

TYPICAL DEVICE CHARACTERISTICS

MAXIMUM RATINGS @ 25°C Unless Otherwise Specified

PARAMETER	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp = 8/20μs) - See Figure 1	P _{PP}	500	Watts
Operating Temperature	T _L	-55 to 150	°C
Storage Temperature	T _{STG}	-55 to 150	°C
Forward Surge Rating (5ms @ 25°C, I _F = 10mA)	V _F	0.5 Min. - 1.2 Max.	Volts
Peak Pulse Current (tp = 8/20μs) - Note 1	I _{PP}	30	Amps

NOTES

1. Across TVS only - pin 2 to pin 5.

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

PART NUMBER	DEVICE MARKING	RATED STAND-OFF VOLTAGE (Note 1) V _{WM} VOLTS	MINIMUM BREAKDOWN VOLTAGE (Note 1) @ 1mA V _(BR) VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) (Note 1) @ I _p = 1A V _C VOLTS	MAXIMUM CLAMPING VOLTAGE (Fig. 2) (Note 1) @ I _p = 5A V _C VOLTS	MAXIMUM LEAKAGE CURRENT (Note 1) @ V _{WM} I _D μA
SRV05-4	S5	5.0	6.0	12.0	15.0	5

@ 25°C Unless Otherwise Specified

TYPICAL CAPACITANCE I/O to GND	MAXIMUM CAPACITANCE I/O to GND	TYPICAL CAPACITANCE I/O to I/O	MAXIMUM CAPACITANCE I/O to I/O
@0V, 1MHz C _{J(SD)} pF	@0V, 1MHz C _{J(SD)} pF	@0V, 1MHz C _{J(SD)} pF	@0V, 1MHz C _{J(SD)} pF
3.5	5.0	2.5	4.0

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

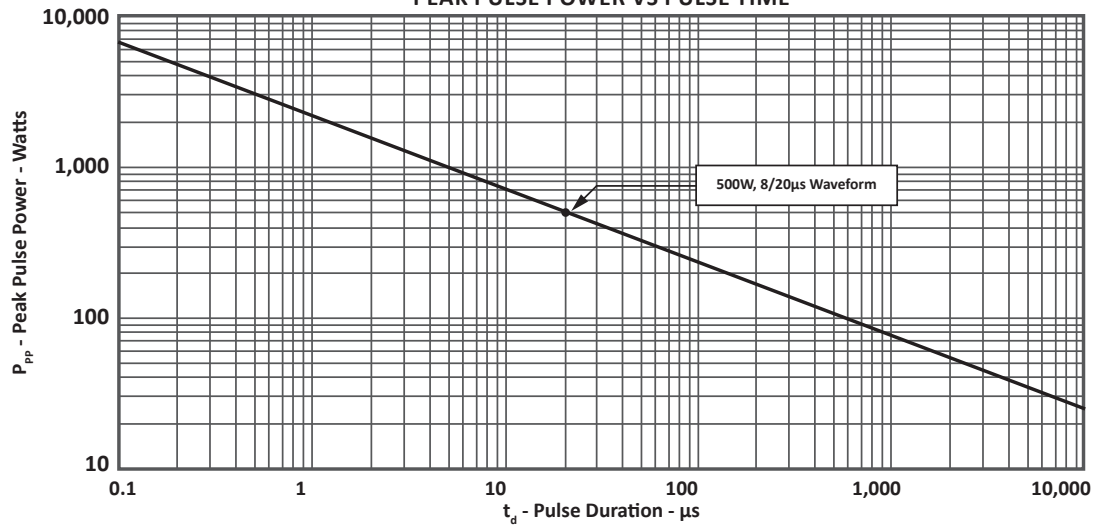


FIGURE 2
PULSE WAVE FORM

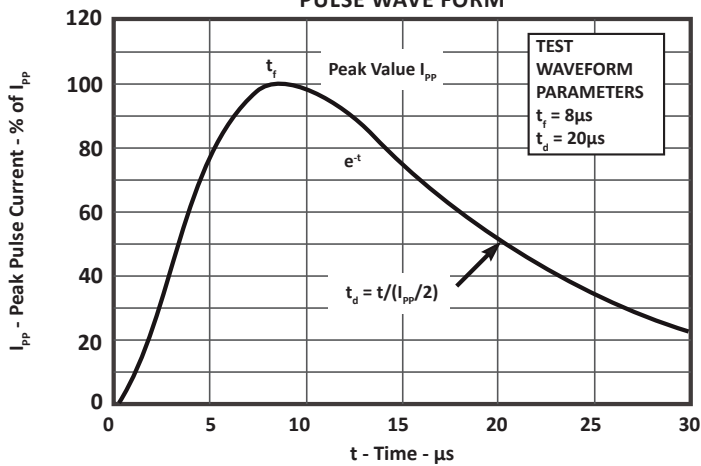
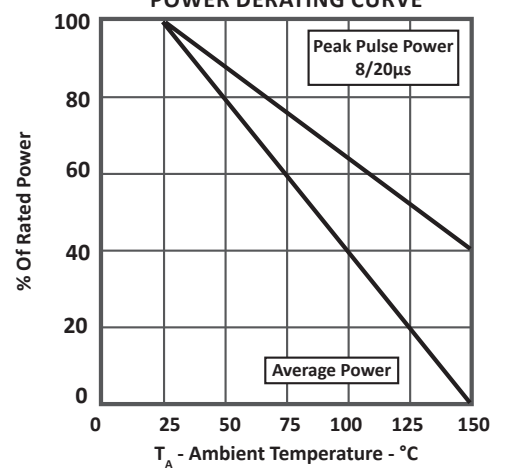


