

4-Line Low Capacitance TVS Diode Array

Features

- Ultra low leakage: nA level
- Operating voltage: 3.3V
- Up to 4 data lines protects
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 30\text{kV}$
Contact discharge: $\pm 30\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (EFT) 34A (8/20ns)
- RoHS Compliant

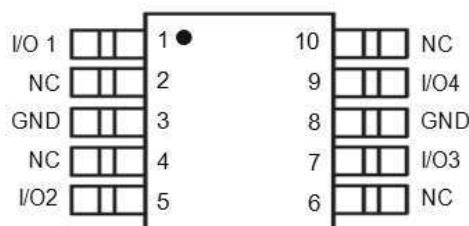
Applications

- HDBaseT Protector
- 10/100/1000 Ethernet
- 2.5 and 5 Gigabit Ethernet
- T1/E1 and T3/E3 Secondary Protection
- A/V Equipment
- General Purpose High-Speed Data Lines

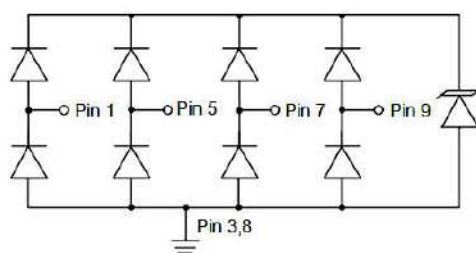
Mechanical Characteristics

- Package: MSOP-10
- Lead Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 5,000pcs
- Reel Size: 13 inch
- Device Marking: 354MH

Dimensions MSOP-10



Pin Configuration



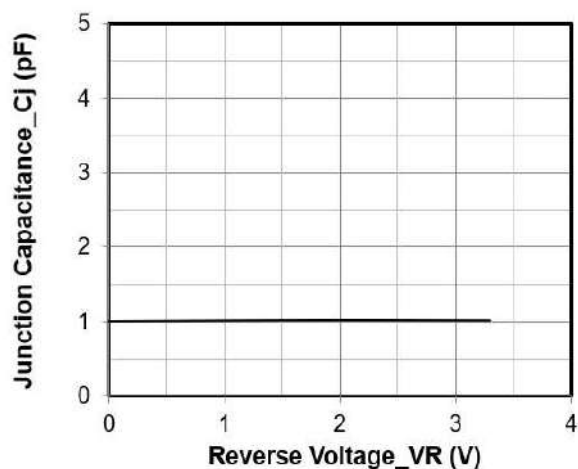
Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P _{pp}	750	W
ESD per IEC 61000-4-2 (Air)	V _{ESD}	±30	kV
ESD per IEC 61000-4-2 (Contact)		±30	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{STJ}	-55 to +150	°C

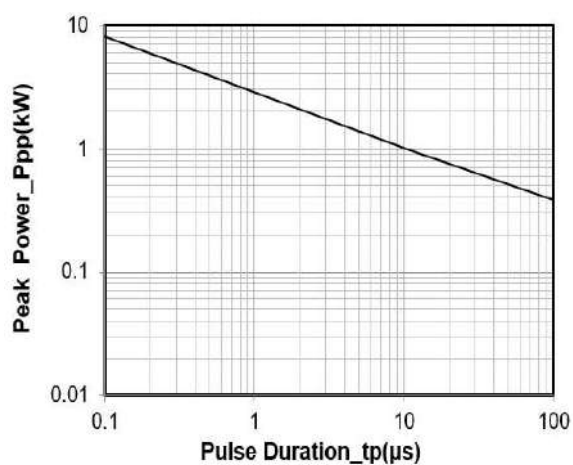
Electrical Characteristics(TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	VRWM	Any I/O pin to ground			3.3	V
Breakdown Voltage	VPT	IT = 2μA, any I/O pin to ground	3.5			V
Snap-Back Voltage	VSB	IT = 50mA, any I/O pin to ground	2.8			V
Reverse Leakage Current	IR	VRWM = 3.3V, any I/O pin to ground			0.5	μA
Clamping Voltage	VC	I _{PP} = 1A (8 x 20μs pulse), any I/O pin to ground			7	V
Clamping Voltage	VC	I _{PP} = 34A (8 x 20μs pulse), any I/O pin to ground			22	V
Junction Capacitance	CJ	VR = 0V, f = 1MHz, any I/O pin to ground		1		pF

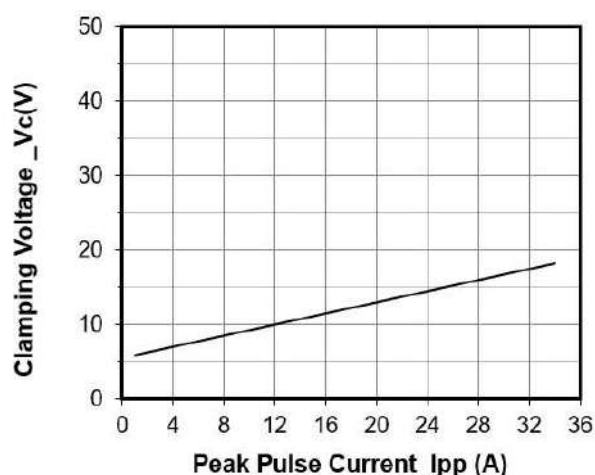
Typical Performance Characteristics(TA=25°C unless otherwise specified)



