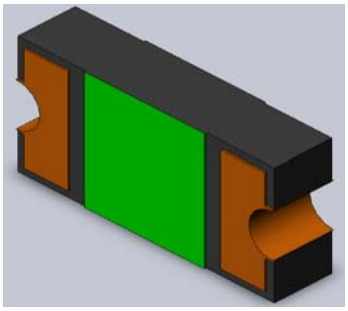
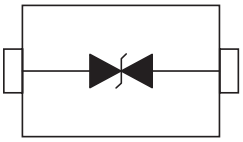
GMLSEP32A-0603
Multilayer Polymer ESD Suppressor

Description

The GMLSEP32A-0603 is an ultra low capacitance polymer ESD suppressor 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: 0603



Schematic Diagram

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
- Surface mount
- Extremely low capacitance
- Low leakage current
- Fast response time
- Bi-directional ESD protection
- Lead free solder termination
- Ideal ESD solution for high frequency, low voltage applications
- RoHS compliant & Halogen free

Applications

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DPI)
- 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
Maximum Lead Temperature for Soldering (10 Seconds)	T_L	260	°C

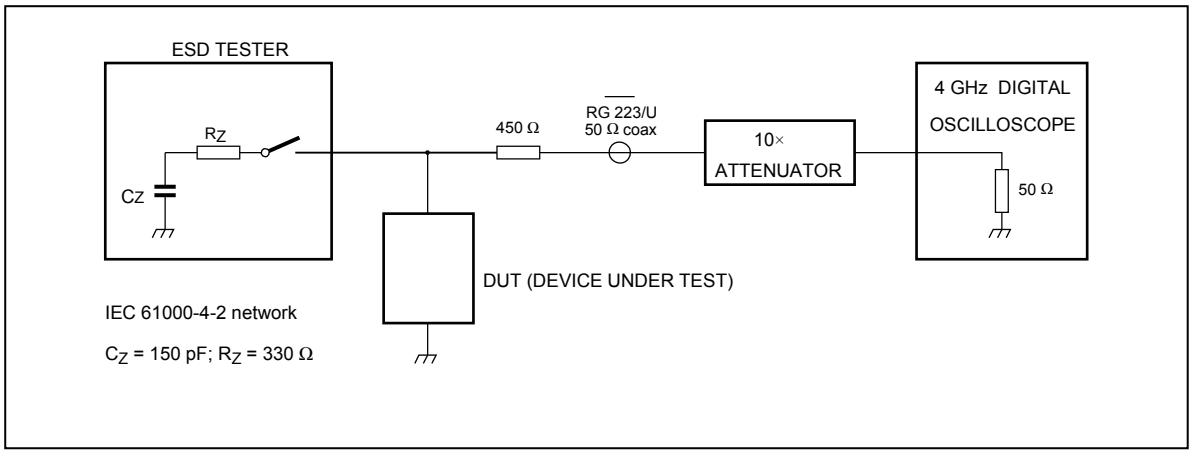
Electrical Characteristics(T_A=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Rated Voltage	V_R	---	---	---	32	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 32V shall be applied on component	---	0.01	0.1	μA
Capacitance	C_P	V_R = 0V, f = 1MHz	---	0.05	---	pF

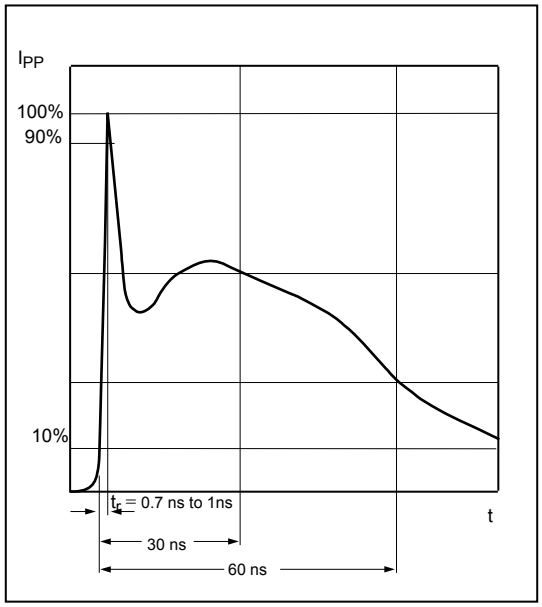
Note: 1. Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.

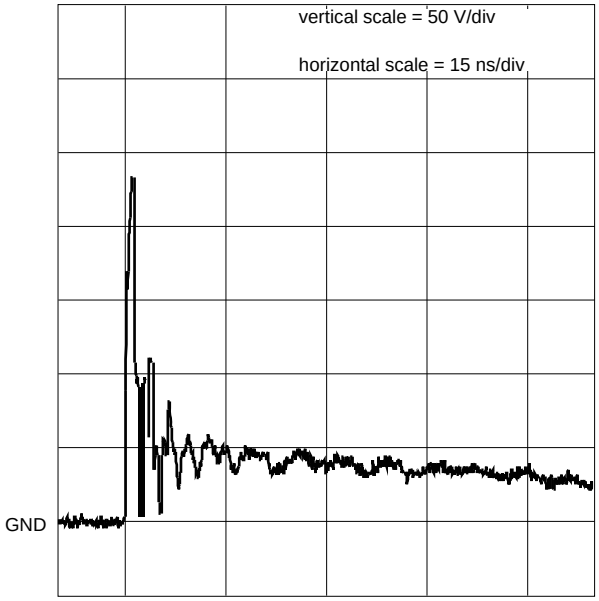
2. After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

