

100W Surface Mount TVS For ESD Protection**FEATURES**

- Ultra small package: 1.0 x0.6 x0.5mm
- Ultra low capacitance: 0.3pF typical
- Operating voltage : 5V
- Low clamping voltage
- 2-pin leadless package
- MSL 3

APPLICATIONS

- Cellular Handsets and Accessories
- Display Ports
- MDDI Ports
- USB Ports
- Digital Visual Interface(DVI)
- PCI Express and Serial SATA Ports

MECHANICAL DATA

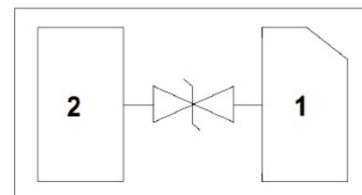
- Case : Molded plastic,DFN1006
- Polarity : Shown Below
- Terminals :Plated terminals, solderable per MIL-STD-750,Method 2026
- Epoxy : UL94-V0 rated flame retardant

IEC COMPATIBILITY

- Complies with following standards:
IEC 61000-4-2 (ESD) $\pm 27\text{kV}$ (Air)
 $\pm 25\text{kV}$ (Contact)
- IEC61000-4-5 (Lightning) 4A (8/20 μs)

DFP1006 PACKAGE

T æ \ ã * ÁCF

**SCHEMATIC & PIN CONFIGURATION****DESCRIPTION**

- The SESD05LCDBD is a bi-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 high-speed data lines. The SESD05LCDBD has an ultra-low capacitance with a typical value at 0.3pF, and complies with the IEC 61000-4-2 (ESD) standard with $\pm 27\text{kV}$ air and $\pm 25\text{kV}$ contact discharge.
- It is assembled into an ultra-small 1.0 x 0.6 x 0.5mm lead-free DFN package. The small size, ultra-low capacitance and high ESD surge protection make SESD05LCDBD an ideal choice to protect cell phone, digital video interfaces and other high speed ports.

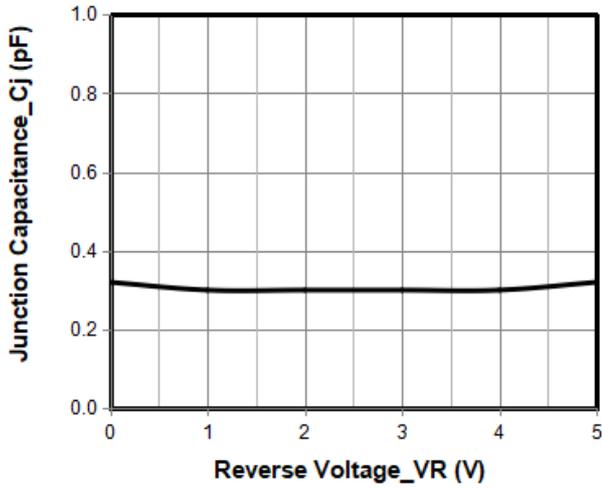
Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power(8/20 μs)	Ppk	100	W
Peak Pulse Current(8/20 μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	± 27 ± 25	kV
Operating Temperature Range	T _J	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	T _{stg}	-55 to +150	$^{\circ}\text{C}$

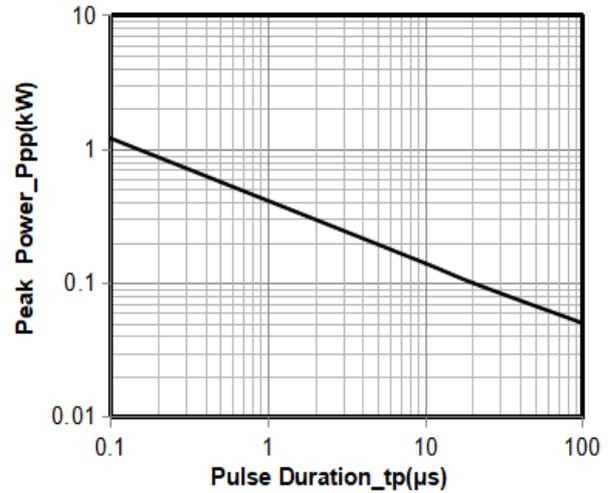
Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	6.5		9.5	V	I _T = 1mA
Reverse Leakage Current	I _R			0.2	μA	V _{RWM} = 5V
Clamping Voltage	V _C			12	V	I _{PP} = 1A (8 x 20 μs pulse)
Clamping Voltage	V _C			25	V	I _{PP} = 4A (8 x 20 μs pulse)
Junction Capacitance	C _J		0.3	0.5	pF	V _R = 0V, f = 1MHz

