



DWESD0505T5L ESD Protection Diode

Feature

- Uni-directional ESD protection of five I/O lines
- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Junction capacitance: 1.5pF(Max)
- Low capacitance for high-speed interfaces
- Low leakage current
- Low clamping voltage
- IEC 61000-4-2 $\pm 20kV$ contact $\pm 25kV$ air
- IEC 61000-4-5 (Lightning) 4A ($8/20\mu s$)

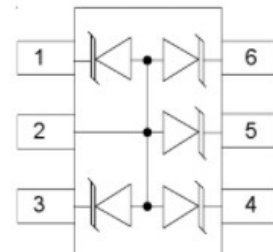
Application

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Dual USB port
- IEEE 1394 Firewire Ports
- Notebooks & Handhelds
- Projection TV & Monitors
- Set-top box
- Flat Panel Displays

Mechanical Data

- Package: SOT-563
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

Circuit Diagram



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
DWESD0505T5L	SOT-563	55L	3000 Tape & Reel	7 inches



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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{PK}	60	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}	± 25 ± 20	kV
Lead Soldering Temperature	T_L	260 (10sec.)	$^{\circ}\text{C}$
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	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND			5	V
Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$ Any I/O pin to GND	6			V
Reverse Leakage Current	I_R	$V_{RWM} = 5.0\text{V}$ Any I/O pin to GND			1	μA
Forward Voltage	V_F	$I_F = 10\text{mA}$ Any I/O pin to GND			1.2	V
Clamping Voltage	V_{C1}	$I_{PP} = 1\text{A}$ (8 x 20 μs pulse)			10	V
Clamping Voltage	V_C	$I_{PP} = 4\text{A}$ (8 x 20 μs pulse)			15	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$			1.5	pF



Typical Characteristics

Fig 1 Power Derating Curve

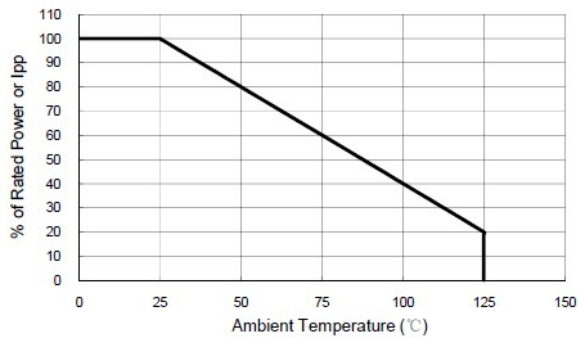


Fig 2 Clamping Voltage vs Peak Pulse Current

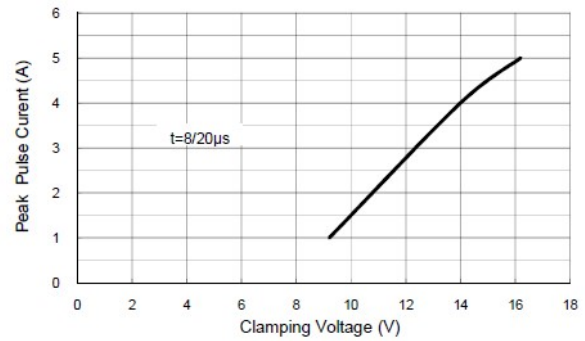


Fig 3 Voltage Sweeping

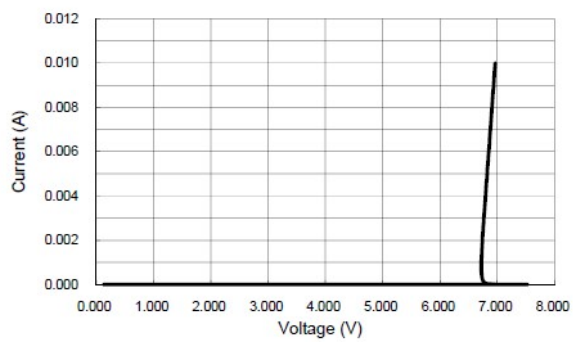
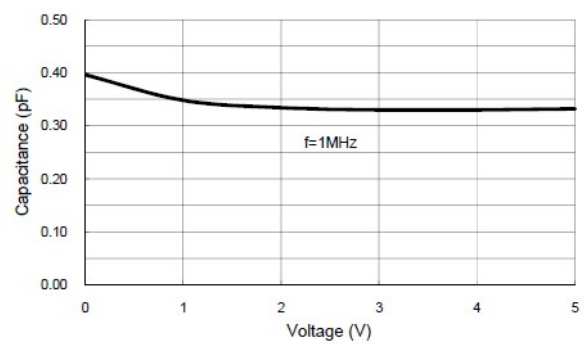


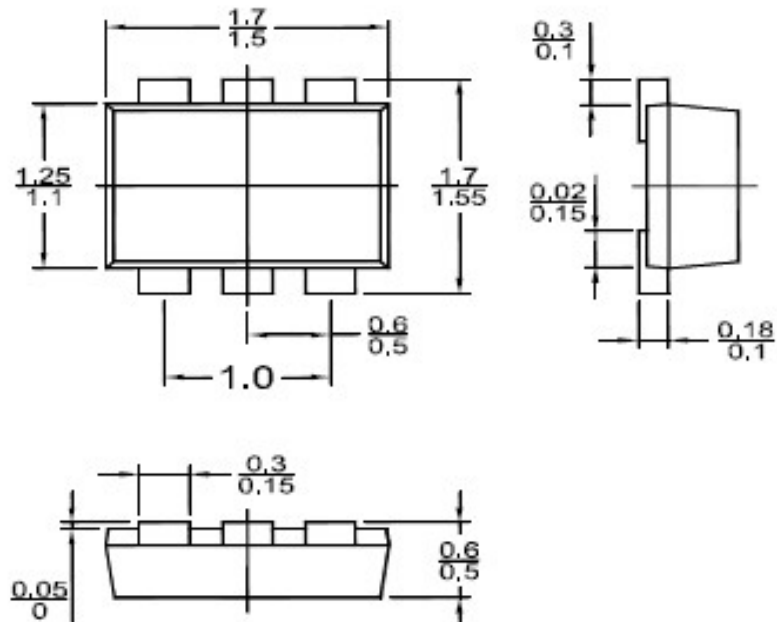
Fig 4 Voltage vs Capacitance





SOT-563 Package Outline Dimensions

Package Outline Dimensions (Units: mm)



Recommended Soldering Footprint

