DESCRIPTION

The ESD8L5.0 is designed to protect voltage sensitive components that require ultra−low capacitance from ESD and transient voltage events. Excellent clamping capability, low capacitance, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its low capacitance, it is suited for use in high frequency designs such as USB 2.0 high speed and antenna line applications.

The ESD8L5.0 is available in SOD-882 Package.

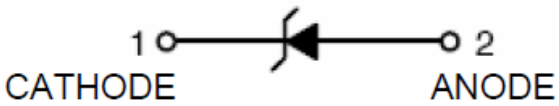
FEATURES

- Ultra Low Capacitance 0.5 pF
- Low Clamping Voltage
- Small Body Outline Dimensions
- Stand−off Voltage: 5V
- Low Leakage
- Response Time is Typically < 1.0 ns
- IEC61000−4−2 Level 4 ESD Protection
- Available in SOD-882 Package

ORDERING INFORMATION

Package Type	Part Number
SOD-882	ESD8L5.0
Note	SPQ: 10,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION



ABSOLUTE MAXIMUM RATINGS

IEC 61000−4−2 (ESD)	Contact	±10kV
	Air	±15kV
P_D, Total Power Dissipation on FR−5 Board[NOTE1] @ T_A = 25°C		150mW
T_J, Junction Temperature Range		-55°C ~ +125°C
T_{STG}, Storage Temperature Range		-55°C ~ +150°C
T_L, Lead Solder Temperature – Maximum (10 Second Duration)		260°C

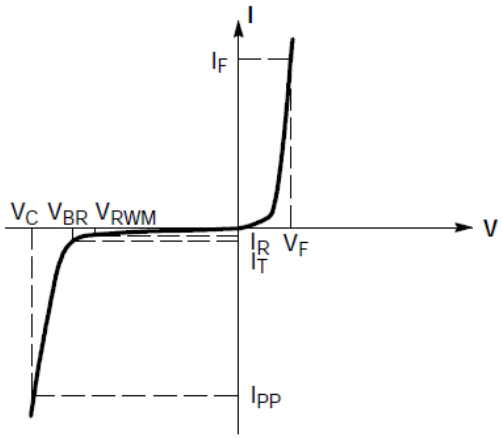
Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

NOTE1: FR−5 = 1.0 x 0.75 x 0.62 in.

ELECTRICAL PARAMETER

T_A = 25°C unless otherwise noted

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F
P_{pk}	Peak Power Dissipation
C	Capacitance @ V_R = 0 and f = 1.0 MHz



Uni−Directional TVS

ELECTRICAL CHARACTERISTICS

T_A = 25°C unless otherwise noted

Part Number	V_{RWM} (V)	I_R (uA) @ V_{RWM}	V_{BR}(V) @ I_T NOTE2	I_T	C(pF)	V_C(V) @ I_{PP} =1A	V_C
	MAX	MAX	MIN	mA	MAX	MAX	Per IEC61000−4−2
ESD8L5.0	5.0	1.0	5.4	1.0	0.9	9.8	Figures 1 and 2 See Below

NOTE2: V_{BR} is measured with a pulse test current IT at an ambient temperature of 25°C.

