LOW CAPACITANCE TVS ARRAY

SOD-723 PACKAGE

DESCRIPTION

The RSB6.8G is a noise suppression, low capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. This device is available in a bidirectional configuration and is rated at 10 Watts for an 10/1000µs waveshape.

The RSB6.8G meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. This device offers a ultra low capacitance and low leakage current in a miniature SOD-723 package.

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)
- Replacement for MLV (0805)
- Bidirectional Configuration
- Protects One Data Line
- Low Clamping Voltage
- Low Capacitance
- RoHS Compliant
- REACH Compliant

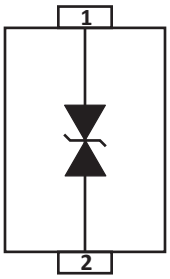
APPLICATIONS

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

MECHANICAL CHARACTERISTICS

- Molded JEDEC SOD-723 Package
- Approximate Weight: 5 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	150	mW
Junction Temperature	T_L	150	°C
Storage Temperature	T_{STG}	-55 to 150	°C
Operating Temperature	T_{OPR}	-55 to 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**
RSB6.8G	A	4.7	5.7	0.5	15

NOTES
1. Bidirectional device. Test both polarities.

TYPICAL DEVICE CHARACTERISTICS

FIGURE 1
PEAK PULSE POWER VS PULSE TIME

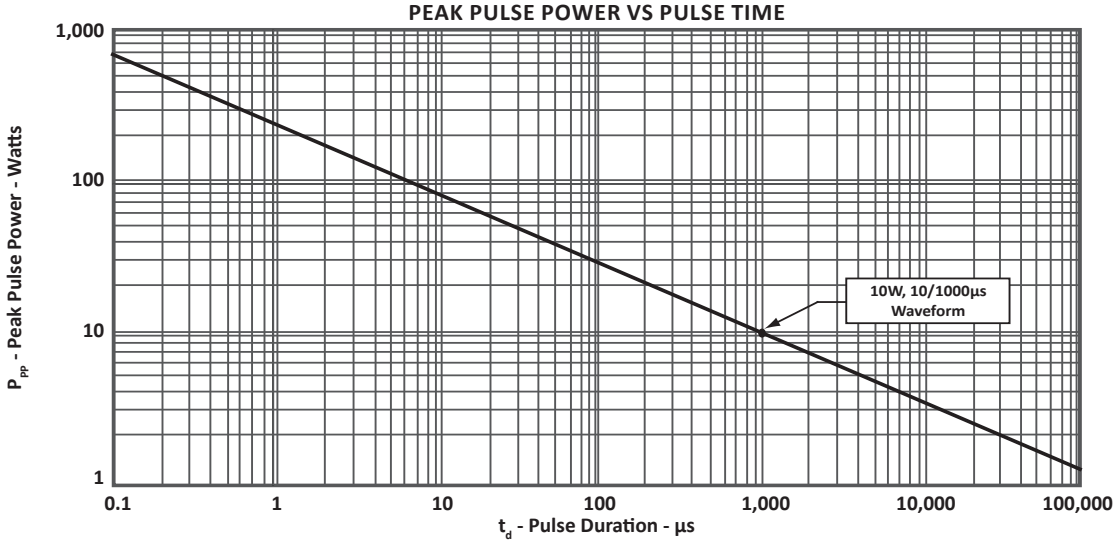


FIGURE 2
PULSE WAVEFORM

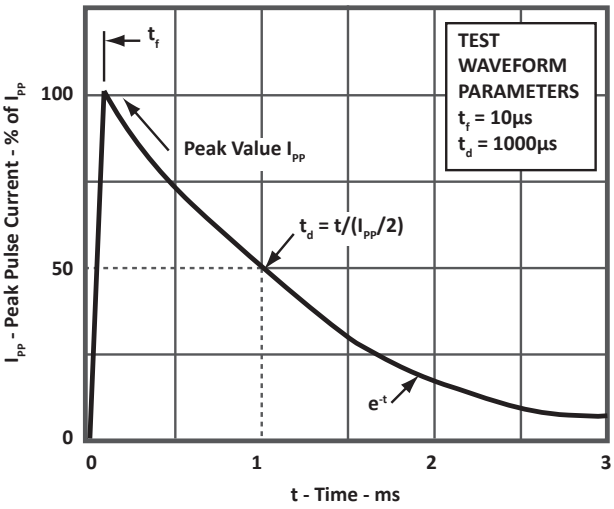
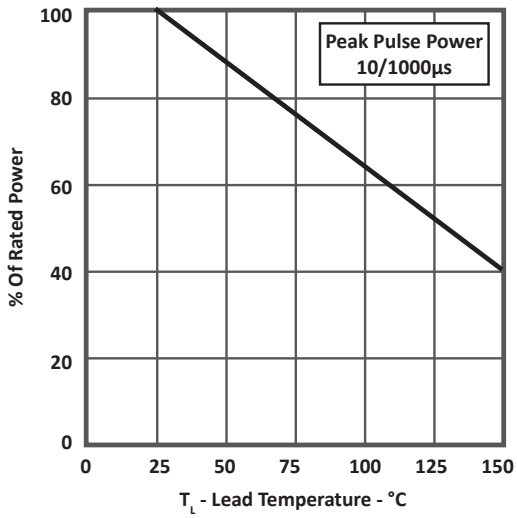


