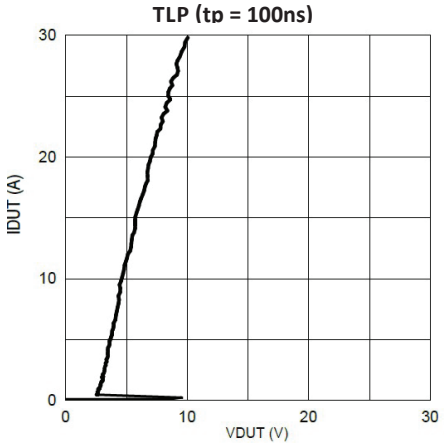
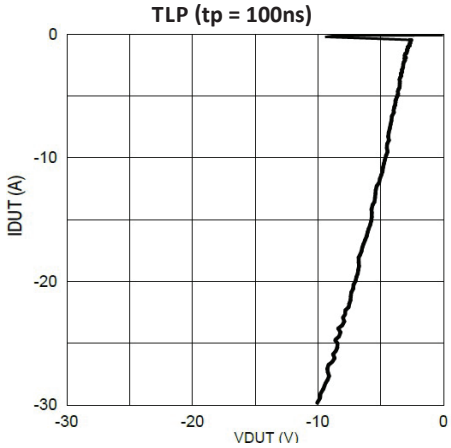
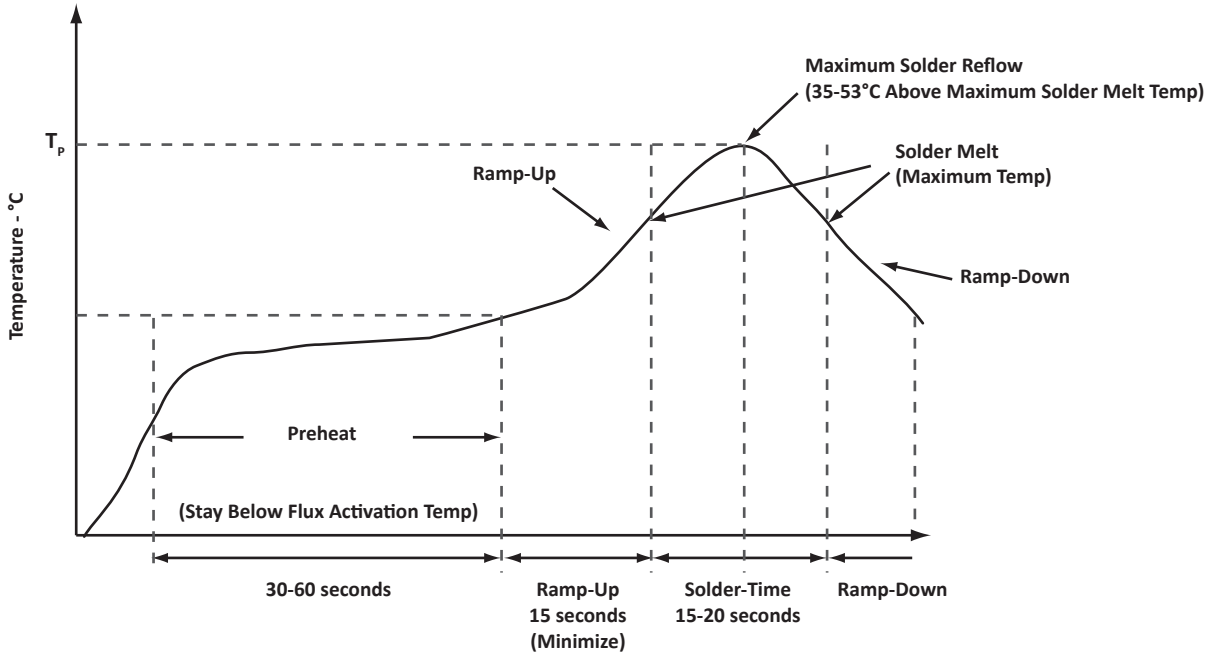


