



SPECIFICATIONS

Surge Components product name
ESDCSA0402V05 TR (RoHS compliant)

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4. ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Rated Voltage	V _R	--	--	--	5	V
Trigger voltage	V _T	IEC61000-4-2 8KV contact discharge	--	350	--	V
Clamping voltage	V _C	IEC61000-4-2 8KV contact discharge	--	35	--	V
Leakage Current	I _L	DC 5V shall be applied on component			0.10	uA
Capacitance	C _P	V _R =0V f=1MHz	--	0.15		pF

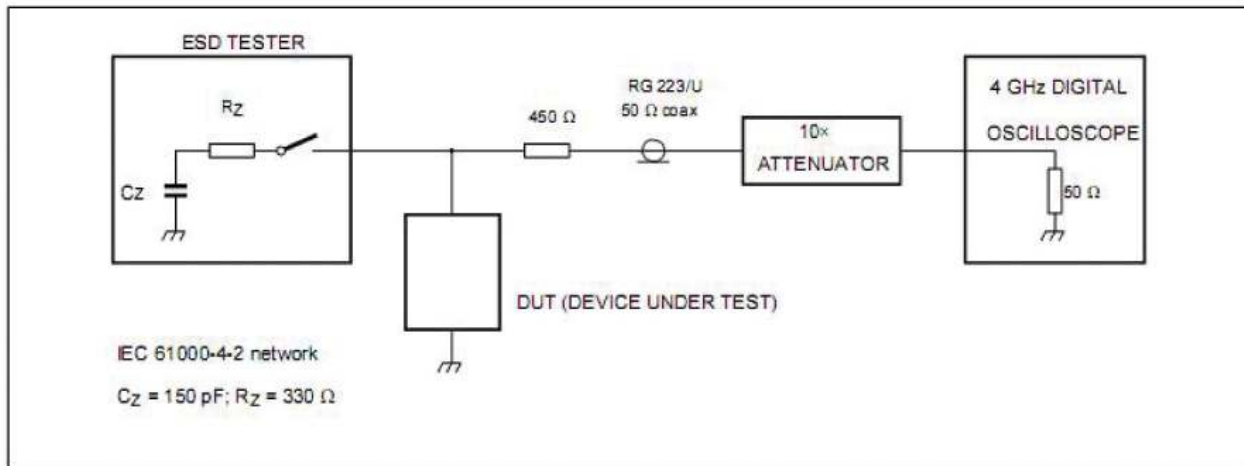
Note: 1. Trigger and clamping voltage are measured per IEC61000-4-2 8KV contact discharge method
 2. After reliability tests such as high temp storage temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA

5. ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	Units
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}	-40 to + 90	°C
Maximum Storage Temperature	T _{STG}	-55 to + 125	°C
Maximum lead temperature for soldering during 10s	TL	260	°C

6. TYPICAL CHARACTERISTICS

ESD Clamping Test



1. DESCRIPTION:

This device is an ultra low capacitance PESD product designed to protect very high speed data interfaces. ESDCSA0402V05 has a typical capacitance of only 0.15pf (I/O to GND), and it can be used to meet the ESD immunity requirements of IEC61000-4-2 (15KV air, 8KV contact discharge)

2. FEATURE

- 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
- Very low leakage current
- Fast response time
- Bi-directional ESD protection
- Lead free solder termination
- The best ESD protection for high frequency, low voltage applications

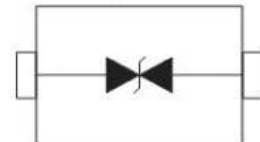
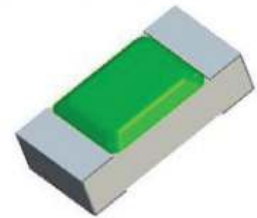
3. APPLICATION