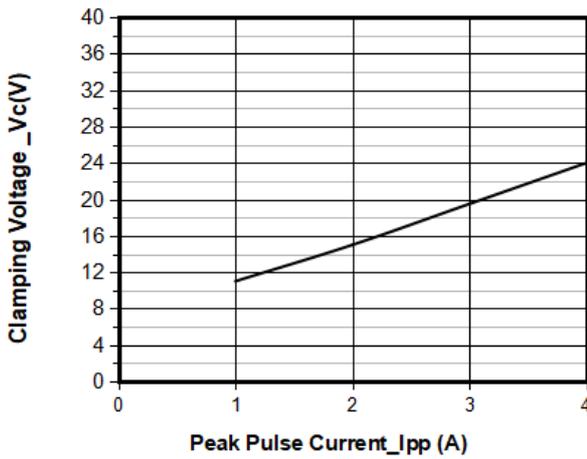
Typical Performance Characteristics (TA=25°C unless otherwise Specified)



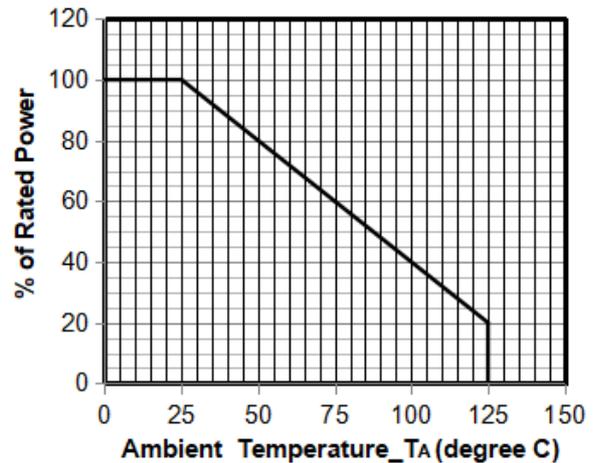
Junction Capacitance vs. Reverse Voltage



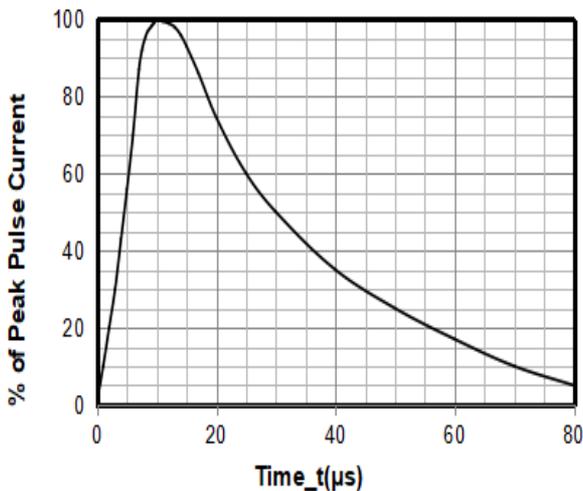
Peak Pulse Power vs. Pulse Time



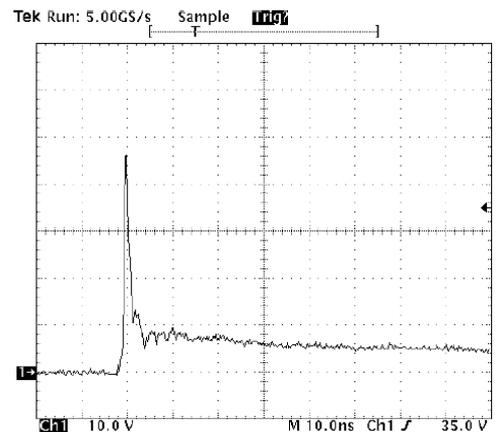
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



