

DESCRIPTION

- The SESD0715BD is an uni-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive data and power line.
- The SESD0715BD complies with the IEC 61000-4-2 (ESD) standard with $\pm 25\text{kV}$ air and $\pm 25\text{kV}$ contact discharge. It is assembled into an ultra-small $1.0 \times 0.6 \times 0.5\text{mm}$ lead-free DFN package. The small size and high ESD surge protection make SESD0715BD an ideal choice to protect cell phone, digital cameras, audio players and many other portable applications.

FEATURES

- Ultra small package: $1.0 \times 0.6 \times 0.5\text{mm}$
- Protects one data or power line
- Ultra low leakage : nA level
- Operating voltage : 7/15V
- Low clamping voltage
- 2-pin leadless package

APPLICATIONS

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals
- Audio Players
- Keypads, Side Keys, LCD Displays

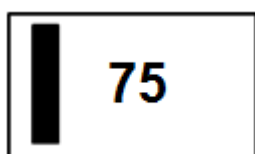
MECHANICAL DATA

- Case : Molded, plastic
DFN-1006-2L
- Polarity : Shown follows
- Epoxy : UL94-V0 rated flame retardant

IEC COMPATIBILITY

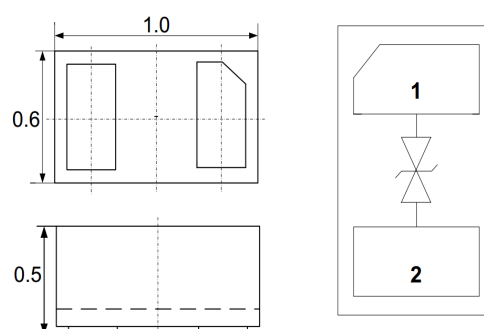
- IEC61000-4-2 (ESD) $\pm 25\text{kV}$ (air),
 $\pm 25\text{kV}$ (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)

DFN1006-2L PACKAGE



75: Device Marking Code
Bar denotes cathode

SCHEMATIC & PIN CONFIGURATION



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

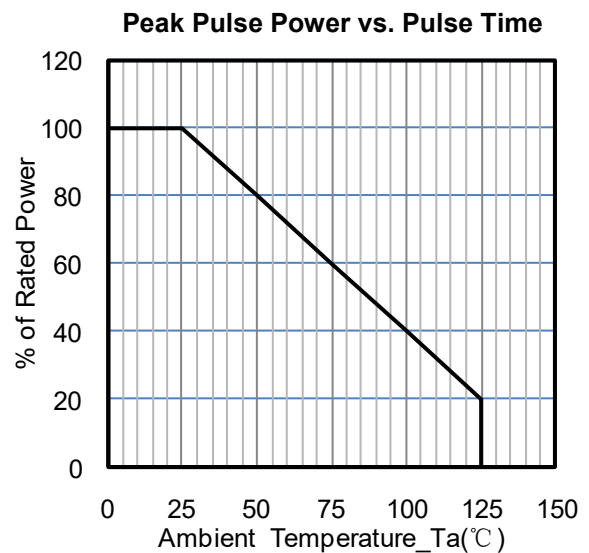
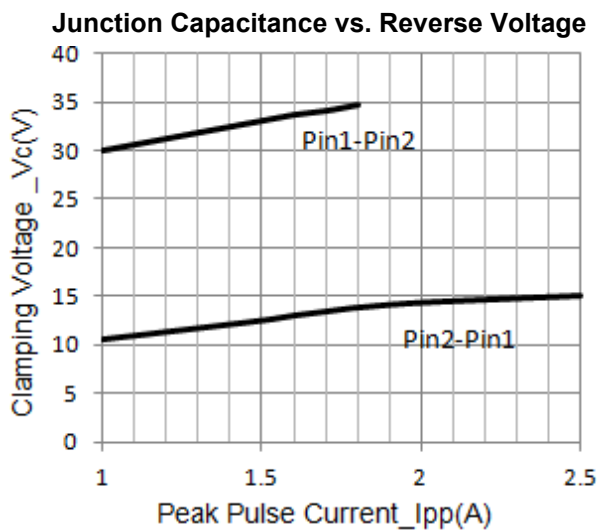
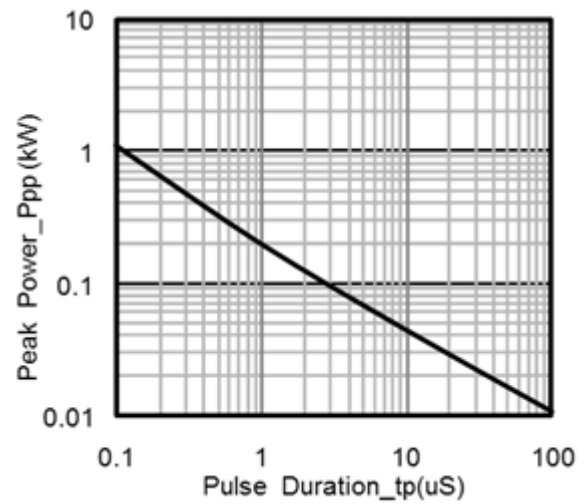
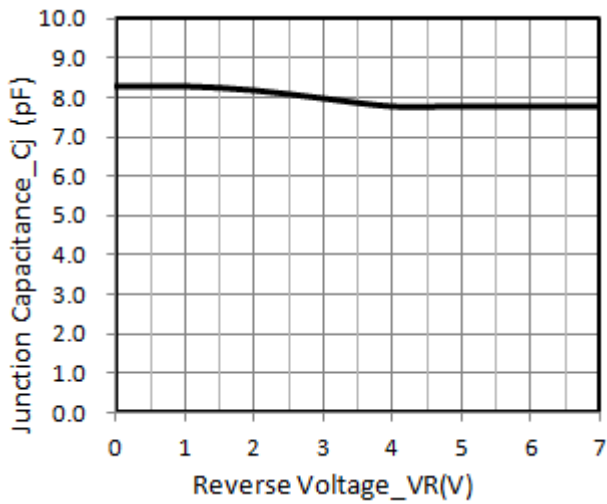
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	Ppk	50	W
Peak Pulse Current (8/20 μs)	Ipp	1.8	A
ESD per IEC 61000-4-2 (Air)	VESD	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 25	
Operating Temperature Range	TJ	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	Tstg	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