FIGURE 3
POWER DERATING CURVE



TYPICAL DEVICE CHARACTERISTICS

FIGURE 4
OVERSHOOT & CLAMPING VOLTAGE

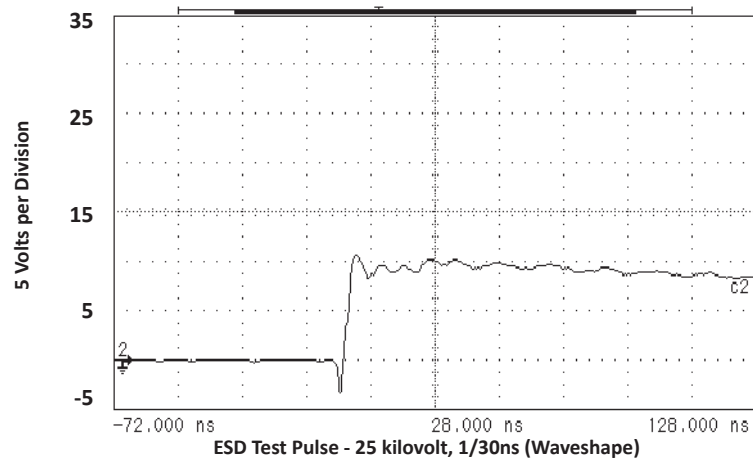
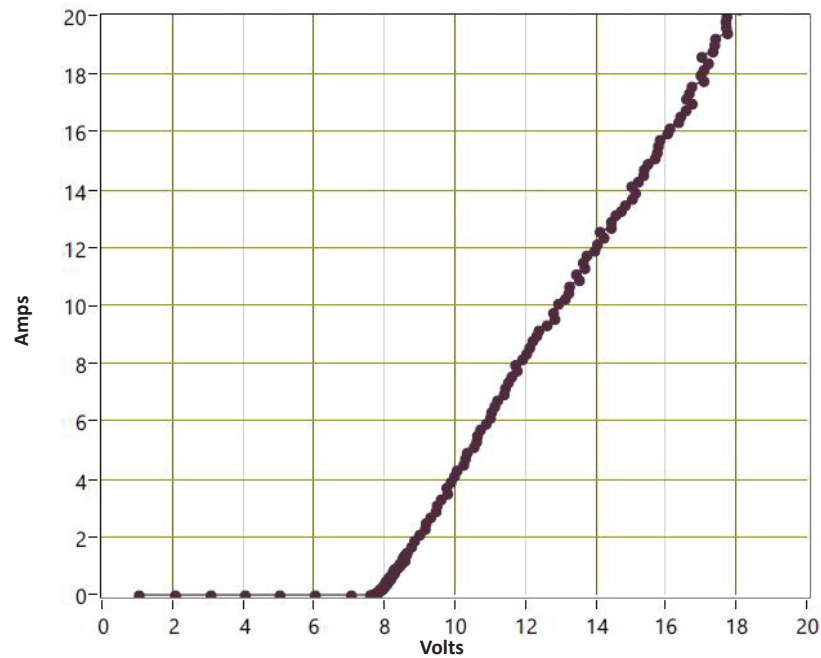
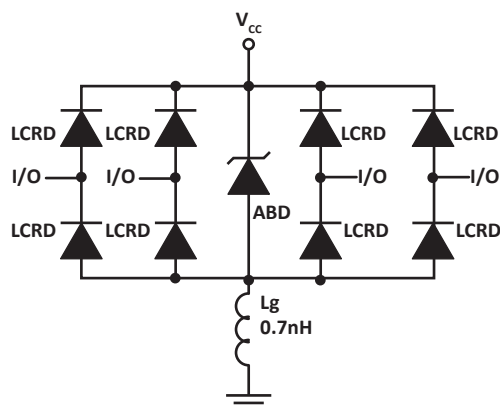


FIGURE 5
TLP CURVE



SPICE MODEL

 FIGURE 1
 SPICE MODEL


LCABD - Low Capacitance Avalanche Breakdown Diode (TVS)