8 X 20 s Pulse Waveform



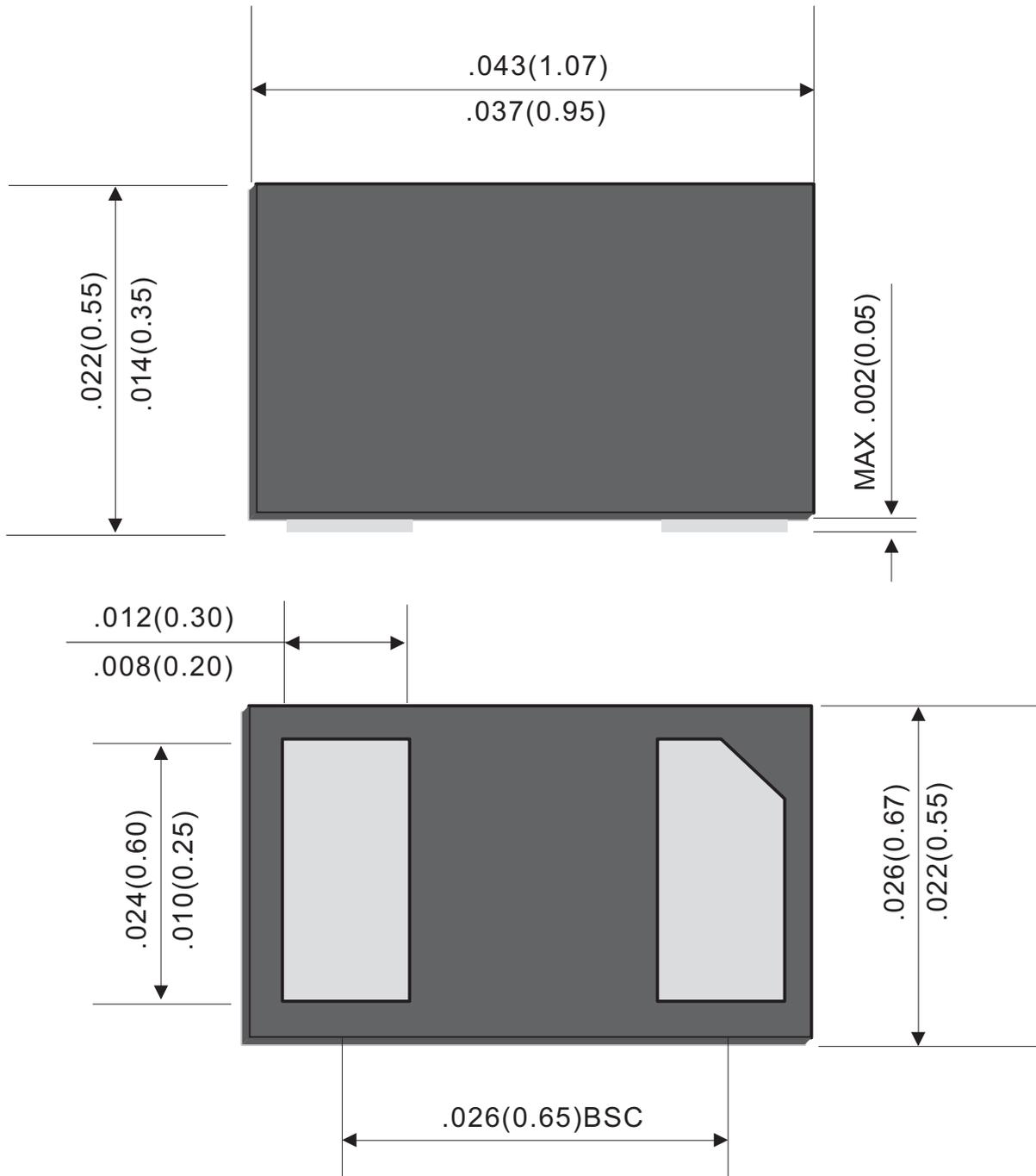
Note: Data is taken with a 10x attenuator

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
SESD05LCDBD -T ⁽¹⁾ H ⁽²⁾ -WS	Tape&Reel: 10 Kpcs/Reel

Note: (1) Packing code, Tape & Reel

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

*****Disclaimer*****

WILLAS reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. WILLAS or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on WILLAS data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. WILLAS does not assume any liability arising out of the application or use of any product or circuit.

This is the preliminary specification. WILLAS products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of WILLAS. Customers using or selling WILLAS components for use in such applications do so at their own risk and shall agree to fully indemnify WILLAS Inc and its subsidiaries harmless against all claims, damages and expenditures.