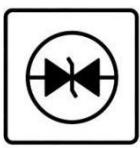




ESD



TVS



TSS



MOV



GDT



PLED

ESD5451N-2-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

- DFN1006-2L package
- Flammability Rating: UL 94V-0
- High temperature soldering guaranteed: 260°C/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
DFN1006-2L		

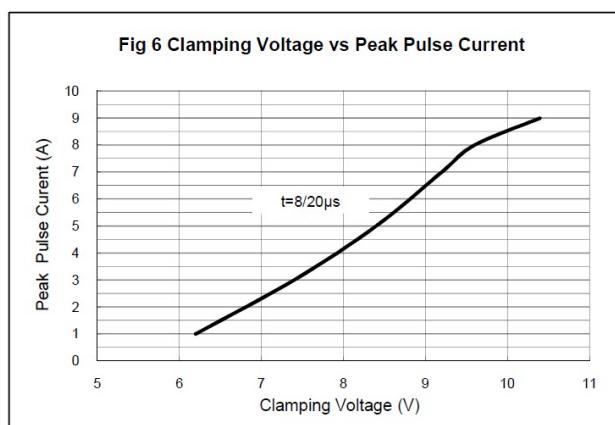
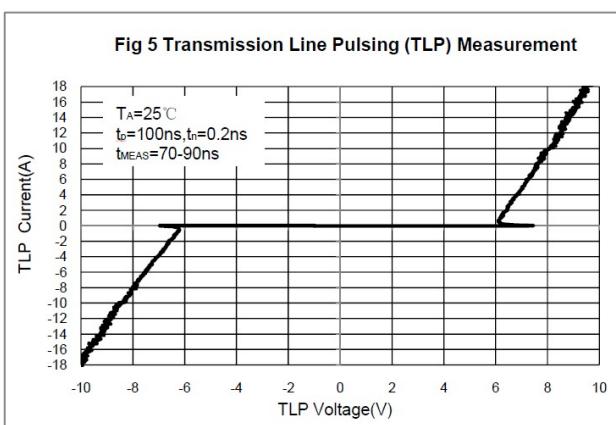
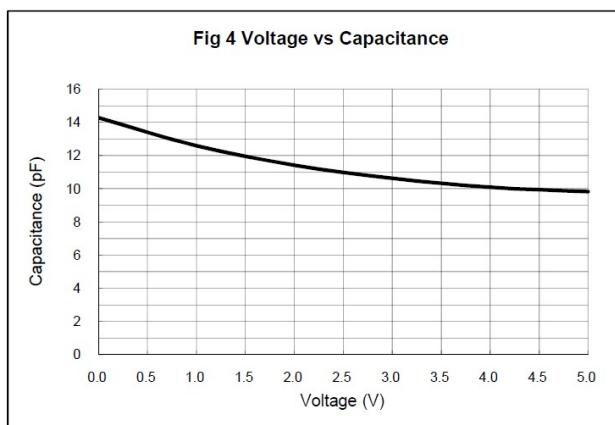
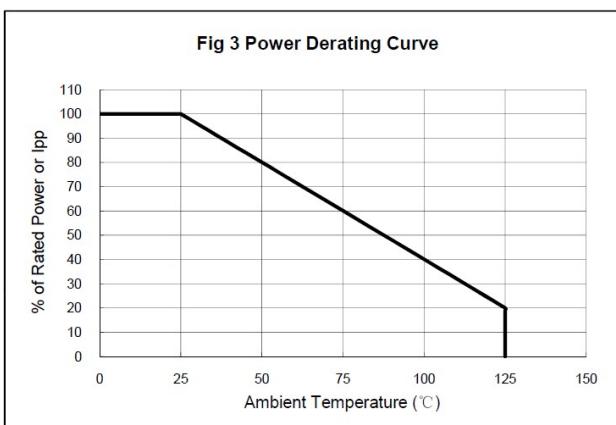
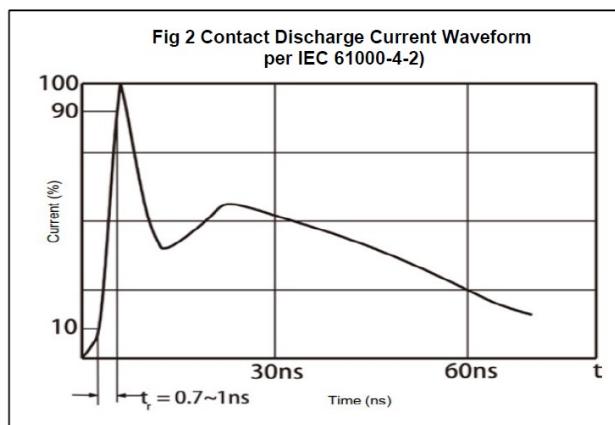
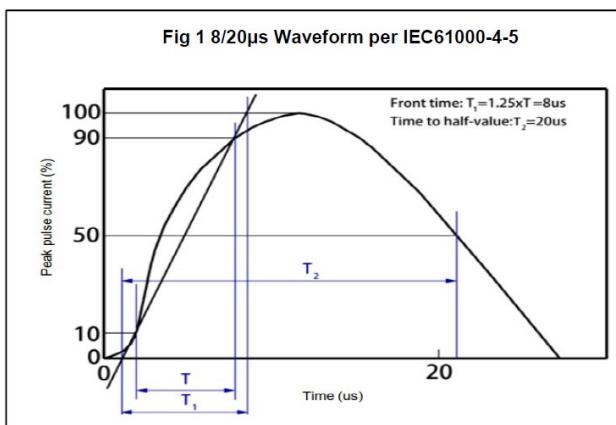
ABSOLUTE MAXIMUM RATING