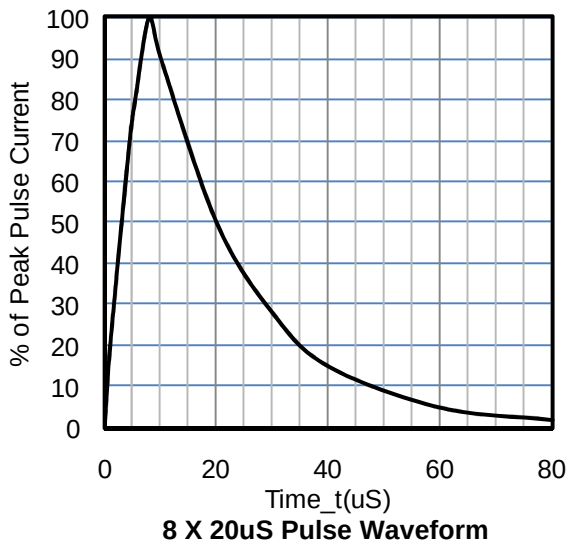
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM		15		V	Pin 1 to Pin 2
Reverse Working Voltage	VRWM		7		V	Pin 2 to Pin 1
Breakdown Voltage	VBR	17	20		V	It = 1mA, Pin 1 to Pin 2
Breakdown Voltage	VBR	8.5	10		V	It = 1mA, Pin 2 to Pin 1
Reverse Leakage Current	IR			0.5	μA	VRWM = 15V, Pin 1 to Pin 2
Reverse Leakage Current	IR			0.5	μA	VRWM = 7V, Pin 2 to Pin 1
Clamping Voltage	VC		30		V	Ipp = 1A (8 x 20 μs pulse), Pin 1 to Pin 2
Clamping Voltage	VC		12		V	Ipp = 1A (8 x 20 μs pulse), Pin 2 to Pin 1
Junction Capacitance	CJ		8	10	pF	VR = 0V, f = 1MHz



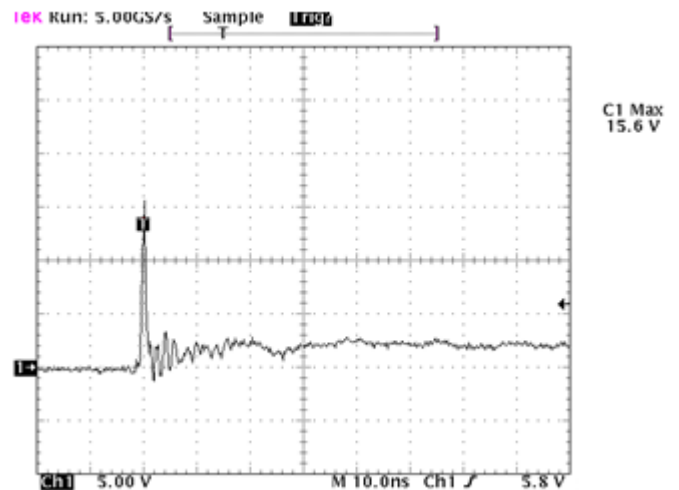
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



