

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

MS0402ESDA-XX

Product specification

Other Data

Body	ZnO
End termination	Ag/Ni/Sn
Packaging	Tape
Complies with Standard	IEC61000-4-2 、 IEC61000-4-5

Notes:

*1 AC voltage at 50~60Hz

*2 Varistor voltage

Measured at 1mA DC

*3 Capacitance

Measured at f=1kHz, Vrms=0.5V

*4 Maximum clamping voltage

Measured at 1A by 8/20μs Pulse

*5 Rated peak single pulsetransient current

Measured by 8/20μs Pulse

Technical Data	Symbol	Value	Unit
Maximum allowable continuous DC voltage	V_{DC}	5.0	V
Varistor voltage Measured*2 Varistor voltage tolerance	V_B	130 ±20	V %
Typical capacitance value measured*3	C	1.0	pF
Typical capacitance value tolerance		±0.3	PF
Maximum clamping voltage measured*4	V_C	250	V

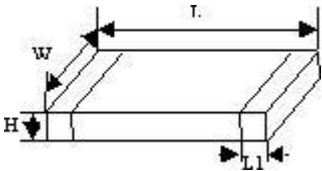
Reference Data

Response time	T_{rise}	<1	ns
Leakage current at $V_B \times 80\%$ (At initial state)	I_{LVB}	<20	μA
Leakage current at $V_B \times 80\%$ (After reliability Test)	I_{LVBA}	<100	μA
Operating ambient temperature		55~+125	°C
Storage temperature		40~+125	°C
Reflow temperature profile(Recommend)		260	°C

Size

Unit: mm

PKG	Length (L)	Width (W)	High (H)	Termination (L1)
0402	1.00±0.20	0.50±0.20	0.70 (max)	0.30±0.20



Standards

MS	0402	ESDA	XX
①	②	③	④

①production series: msksemi

②size: 0402

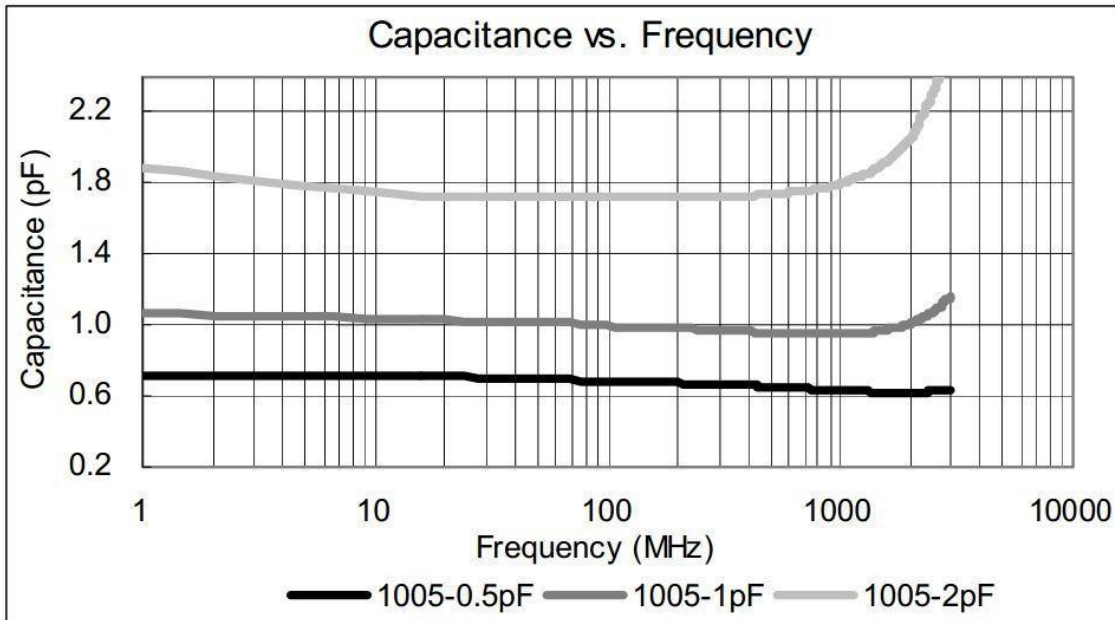
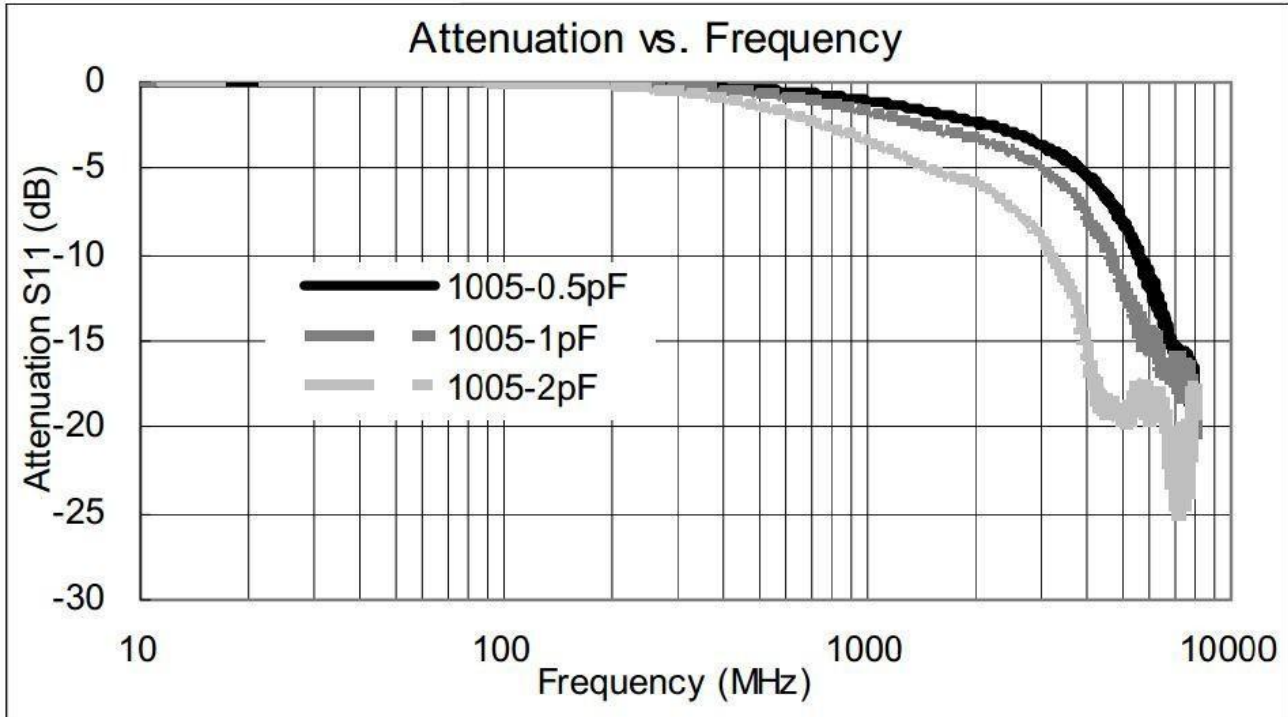
③type: ESD高分子保护器件

