

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

ESD5451N-MS

Product specification

Features

- Transient protection for high-speed data lines
- IEC 61000-4-2 (ESD) $\pm 30\text{kV}$ (Contact)
 $\pm 30\text{kV}$ (Air)
IEC 61000-4-4 (EFT) 40A (5/50 ns)
Cable Discharge Event (CDE)
- Package optimized for high-speed lines
- Ultra-small package (1.0mm×0.6mm×0.4mm)
- Protects one data, control or power line
- Low capacitance
- Low leakage current
- Low clamping voltage
- Each I/O pin can withstand over 1000 ESD


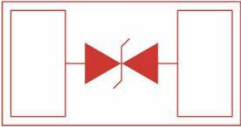

MACHANICAL DATA

- DFN-1006 package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed: 260℃/10s
- Packaging: Tape and Reel ◇ Reel size: 7 inch
- MSL1

APPLICATIONS

- Portable Electronics
- Desktops, Servers and Notebooks
- Cellular Phones
- MP3 Ports
- Digital Ports
- Subscriber Identity Module (SIM) card

Reference News

PACKAGE OUTLINE	Bi-directional	Marking
		
DFN-1006		

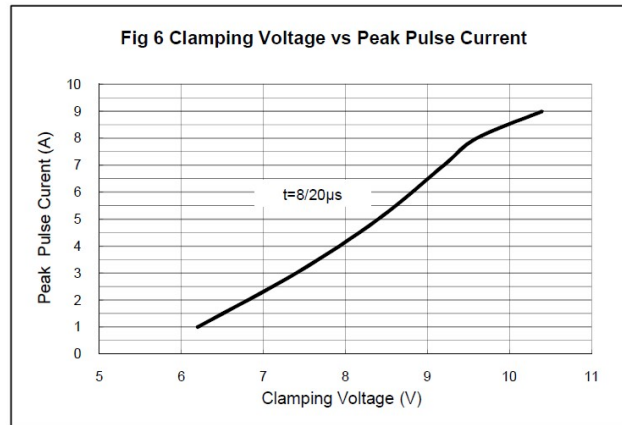
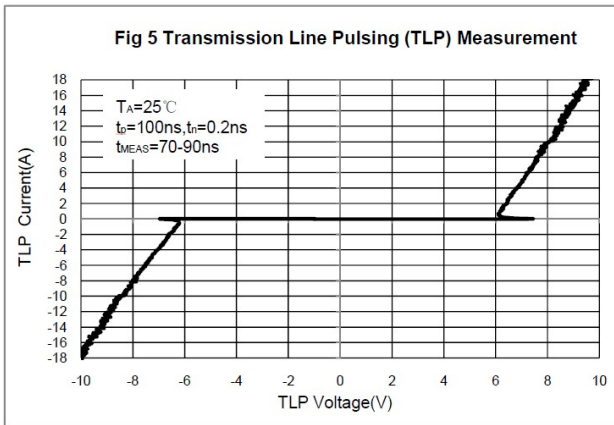
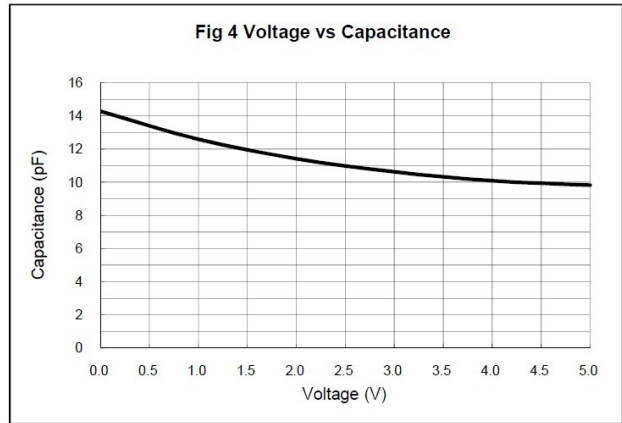
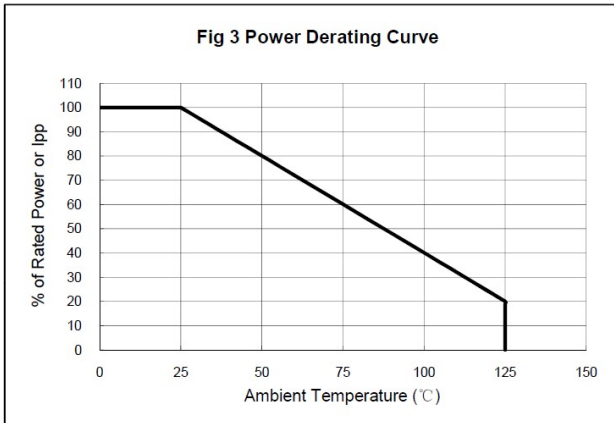
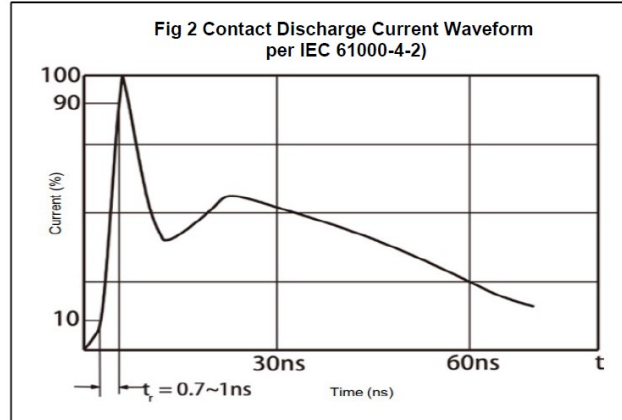
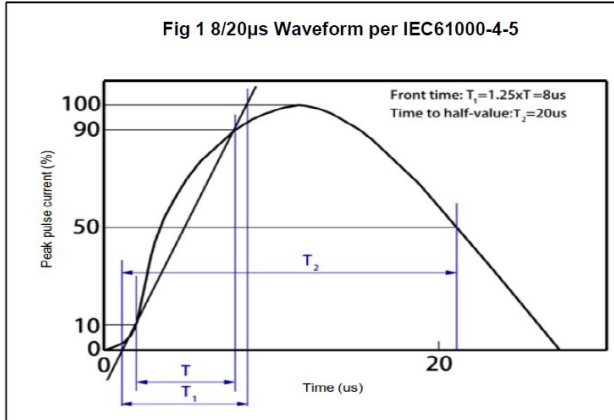
ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	± 30 ± 30	KV
P_{PP}	Peak Pulse Power (8/20 μ s)	60	W
I_{PP}	Peak Pulse Current (8/20 μ s)	5	A
T_j	Operating Temperature	-55/+125	$^{\circ}$ C
T_{STG}	Storage Temperature	-55/+150	$^{\circ}$ C

