LOW CAPACITANCE TVS ARRAY

SC-79 PACKAGE

DESCRIPTION

The RSB6.8S is a low capacitance, transient voltage suppressor designed to protect applications such as wireless telecommunication devices, PCMCIA cards and portable electronics. This device is available in a bidirectional configuration with a working voltage of 4.7V and a minimum breakdown voltage of 5.7V. The RSB6.8S is rated at 10W peak pulse power (10/1000µs), which is sufficient protection for ESD threats at key interface locations.

The RSB6.8S is ideally suited to protect 5V DC lines and data I/O ports against ESD and EFT. This device meets the requirements of IEC 61000-2 and IEC 61000-4-4. Packaged in a SC-79 configuration, this device can be substituted for similar 0803 outlines.

FEATURES

- Compatible with IEC 61000-4-2 (ESD): Air - 15kV, Contact - 8kV
- Compatible with IEC 61000-4-4 (EFT): 40A - 5/50ns
- 10 Watts Peak Pulse Power per Line (tp = 10/1000µs)
- Bidirectional Configuration
- Replacement for MLV (0803)
- Low Clamping Voltage
- Low Capacitance
- RoHS Compliant
- REACH Compliant

APPLICATIONS

- Noise Suppression for Data/Audio Lines
- SMART Phones
- Digital Cameras
- Laptop Computers

MECHANICAL CHARACTERISTICS

- Molded JEDEC SC-79 Package
- Approximate Weight: 2 milligrams
- Lead-Free Pure-Tin Plating (Annealed)
- Solder Reflow Temperature:
  Pure-Tin - Sn, 100: 260-270°C
- 8mm 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**
Peak Pulse Power (tp = 10/1000µs) - See Figure 1	P_{PP}	10	Watts
Power Dissipation	P_D	150	mW
Operating Temperature	T_A	-55 to 150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Junction Temperature	T_L	150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified					
PART NUMBER (Note 1)	**DEVICE MARKING**	**RATED STAND-OFF VOLTAGE** V_{WM} **VOLTS**	**MINIMUM BREAKDOWN VOLTAGE @ 1mA** $V_{(BR)}$ **VOLTS**	**MAXIMUM LEAKAGE CURRENT @3.5V** I_D **µA**	**MAXIMUM CAPACITANCE @0V, 1MHz C pF**
RSB6.8S	C5	4.7	5.7	0.5	30

NOTE
1. Bidirectional device. Test both polarities.

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

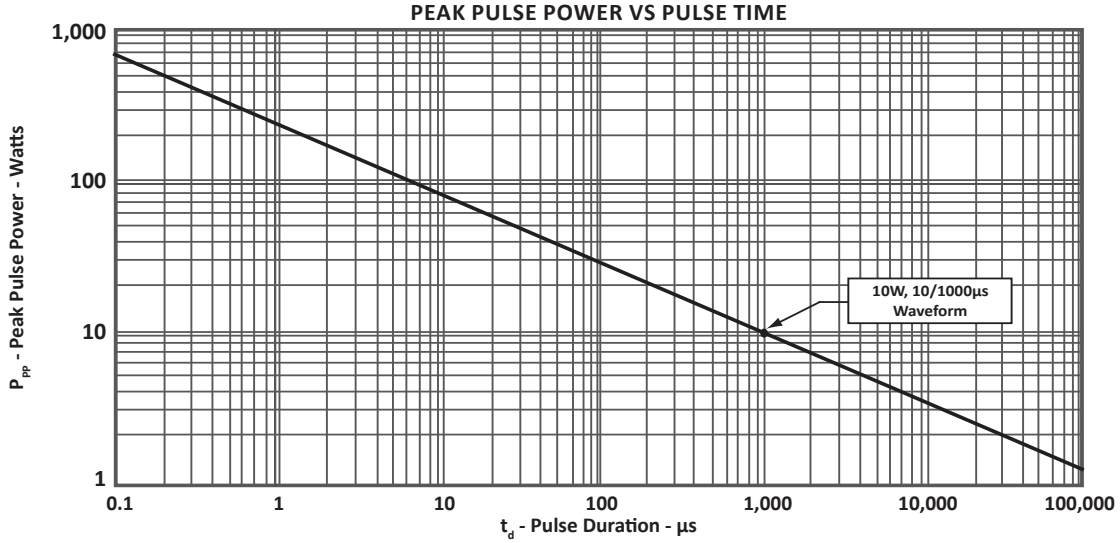
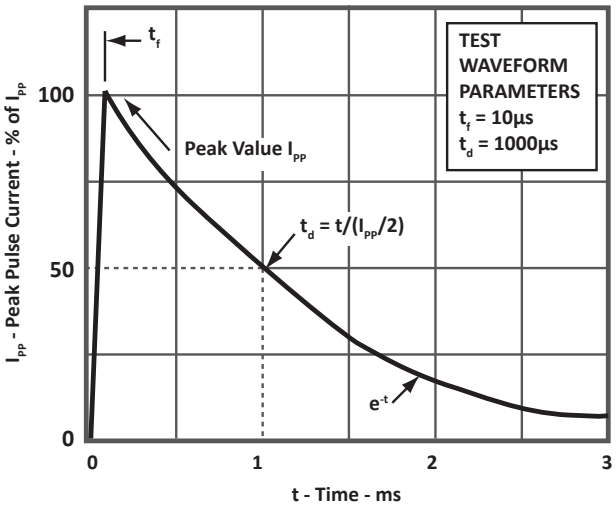