FIGURE 5
TLP (tp = 100ns)

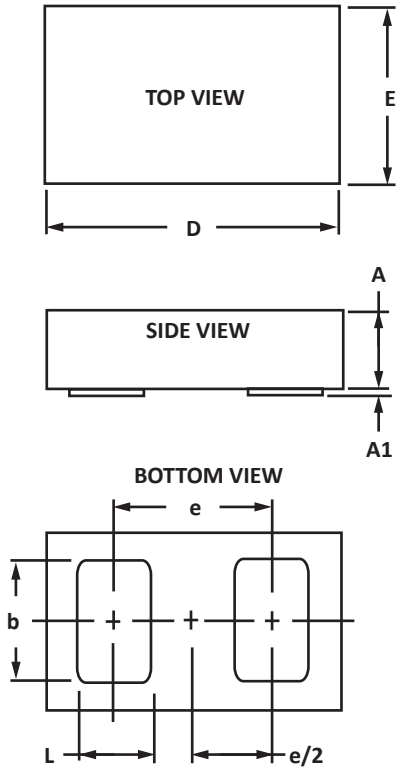


PACKAGE INFORMATION

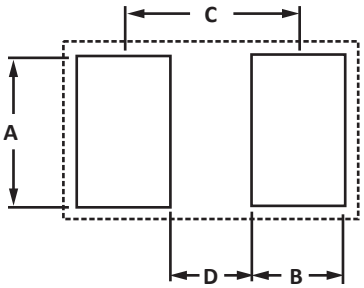


PACKAGE INFORMATION

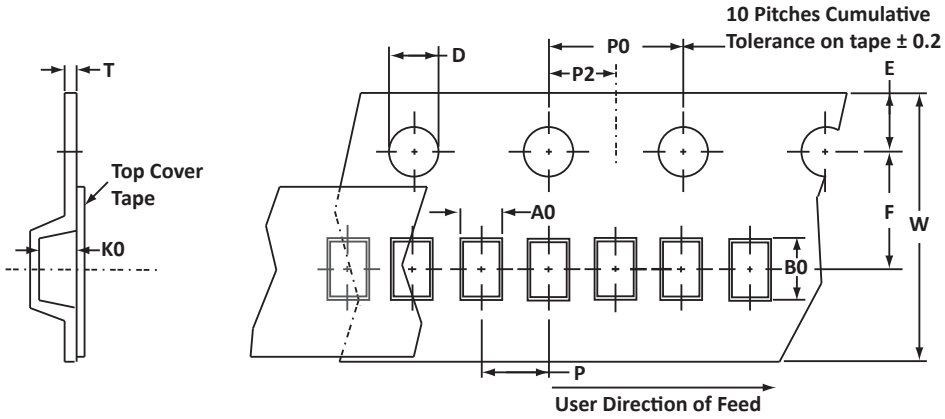
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.185	0.227	0.007	0.009
A1	0.000	0.050	0.000	0.002
b	0.200	0.240	0.008	0.009
D	0.590	0.640	0.023	0.025
E	0.290	0.340	0.011	0.013
e	0.355 BSC		0.014	
L	0.140	0.180	0.006	0.007



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
1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Marking on Part - marking code (see page 2).

ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
PLR03331-0201	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.

CONTACT US

Corporate Headquarters
2929 South Fair Lane
Tempe, Arizona 85282
USA

By Telephone
General: 602-431-8101
Sales: & Marketing: 602-414-5109
Customer Service: 602-414-5114
Product Technical Support: 602-414-5107

By Fax
General: 602-431-2288

By E-mail:
Asia Sales: asiasales@protekdevices.com
Europe Sales: europesales@protekdevices.com
U.S. Sales: ussales@protekdevices.com
Distributor Sales: distysales@protekdevices.com
Customer Service: service@protekdevices.com
Technical Support: support@protekdevices.com

Web
www.protekdevices.com