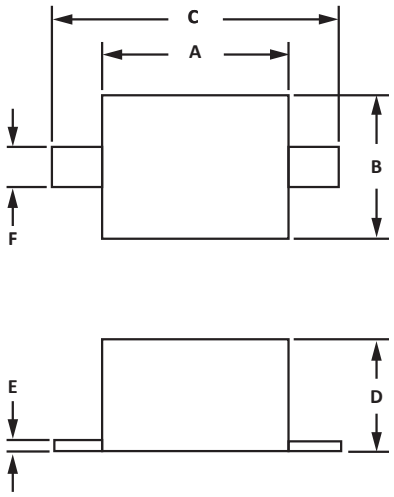
FIGURE 3
POWER DERATING CURVE



SOD-723 PACKAGE INFORMATION

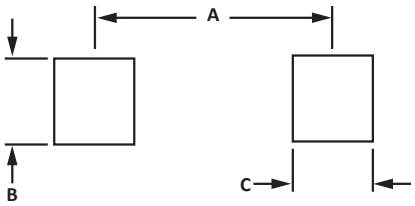
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.95	1.05	0.038	0.042
B	0.55	0.65	0.022	0.026
C	1.35	1.45	0.054	0.058
D	0.45	0.66	0.018	0.026
E	0.10	0.16	0.004	0.006
F	0.012 BSE		0.30 BSE	

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

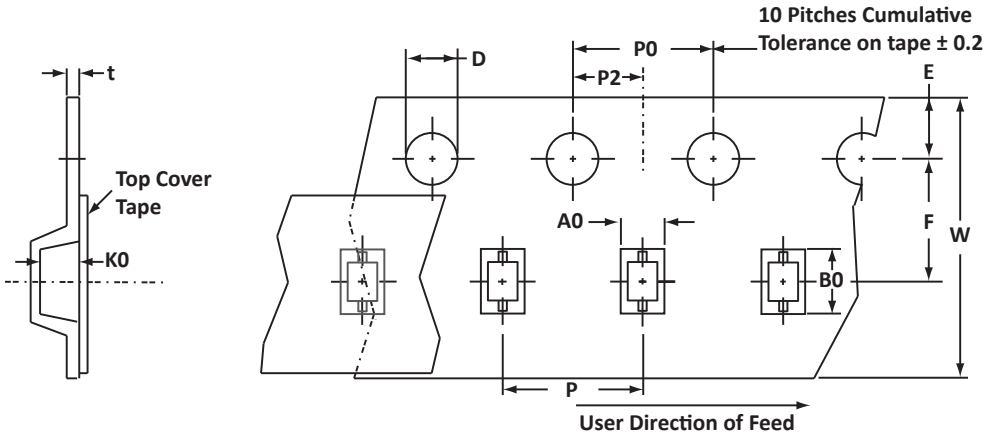


PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOM	NOM
A	1.1	0.043
B	0.45	0.018
C	0.50	0.020

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	0.85 ± 0.10	1.65 ± 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. Suffix - T7 = 7" Reel - 3,000 pieces per 8mm tape.
4. Marking on Part - marking code (see page 2) and date code.

Package outline, pad layout and tape specifications per document number 06064.R0 4/06.

ORDERING INFORMATION					
BASE PART NUMBER	LEADFREE SUFFIX	TAPE SUFFIX	QTY/REEL	REEL SIZE	TUBE QTY
RSB6.8G	-LF	-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.

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:
Sales: sales@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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