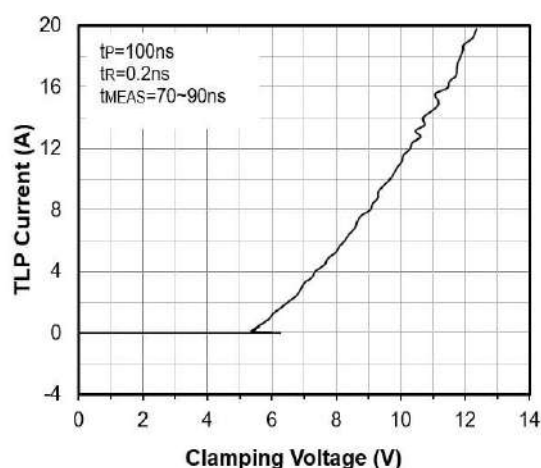
Junction Capacitance vs. Reverse Voltage



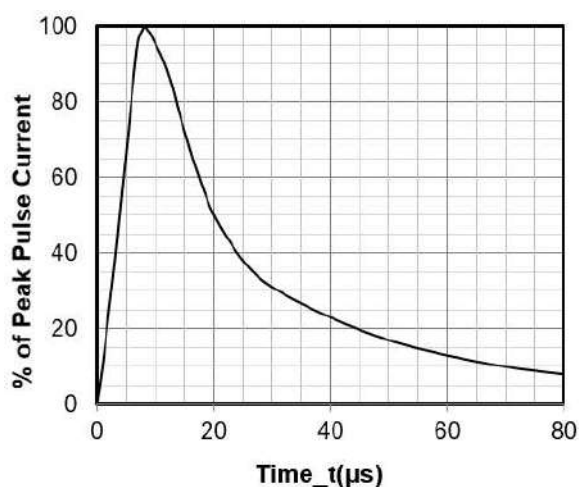
Peak Pulse Power vs. Pulse Time



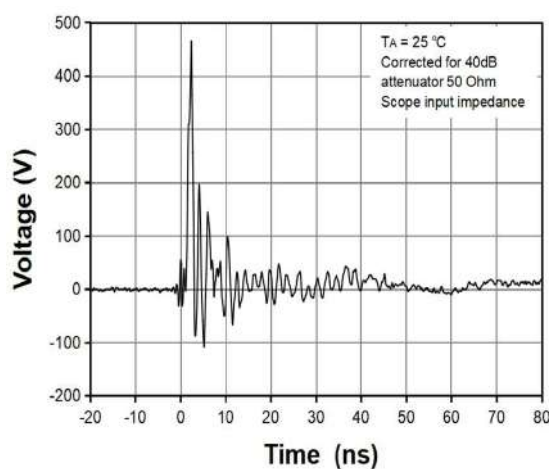
Clamping Voltage vs. Peak Pulse Current (tp = 8/20μs)



TLP Measurement



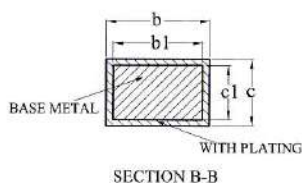
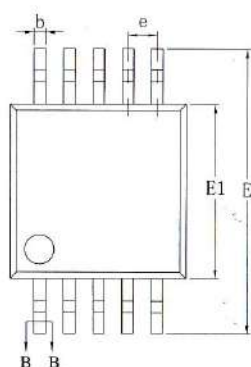
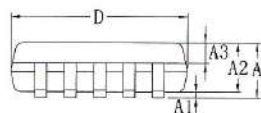
8 X 20μs Pulse Waveform



ESD Clamping Voltage

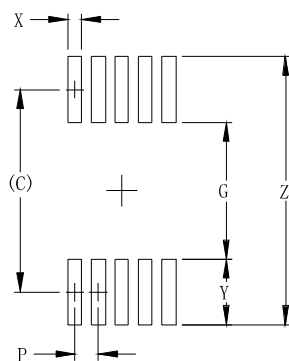
8 kV Contact per IEC61000-4-2

MSOP-10 Package Outline Drawing



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	—	—	1.10
A1	0.05	—	0.15
A2	0.75	0.85	0.95
A3	0.30	0.35	0.40
b	0.18	—	0.26
b1	0.17	0.20	0.23
c	0.15	—	0.19
c1	0.14	0.15	0.16
D	2.90	3.00	3.10
E	4.70	4.90	5.10
E1	2.90	3.00	3.10
e	0.50BSC		
L	0.40	—	0.70
L1	0.95REF		
θ	0	—	8°

Suggested Land Pattern



DIMENSIONS		
DIM	INCHES	MILLIMETERS
C	(.161)	(4.10)
G	.098	2.50
P	.020	0.50
X	.011	0.30
Y	.063	1.60
Z	.224	5.70

NOTES:

1. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY. CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.