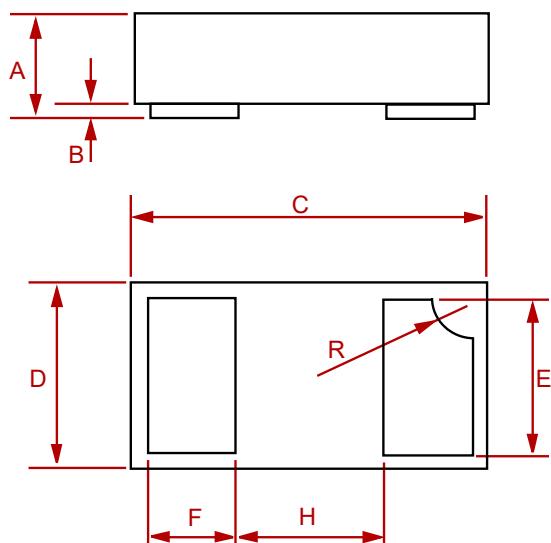
Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact) ESD per IEC 61000-4-2 (Air)	± 30 ± 30	kV
P_{PP}	Peak Pulse Power (8/20μs)	60	W
I_{PP}	Peak Pulse Current (8/20μs)	5	A
T_j	Operating Temperature	-55/+125	°C
T_{STG}	Storage Temperature	-55/+150	°C

ELECTRICAL CHARACTERISTICS (Tamb=25°C)

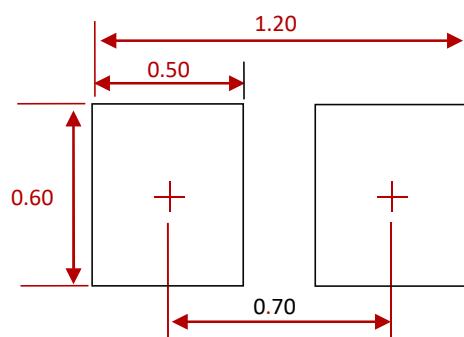
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Stand-Off Voltage				5.0	V
V_{BR}	Reverse Breakdown voltage	$I_T=1\text{mA}$	5.6			V
I_R	Reverse leakage current.	$V_{RWM}=5\text{V}$			1	μA
V_C	Clamping Voltage	$I_{PP}=1\text{A}, t_p=8/20\text{us}$ $I_{PP}=5\text{A}, t_p=8/20\text{us}$			9.5 12	V
V_{CTLP}	TLP Clamping Voltage	$I_{PP} = 16\text{A}$ IEC61000-4-2 Level 4 equivalent ($\pm 8\text{kV}$ Contact, $\pm 15\text{kV}$ Air)		9.5		V
C_J	Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$			15	pF

ELECTRICAL CHARACTERISTICS CURVE



PACKAGEMECHANICALDATA


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 PadLayout

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.

REELSPECIFICATION

P/N	PKG	QTY
ESD5451N-2-MS	DFN1006-2L	10000

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