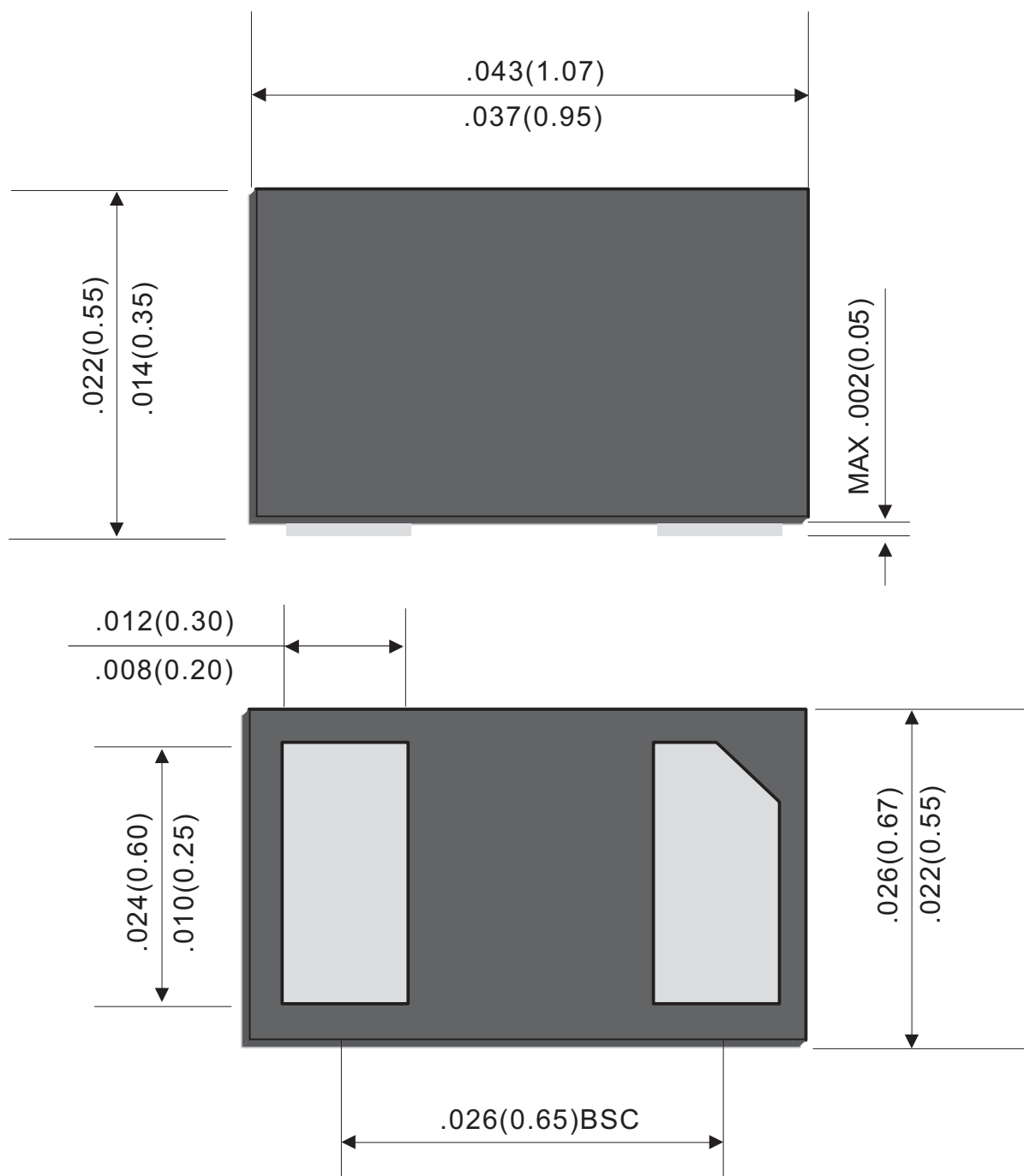
ESD Clamping Voltage

8 kV Contact per IEC61000-4-2



Outline Drawing

DFN1006-2L



Dimensions in inches and (millimeters)

Rev.B-1

**Ordering Information:**

Device PN	Packing
SESD0715BD -T ⁽¹⁾ H ⁽²⁾ -WS ⁽³⁾	Tape&Reel: 10 Kpcs/Reel

Note: (1) Packing code, Tape & Reel Packing

(2) Halogen free product for packing code suffix "H"

(3) WS : Willas brand abbreviation, Label Type does not display

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