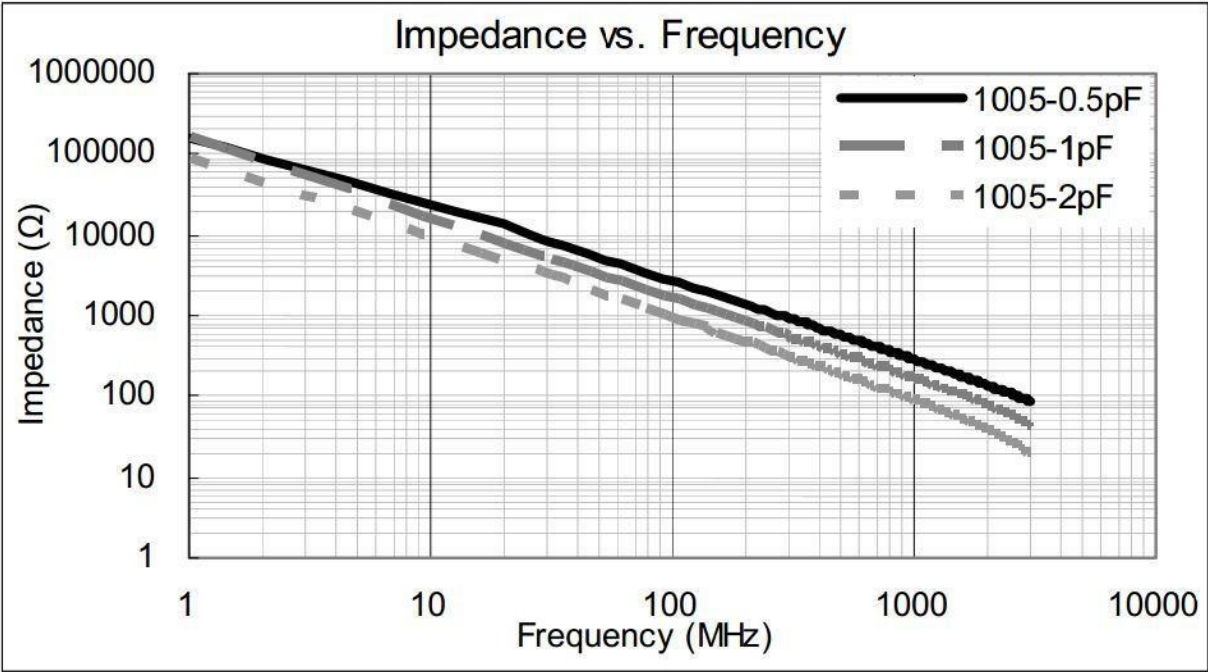
④V_{DC}: 5V 9V 12V 14V 18V 24V

Ordering Information

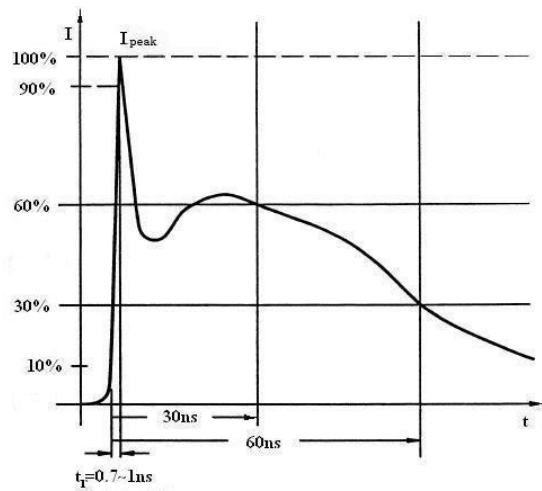
P/N	PKG	QTY
MS0402ESDA-05	0402	10000
MS0402ESDA-09	0402	10000
MS0402ESDA-12	0402	10000
MS0402ESDA-14	0402	10000
MS0402ESDA-18	0402	10000
MS0402ESDA-24	0402	10000

V-I characteristic





Esd Wave Form



IEC61000-4-2 Standards

SEVERITY LEVEL	AIRDIRCHARGE	DIRECT ISCHARGE
1	2 kV	2 kV
2	4 kV	4 kV
3	8 kV	6 kV
4	15 kV	8 kV

IEC61000-4-2 Compliant ESD Current Pulse Waveform

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