- 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

Caution: This component is designed for signal line protection only,

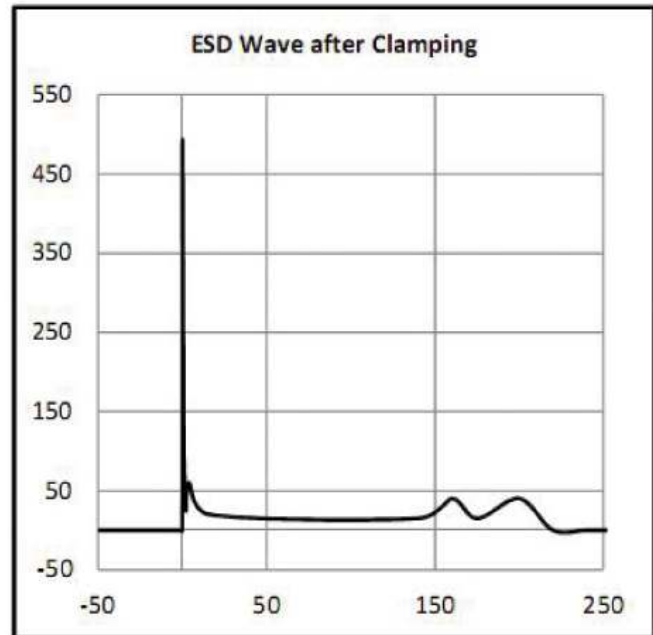
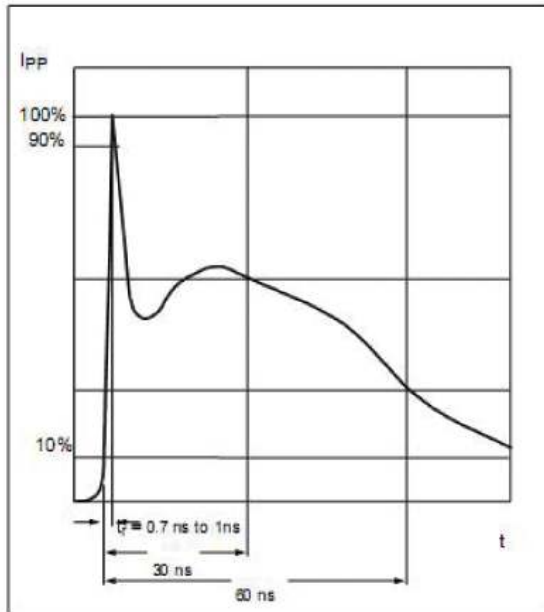
Not intended to be used under bias, not for application with a power line.

ESDCSA0402V05

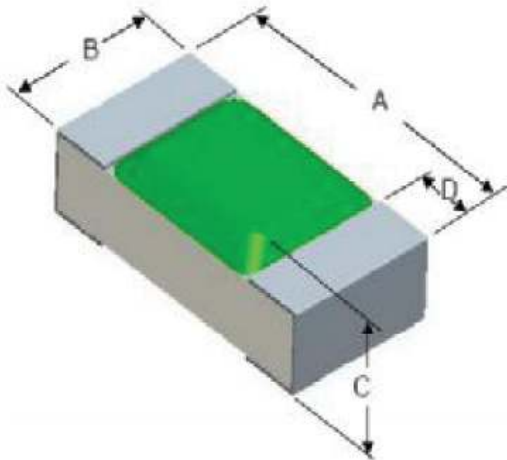


Schematic Diagram

ESD Clamping Test Waveforms

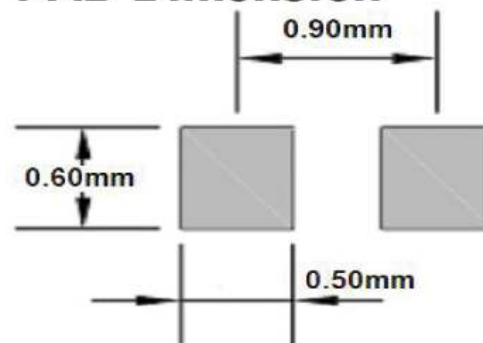


7.PRODUCT DIMENSION AND PAD SIZE.