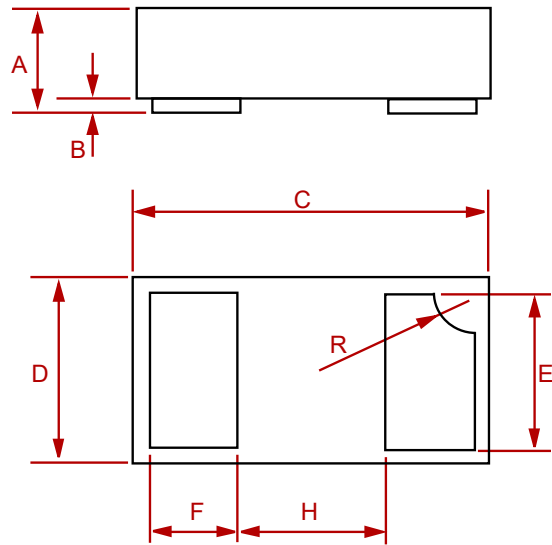
ELECTRICAL CHARACTERISTICS ($T_{amb}=25^{\circ}$ C)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Stand-Off Voltage				5.0	V
V_{BR}	Reverse Breakdown voltage	$I_T=1mA$	5.6			V
I_R	Reverse leakage current.	$V_{RWM}=5V$			1	μ A
V_C	Clamping Voltage	$I_{PP}=1A, t_P=8/20\mu s$ $I_{PP}=5A, t_P=8/20\mu s$			9.5 12	V
C_J	Junction Capacitance	$V_R=0V, f=1MHz$			15	pF

ELECTRICAL CHARACTERISTICS CURVE

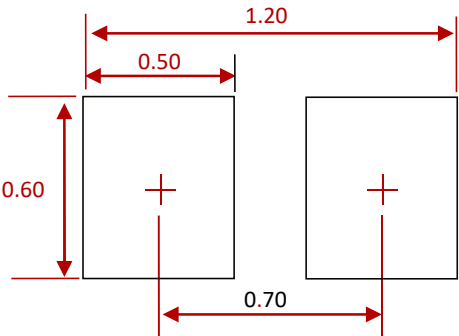


PACKAGE MECHANICAL DATA



Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.0125	0.02	0.32	0.52
B	0.000	0.002	0.00	0.05
C	0.037	0.043	0.95	1.080
D	0.022	0.027	0.55	0.680
E	0.016	0.024	0.40	0.60
F	0.008	0.012	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15

Suggested Pad Layout



- NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
 2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY.
CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR
COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

P/N	PKG	QTY
ESD5451N-MS	DFN-1006	10000

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