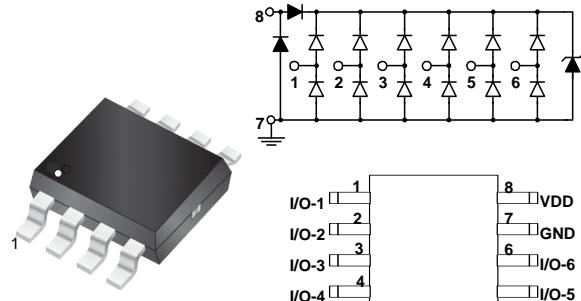


Ultra Low Capacitance ESD TVS Array in MSOP8

Features

- 100Watts peak pulse power ($T_p = 8/20\mu s$)
- MSOP8 Package
- Protects six Line Pairs
- Solid-state Punch through Avalanche TVS process technology
- Low clamping voltage
- Low leakage current
- Ultra Low capacitance
- Transient protection for high-speed data lines to :
 - IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 5A (8/20 μs)



Mechanical Data

- **Case:** MSOP8 (plastic package). Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:** UL 94 V-0
- **Terminals:** High temperature soldering guaranteed: 260°C/10 sec. at terminals

Applications

- HDMI Ports
- WAN/LAN Equipment
- Desktops, Servers, Notebooks & Handhelds
- 10/100/1000 Ethernet
- Base Stations

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

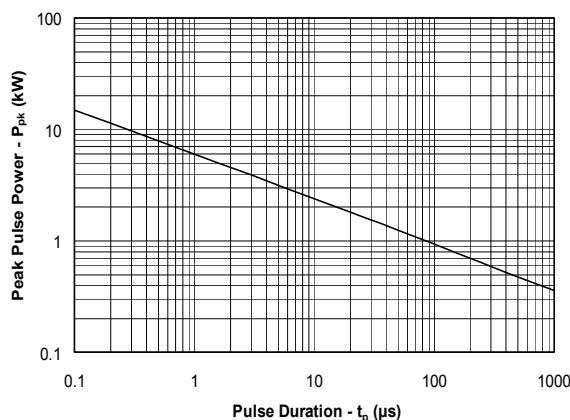
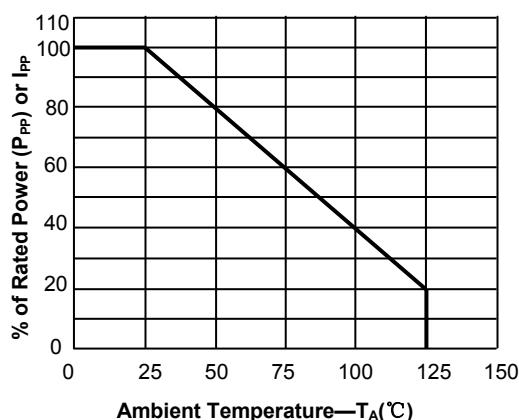
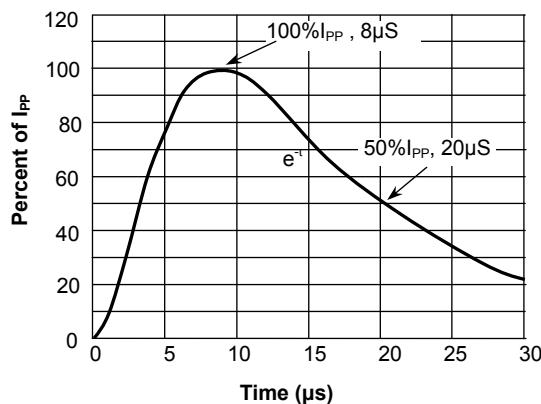
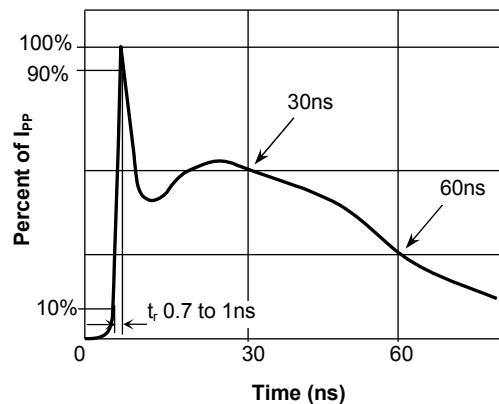
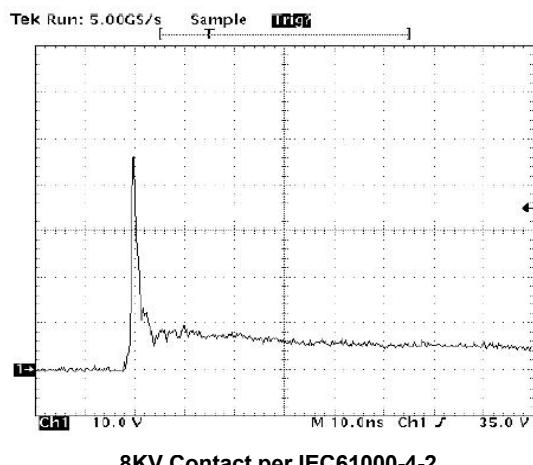
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P_{PP}	100	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	8/15	kV
Peak Pulse Current ($T_p = 8/20\mu s$)	I_{PP}	5	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

($T_A = 25$ °C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_R=5.0V$			0.5	µA
Clamping Voltage	V_C	$I_{PP}=1A, T_p=8/20\mu s$			12	V
Clamping Voltage	V_C	$I_{PP}=5A, T_p=8/20\mu s$			20	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.3		pF

Typical Characteristics ($T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

Fig.2 Pulse Derating Curve

Fig.3 Pulse Waveform-8/20μs

Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

Fig.5 ESD Clamping Voltage


Package Dimensions

The technical drawing illustrates the physical dimensions of the TESDM8UC5VU package. It includes a top view showing width (W), height (E), and lead spacing (b). A side view shows thickness (C) and lead height (e). Detail A provides a magnified view of a single lead, defining its profile with lead angle (θ), lead length (L), and lead thickness (0.25 mm).

Symbol	Millimeters	
	min	max
A	0.800	1.200
A1	0.000	0.200
A2	0.750	0.970
b	0.280	0.380
C	0.130	0.230
D	2.900	3.100
e	0.65 BASIC	
E	4.700	5.100
E1	2.900	3.100
L	0.400	0.700
θ	0°	8°

Part number system

The part number system diagram shows the top and bottom views of the package. Dimension A is the lead width, B is the lead height, C is the lead pitch, and D is the total width.

Dimensions	
Symbol	mm
A	0.41
B	1.02
C	0.65
D	4.8

Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
TESDM8UC5VU	MSOP8	Tape and reel	5000pcs / reel	EIA STD RS-481