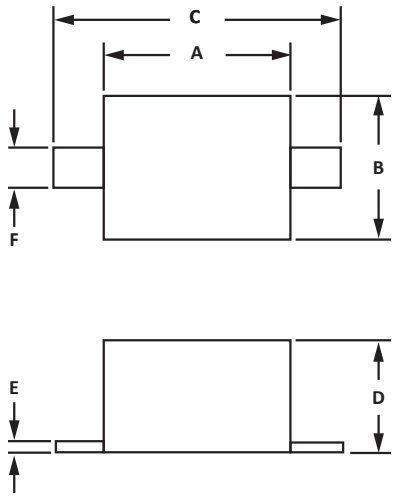
FIGURE 2
PULSE WAVEFORM



SC-79 PACKAGE INFORMATION

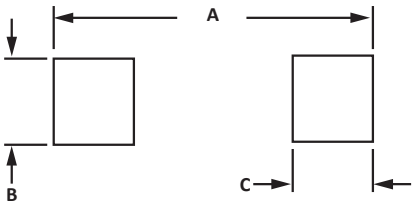
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.10	1.30	0.043	0.049
B	0.70	0.90	0.028	0.035
C	1.50	1.70	0.059	0.066
D	0.50	0.70	0.020	0.028
E	0.08	0.20	0.003	0.008
F	0.30 BSE		0.012 BSE	

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

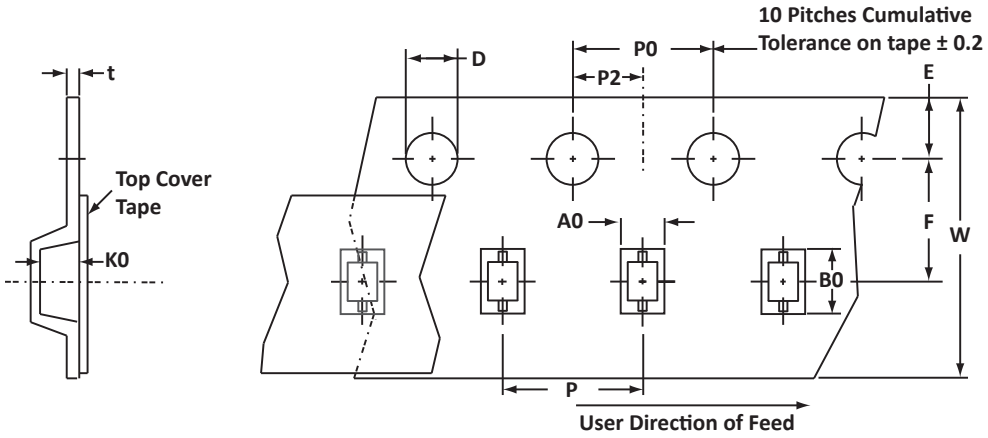


PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.85	2.03	0.070	0.080
B	0.38	0.64	0.015	0.025
C	0.25	0.51	0.010	0.020

NOTES
1. Controlling dimension: millimeters



TAPE AND REEL



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	1.00 ± 0.10	1.95 ± 0.05	0.075 ± 0.05	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. Empty pocket between sprocket holes.
4. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
5. Marking on Part - marking code (see page 2) and date code.

Package outline, pad layout and tape specifications per document number 06037.R3 8/10.

ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
RSB6.8S	n/a	-T7	3,000	7"	n/a

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

COMPANY INFORMATION

COMPANY PROFILE

In business more than 20 years, ProTek Devices™ is a privately-held company located in Tempe, Arizona, that offers a product line of transient voltage suppressors (TVS); avalanche breakdown diodes; steering diode TVS arrays and other surge suppressor component products. These TVS devices protect electronic systems from the effects of lightning, electrostatic discharge (ESD), nuclear electromagnetic pulses (NEMP), inductive switching and EMI / RFI. ProTek Devices also offers high performance interface and linear products that include analog switches; multiplexers; LED drivers; audio control ICs; RF and related high frequency products. The analog devices work in a host of consumer; industrial; automotive and other applications.

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