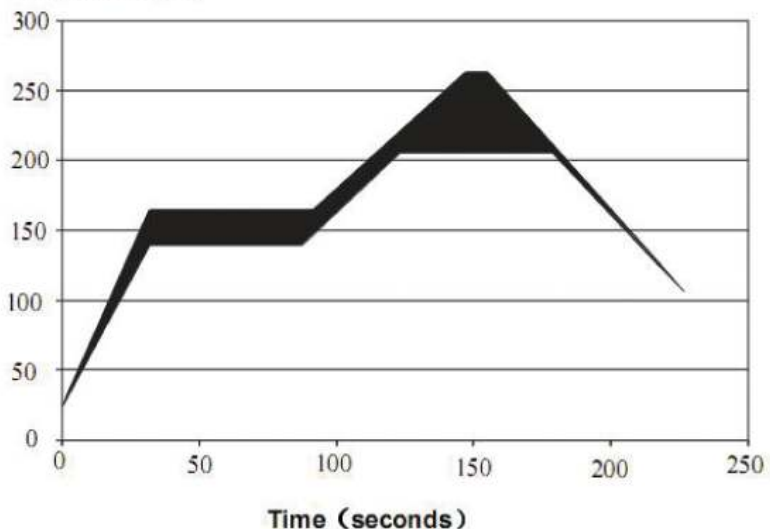
DIM	MILLIMETERS		
	MIN	NOM	MAX
A	0.90	1.05	1.20
B	0.45	0.55	0.65
C	0.26	0.36	0.46
D	0.15	0.25	0.35

PAD Dimension

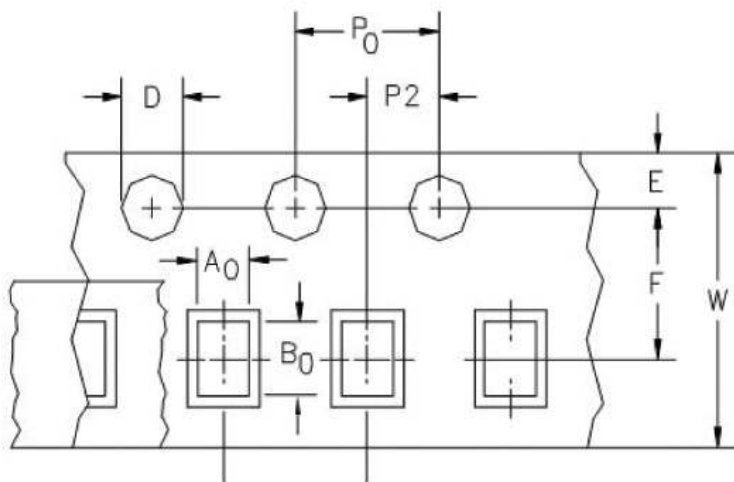


8. SOLDER REFLOW RECOMMENDATIONS

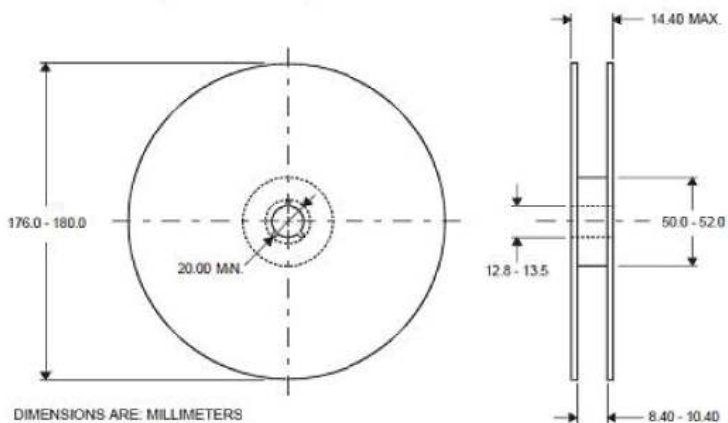
Temperatures (°C)



9. PACKAGE INFORMATION



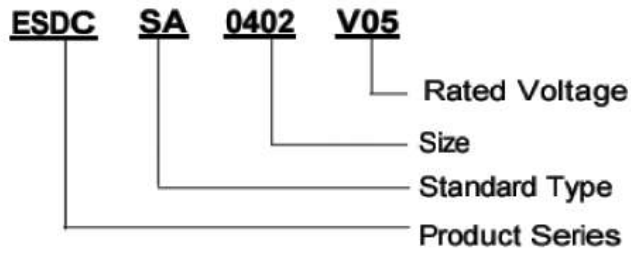
Dimension	Typical	Unit
A0	0.75	mm
B0	1.22	
D	1.55	
P0	4.00	
P1	2.00	
P2	2.00	
E	1.75	
F	3.50	
W	8.00	



DIMENSIONS ARE MILLIMETERS



10. PART NUMBER SYSTEM



11. ORDER INFORMATION

Device	Package	Net Weight	Carrier	Quantity	HSF status
ESDPSA2510V05	0402	0.44mg	Tape & Reel	10,000pcs/reel	RoHS compliant