LCRD: Low Capacitance Rectifier Diode

Lg - Lead Inductance

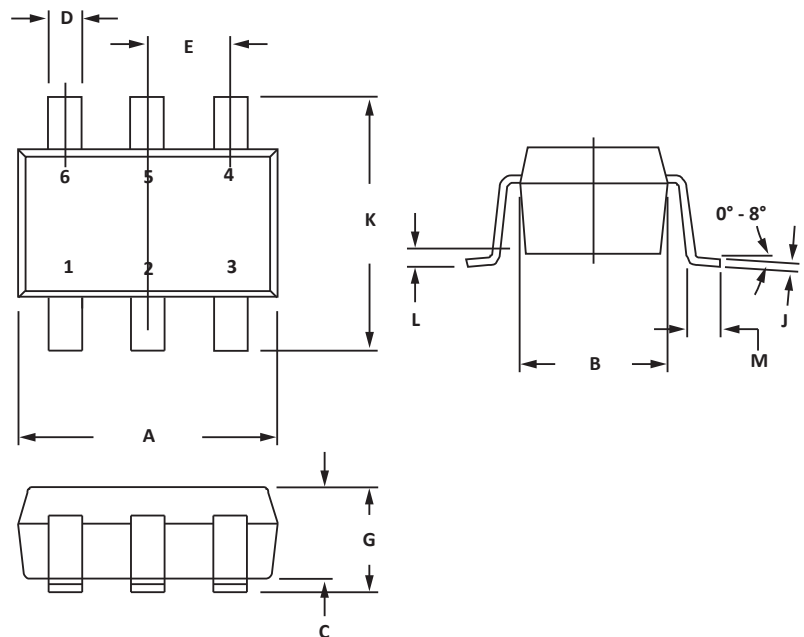
TABLE 1 - SPICE PARAMETERS			
PARAMETER	UNIT	ABD(TVS)	LCRD
BV	V	6.0	200
IBV	μA	1	0.01
C_{jo}	pF	230	3
I_s	A	1E-11	1E-13
Vj	V	0.6	0.6
M	-	0.33	0.33
N	-	1	1
R_s	Ohms	0.014	0.31
TT	s	1E-9	1E-9
EG	eV	1.11	1.11

PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.30	0.40	0.012	0.016
E	0.85	1.05	0.033	0.040
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.0	0.15	0.0	0.006
M	0.30	0.60	0.012	0.024

NOTES

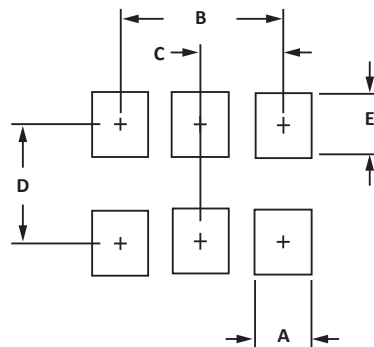
1. Controlling dimension: inches.
2. Dimensioning and tolerances per ANSI Y14.5M, 1985.
3. Dimensions are exclusive of mold flash and metal burrs.



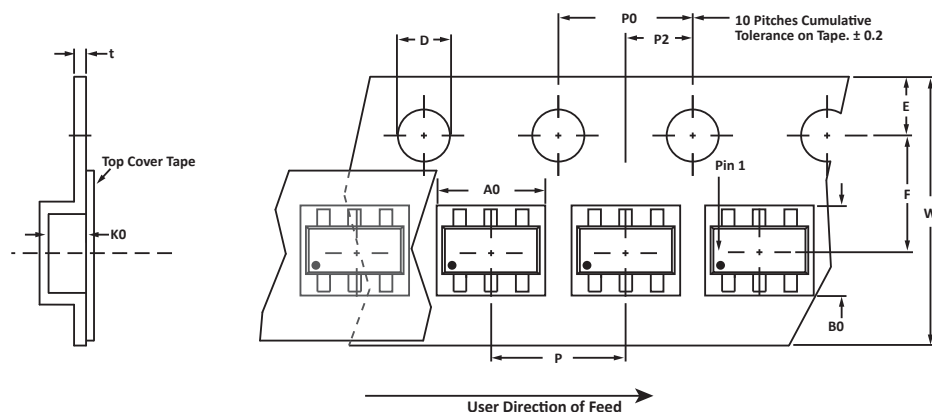
PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	0.70	0.028
B	1.90	0.074
C	0.95	0.037
D	2.40	0.094
E	1.00	0.039

NOTES

1. Controlling dimension: inches.



TAPE AND REEL



SPECIFICATIONS

REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.20 ± 0.10	3.20 ± 0.10	1.65 ± 0.10	1.50 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.25

NOTES

1. Dimensions are in millimeters.
2. Surface mount product is taped and reeled in accordance with EIA-481.
3. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
4. Marking on Part - marking code (see page 2) and pin one defined by dot on package.

ORDERING INFORMATION

BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
SRV05-4	-P	-T7	3,000	7"	n/a

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

COMPANY INFORMATION

COMPANY PROFILE

In business more than 25 years, ProTek Devices™ is a privately held semiconductor company. The company offers a product line of overvoltage protection and overcurrent protection components. These include transient voltage suppressor array (TVS arrays) avalanche breakdown diode, steering diode TVS array and electronics SMD chip fuses. These components deliver circuit protection in electronic systems from numerous overvoltage and overcurrent events. They include lightning; electrostatic discharge (ESD); nuclear electromagnetic pulses (NEMP); inductive switching; and electromagnetic interference (EMI) / radio frequency interference (RFI). ProTek Devices also offers LED wafer die for ESD protection and related high frequency products. ProTek Devices is ISO 9001:2015 certified.

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