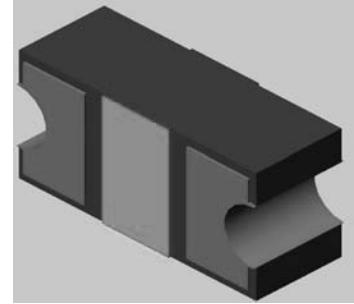


GMLSEP15A-0402

Multilayer Polymer ESD Suppressor

Description

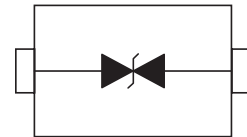
The GMLSEP15A-0402 is an ultra low capacitance PESD product designed to protect high speed data interfaces. The device has a typical capacitance of only 0.05pf (I/O to GND) and meets the ESD immunity requirements of IEC61000-4-2 (15KV air, 8KV contact discharge).



Case: 0402

Features

- ESD protection for high speed data lines to IEC61000-4-2
- ESD contact discharge typical 8KV, max 15KV
- ESD air discharge typical 15KV, max 25KV
- Multilayer structure
- Surface mount
- Extremely low capacitance
- Very low leakage current
- Fast response time
- Bi-directional ESD protection
- Lead free solder termination
- The best ESD solution for high frequency, low voltage applications



Schematic Diagram

Applications

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DP)
- Unified Display Interface (UDI)
- Mobile Display Digital Interface (MDDI)
- Gigabit Ethernet
- USB2.0 and USB3.0
- IEEE1394 Interface

Absolute Maximum Ratings

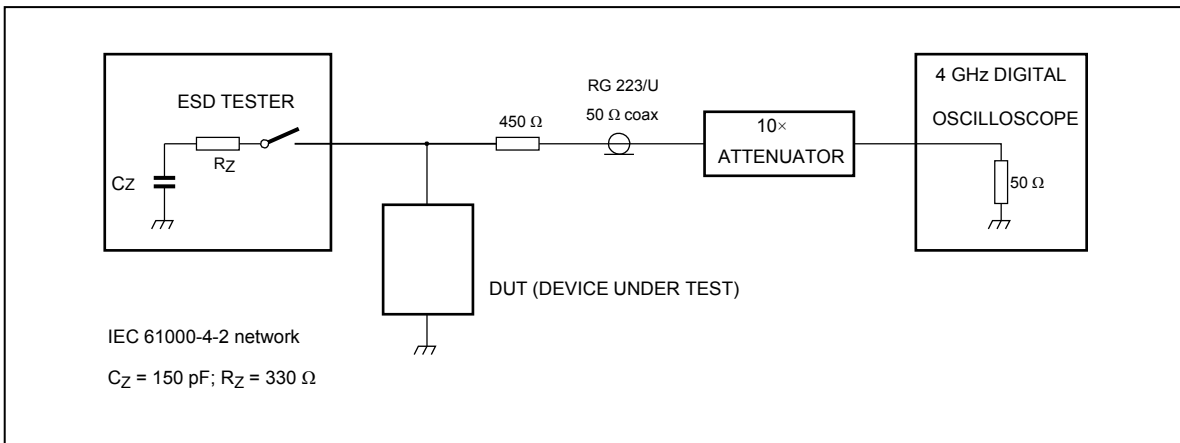
Parameter	Symbol	Value	Unit
Maximum Contact Discharge Voltage Per IEC61000-4-2	-	15KV	V
Maximum Air Discharge Voltage Per IEC61000-4-2	-	25KV	V
Maximum Operating Temperature	T _{OPER}	-55 to +125	°C
Maximum Storage Temperature	T _{STG}	-55 to +125	°C

Electrical Characteristics (T_A=25°C)

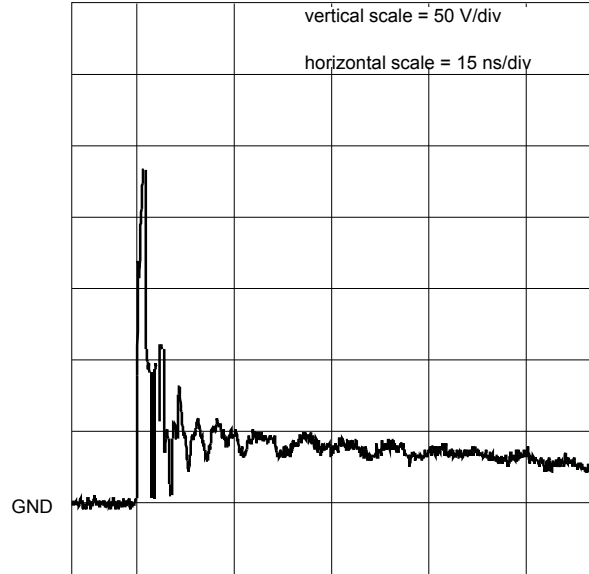
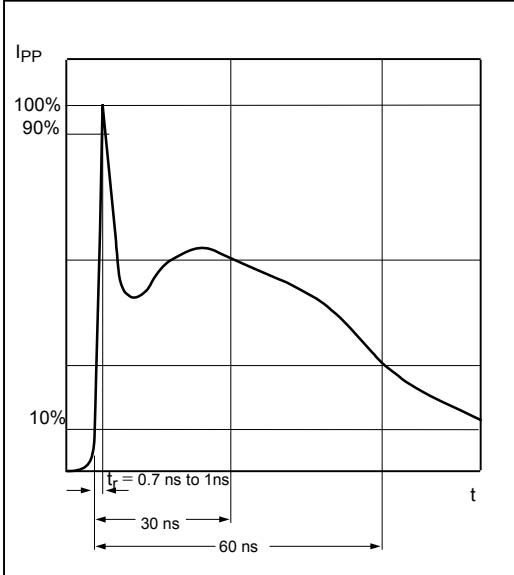
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Rated Voltage	V _R	-	-	-	15	V
Trigger Voltage	V _T	IEC61000-4-2 8KV contact discharge	-	300	-	V
Clamping Voltage	V _C	IEC61000-4-2 8KV contact discharge	-	35	-	V
Leakage Current	I _L	DC 15V shall be applied on component	-	0.01	0.10	μA
Capacitance	C _P	V _R =0V, f=1MHz	-	0.05	-	pF

- Note: 1. Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.
 2. After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

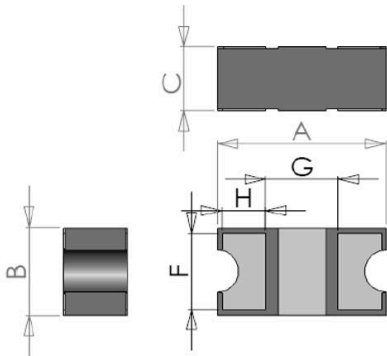
ESD Clamping Test



ESD Clamping Test Waveforms

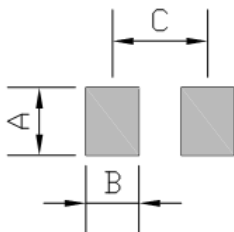


Package Outline Dimensions



Symbol	Dimension in Millimeters		
	Min	Typ	Max
A	0.95	1.00	1.05
B	0.44	0.52	0.60
C	0.32	0.36	0.40
H	0.21	0.23	0.25
F	0.43	0.45	0.47
G	0.42	0.44	0.46

Recommended Pad Layout



Symbol	Dimension in Millimeters
A	0.55
B	0.48
C	0.88