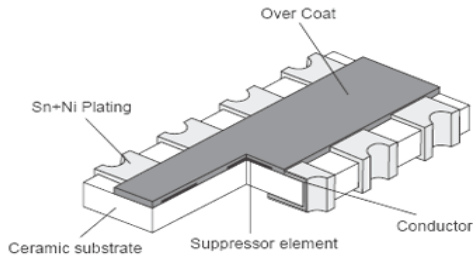




MSA Low Capacitance MAX Guard® ESD Suppressor Array

The content of this specification may change without notification 10/12/07



FEATURES

- Low capacitance (<0.2pF)
- Ultra low leakage current (<1nA)
- Fast response time
- Bi-direction device

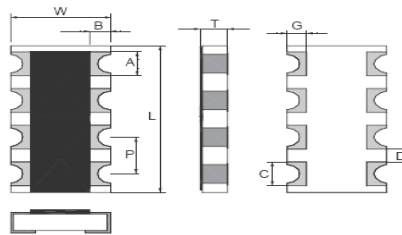
APPLICATIONS

- Cell / smart phone
- Computers / Laptops
- Digital cameras
- PDA's
- Plasma display panels / LCD / TVs/ HDTVs
- Mp3 / Multimedia players
- Scanner / Printer
- High speed data ports USB 2.0, IEEE1394

HOW TO ORDER

MSA	24	A	05	T	1	V1
Product Code	Size	Tolerance	Operating Voltage	Packaging	Typical Clamping Voltage	Typical Trigger Voltage
MAX Guard Suppress or	24: 0402X 4 34: 0603X 4	A: Suit For IEC6100-4-2 C: Suit For IEC6100-4-2 & AEC-Q200	03: 3.3V 05: 5.5V 12: 12V 24: 24V	T: Paper Tape (5K/10K)	1: 17V 2: 25V	V1: 150V V2: 250V

SCHEMATIC



DIMENSIONS (mm)

Size	L	W	T	P	A	B	C	D	G
MS04 (0402)	2.0±0.1	1.0±0.1	0.45±0.1	0.5±0.1	0.3±0.1	0.2±0.1	0.3±0.1	0.15±0.1	0.25±0.1
MS06 (0603)	3.2±0.2	1.5±0.2	0.6±0.1	0.8±0.1	0.6±0.1	0.3±0.2	0.5±0.1	0.25±0.1	0.35±0.1

ELECTRICAL CHARACTERISTICS

Type	Continuous Operating Voltage (Max.)	ESD Capability	Trigger Voltage (Typ.)	Clamping Voltage (Typ.)	Capacitance	Leakage Current (Typ.)	Response Time	ESD Pulse Withstand (Typ.)					
MSA24A03T1V1	3.3 VDC	Direct Discharge: 8KV Air Discharge: 15KV	150V	17V	<0.02pF	<10nA	<1ns	>1000 pulses					
MSA24A03T2V2			250V	25V									
MSA24A05T1V1	5.5 VDC		150V	17V									
MSA24A05T2V2			250V	25V									
MSA24A12T1V1			150V	17V									
MSA24A12T2V2	12 VDC		250V	25V									
MSA24A24T1V1			150V	17V									
MSA24A24T2V2			250V	25V									
MSA34A03T1V1	3.3 VDC		Direct Discharge: 8KV Air Discharge: 15KV	150V					17V	<0.02pF	<10nA	<1ns	>1000 pulses
MSA34A03T2V2				250V					25V				
MSA34A05T1V1	5.5 VDC			150V					17V				
MSA34A05T2V2				250V					25V				
MSA34A12T1V1		150V		17V									
MSA34A12T2V2	12 VDC	250V		25V									
MSA34A24T1V1		150V		17V									
MSA34A24T2V2		250V		25V									

- The function meets with the requirement of IEC 61000-4-2 specification.
- Trigger measurement made using Transmission Line Pulse method.
- Capacitance measured at 1 M~1.8 GHz.
- Performing under IEC 61000-4-2 level 4 (8KV contact discharge, 15KV air discharge).