

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 (10/1000 μ s), 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 = 10/1000 μ s)
- Bidirectional Configuration
- Replacement for MLV (0803)
- Low Clamping Voltage
- Low Capacitance
- RoHS Compliant
- REACH Compliant

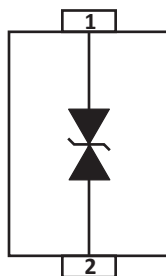
APPLICATIONS

- 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 |

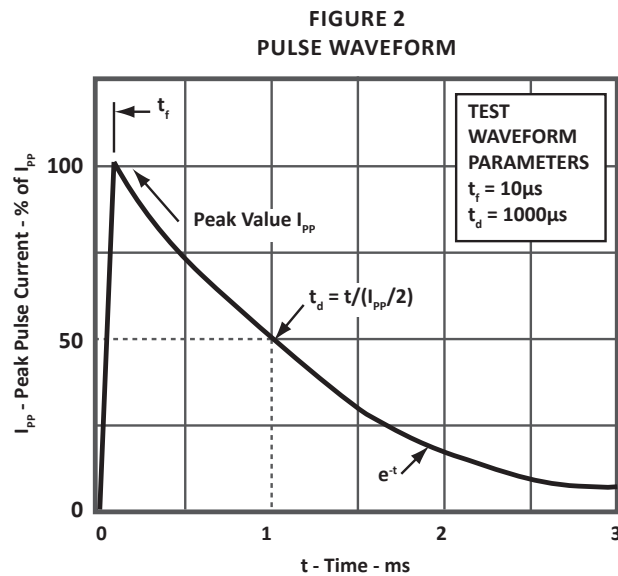
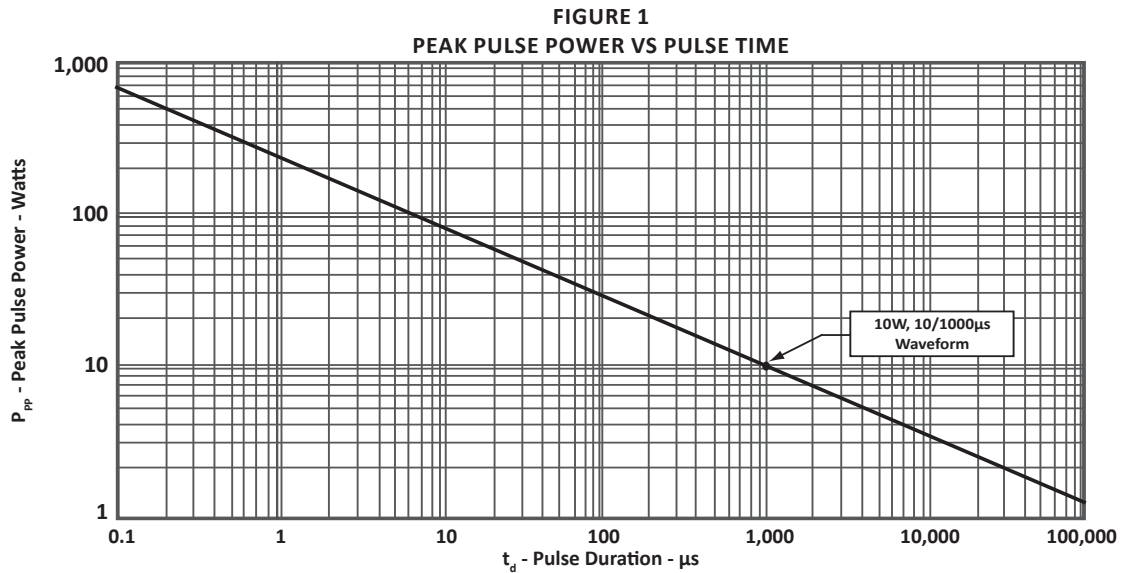
ELECTRICAL CHARACTERISTICS PER LINE @ 25°C Unless Otherwise Specified

| 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



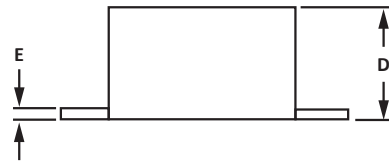
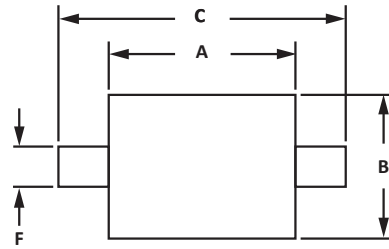
SC-79 PACKAGE INFORMATION

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.

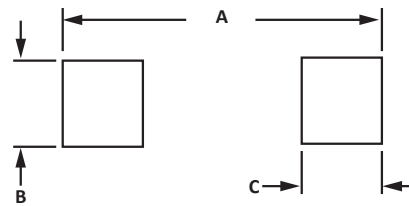


PAD LAYOUT DIMENSIONS

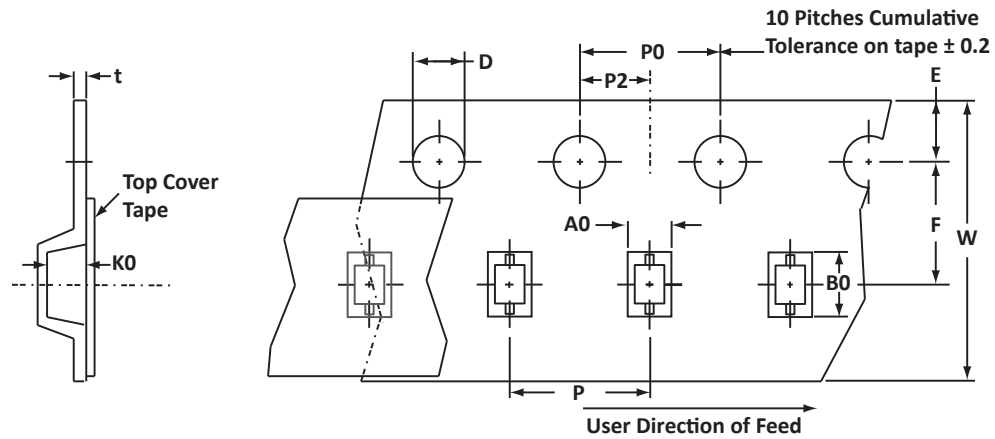
| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|--------|-------|
| | MIN | MAX | MIN | MAX |
| A | 1.85 | 2.03 | 0.070 | 0.080 |
| B | 0.38 | 0.64 | 0.015 | 0.025 |
| C | 0.25 | 0.51 | 0.010 | 0.020 |

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

- Dimensions are in millimeters.
- Surface mount product is taped and reeled in accordance with EIA-481.
- Empty pocket between sprocket holes.
- Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
- 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 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.

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

ProTek Devices (Asia Pacific) Pte. Ltd.

8 Ubi Road 2, #06-19
Zervex
Singapore - 408538
Tel: +65-67488312
Fax: +65-67488313

Web

www.protekdevices.com

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