

Features

- ESD air discharge typical 8KV, max 15KV
- 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:** E^1E^1 (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

- IO PORT
- 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	---	8KV	V
Maximum Air discharge voltage Per IEC61000-4-2	---	15KV	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

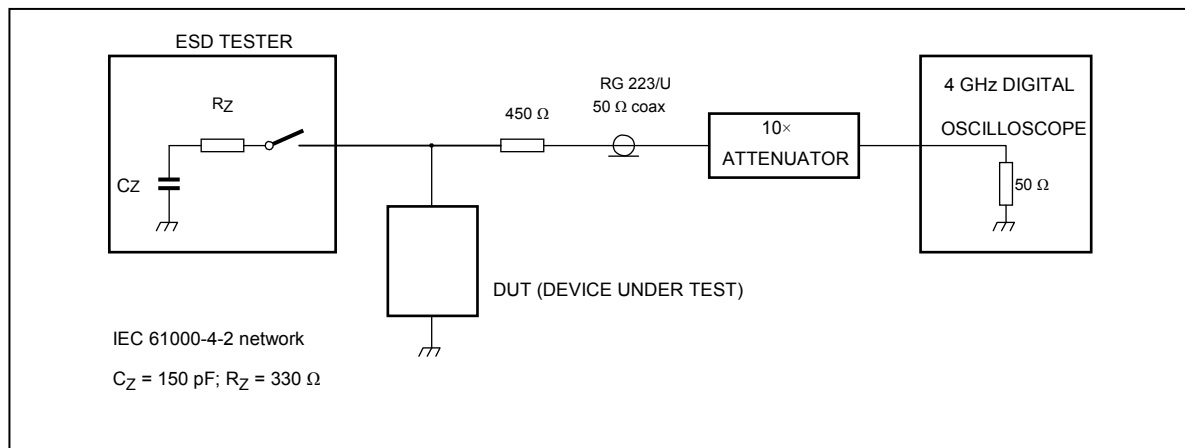
Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

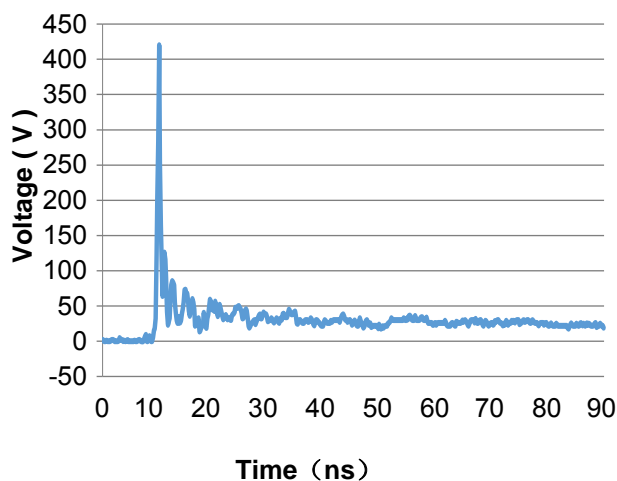
Parameter	Symbol	Test Conditions	Min	Typ	Max	Units
Rated Voltage	V _R	---	---	18	---	V
Clamping voltage	V _C	8/20 μ s @ 1A	---	58	---	V
Leakage current	I _L	DC 12V shall be applied on component	---		0.10	μ A
Capacitance	C _P	V _R = 0V, f = 1MHz	---	100		pF

Note: After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10 μ A.

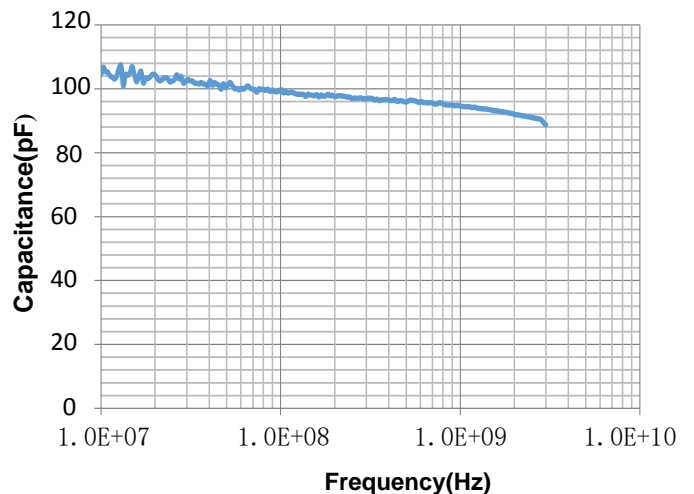
ESD Clamping Test



Typical ESD Response
(IEC 61000-4-2, 8KV contact discharge)