ESD Clamping Test

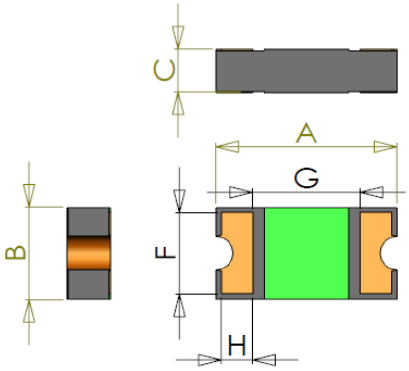


ESD Clamping Test Waveforms



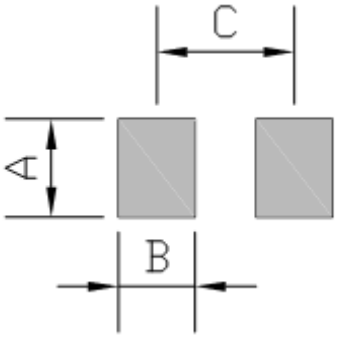


Package Outline Dimensions



Symbol	Dimension			Unit
	Min	Typ	Max	
A	1.50	1.60	1.70	mm
B	0.74	0.82	0.90	
C	0.32	0.36	0.40	
H	0.265	0.285	0.305	
F	0.70	0.72	0.74	
G	0.93	0.95	0.97	

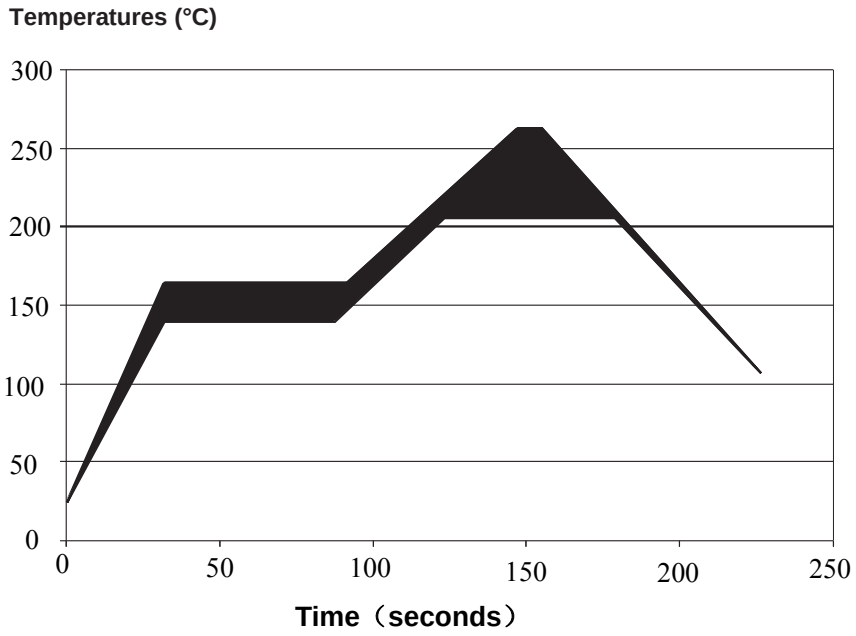
Recommened Pad Layout



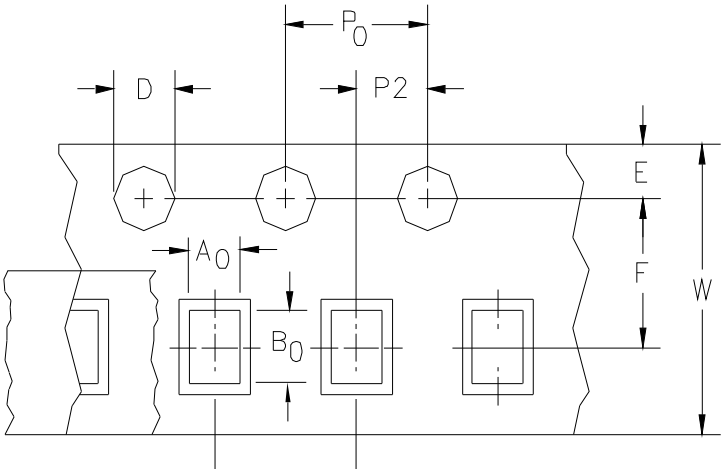
Symbol	Dimension	Unit
A	0.95	mm
B	0.65	
C	1.35	

Solder thickness 0.08 to 0.12mm

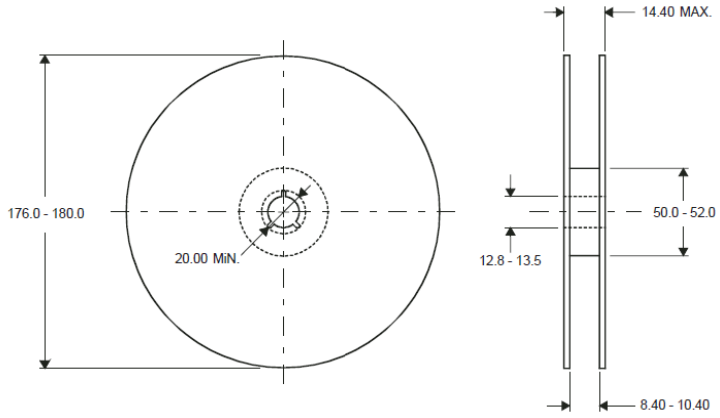
Solder Reflow Recommendations



Package Information



Dimension	Typical	Unit
A0	1.00	mm
B0	1.90	
D	1.55	
P0	4.00	
P1	4.00	
P2	2.00	
E	1.75	
F	3.50	
W	8.00	



DIMENSIONS ARE: MILLIMETERS