TYPICAL CHARACTERISTICS

Figure1. ESD Clamping Voltage Screenshot

Positive 8 kV Contact per IEC61000−4−2

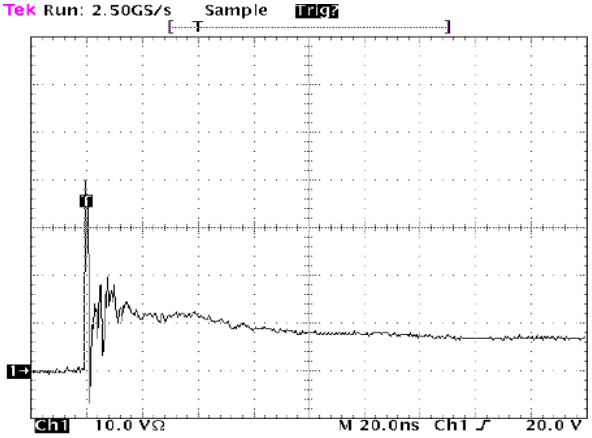


Figure 2. ESD Clamping Voltage Screenshot

Negative 8 kV Contact per IEC61000−4−2

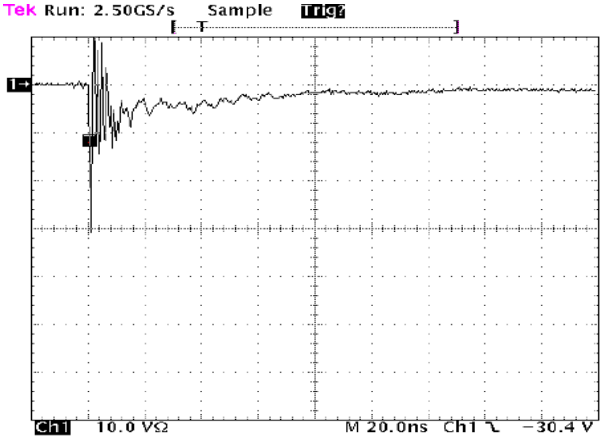


Figure3. Forward Characteristics

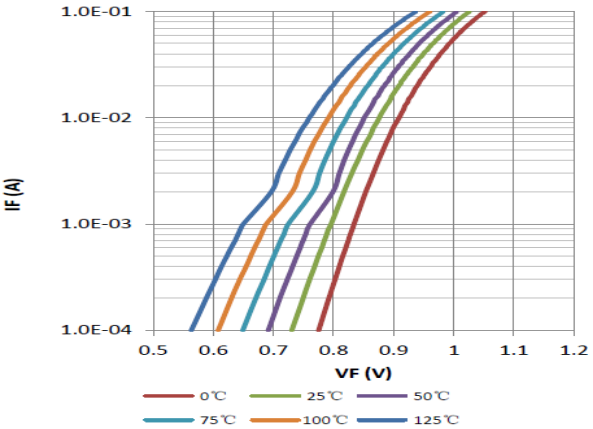


Figure4. Leakage Current

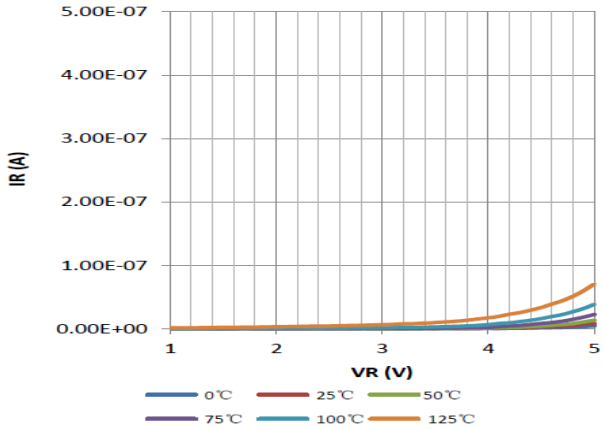
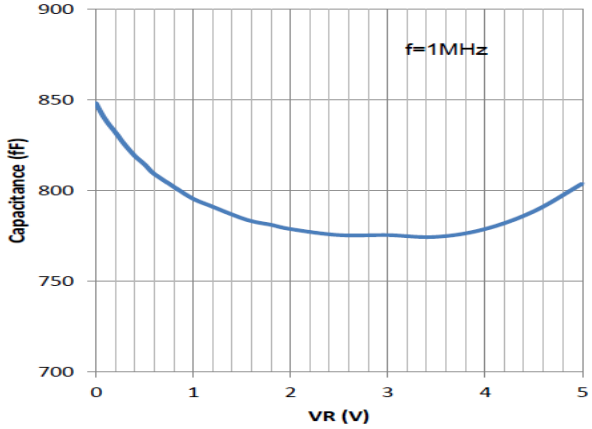
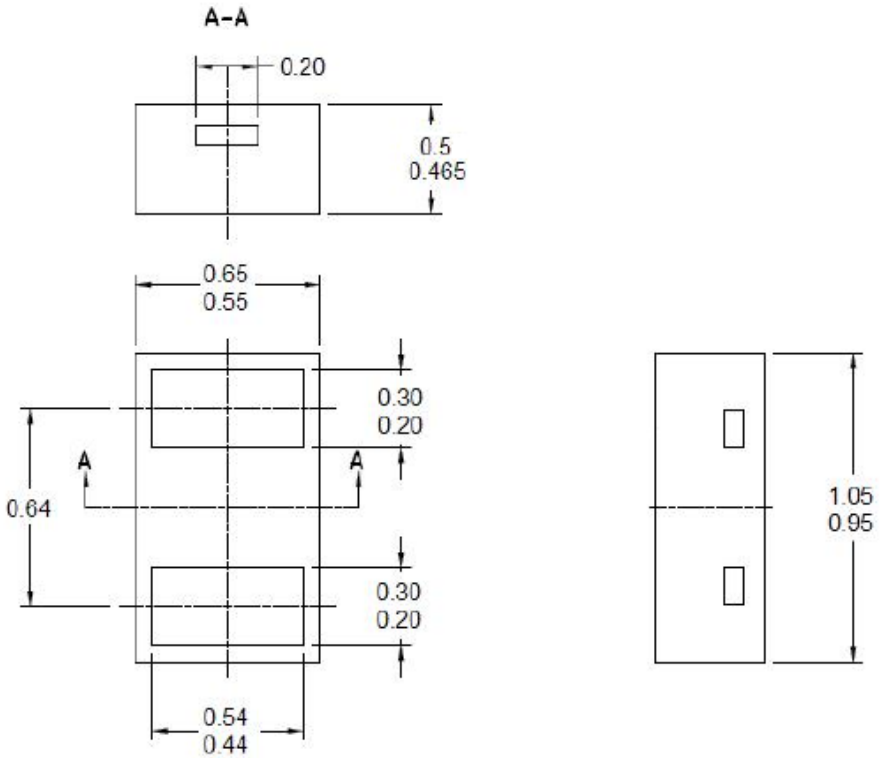


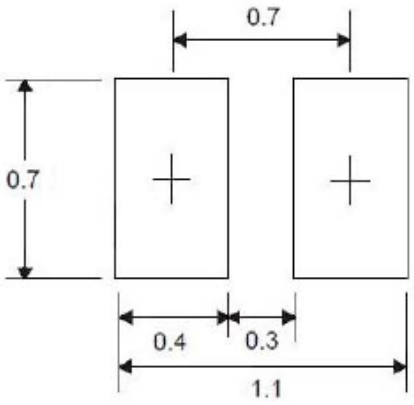
Figure5. Capacitance



PACKAGE INFORMATION

Dimension in SOD-882 Package (Unit: mm)





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