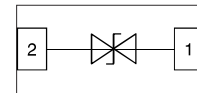




Ultra Low Capacitance ESD Protection Diode in 0603

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
- 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



Mechanical Data

- **Case:** 0603(plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- USB3.0, Firewire, DVI, HDMI, S-ATA
- Thunderbolt, Display Port
- Mobile HDMI Link, MDDI, MIPI, SWP / NFC

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

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}	-40 to +90	°C
Maximum Storage temperature	T _{STG}	-55 to +125	°C
Maximum lead temperature for soldering during 10s	T _L	260	°C

Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

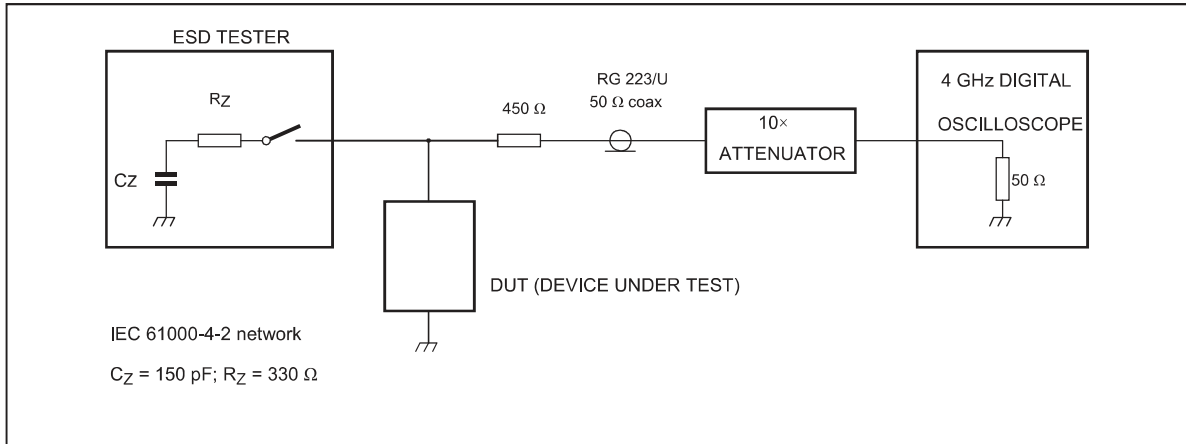
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Rated Voltage	V _R	---	---	---	5	V
Trigger voltage	V _T	IEC61000-4-2 8KV contact discharge	---	350	---	V
Clamping voltage	V _C	IEC61000-4-2 8KV contact discharge	---	35	---	V
Leakage current	I _L	DC 12V shall be applied on component	---		0.10	uA
Capacitance	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

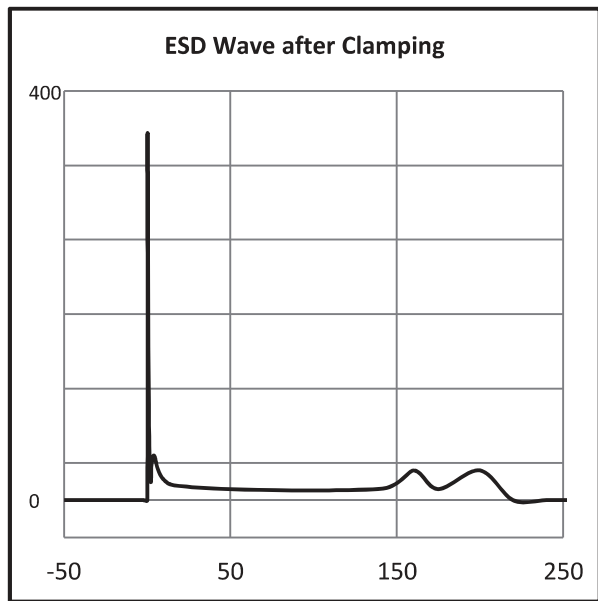
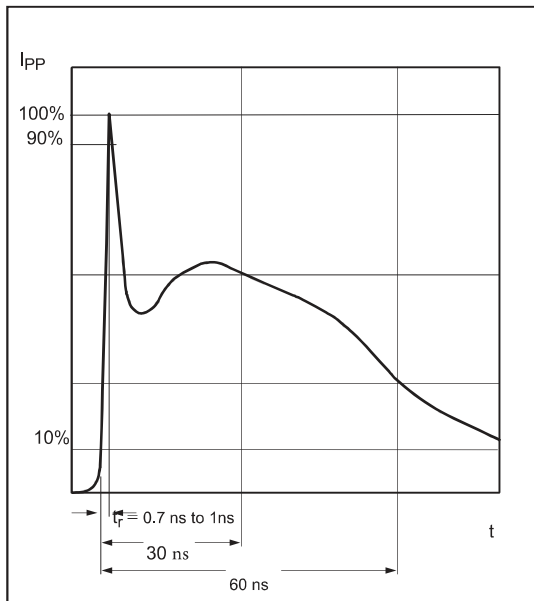
leakage current is less than 10uA.



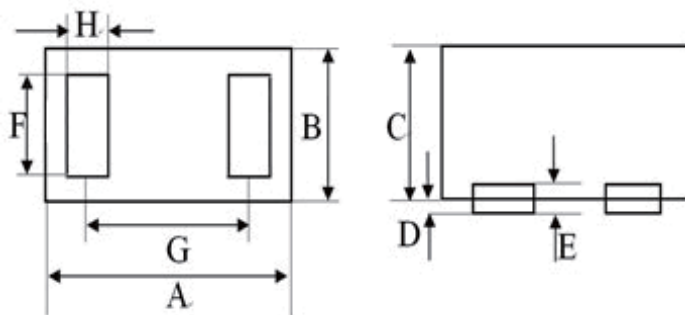
ESD Clamping Test



ESD Clamping Test Waveforms



Product Dimension



Dim	millimeters	
	min	max
A	1.45	1.75
B	0.70	0.95
C	0.43	0.63
D	0.00	0.05
E	0.125REF	
F	0.70	0.80
G	1.30BSC	
H	0.45	0.55



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESDPSA0603V05	0603	Tape and reel	5000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release