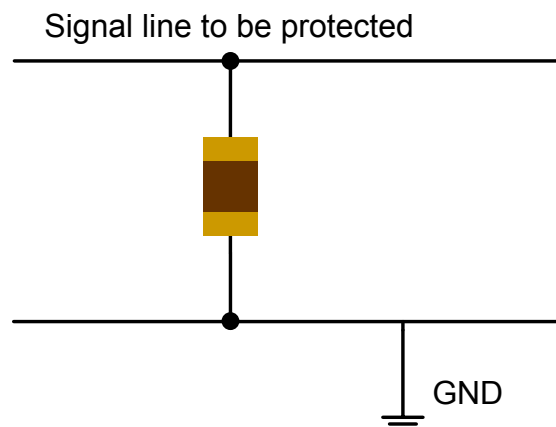
Typical Device Capacitance VS. Frequency



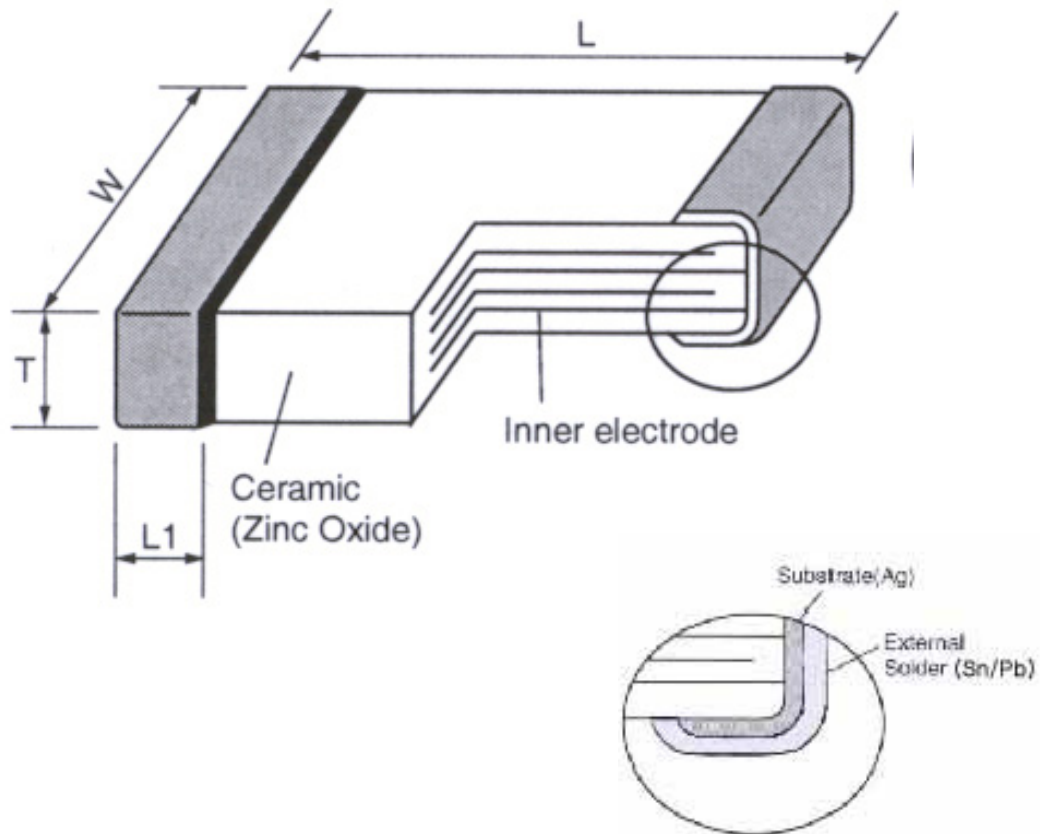
ESD Protection for Signal Line

The CESD is designed for the protection of one bidirectional data line from ESD damage.

- Place the PESD as close to the input terminal or connector as possible.
- Minimize the path length between the PESD and the protected signal line.
- Use ground planes whenever possible.



Product Dimension



CODE	DIMENSION (mm)			
	L	W	T	L1
05	1.0 ± 0.05	0.5 ± 0.05	0.5 ± 0.05	$0.2 + 0.15 / - 0.1$
10	1.6 ± 0.1	0.8 ± 0.1	0.8 ± 0.1	0.3 ± 0.2
21	2.0 ± 0.1	1.25 ± 0.1	1.35 MAX	$0.5 + 0.2 / - 0.3$
31	3.2 ± 0.15	1.6 ± 0.15	1.45 MAX	$0.5 + 0.2 / - 0.3$