

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

Features

Ultra Low Capacitance: 0.30pF(typ.)
 Reverse Working Voltage: 5V
 IEC 61000-4-2 (ESD Air): ±20kV
 IEC 61000-4-2 (ESD Contact): ±20kV
 IEC 61000-4-5 (Lightning 8/20µs): 5A

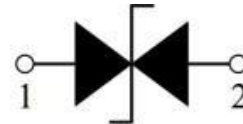
Pin Description



Applications

Smart Phone and Tablet PC
 TV and Set Top Box
 Wearable Devices
 PDA

Schematic Diagram



Limiting Values(T_A = 25 °C, unless otherwise specified)

Symbol	Parameter	Conditions	Min	Max	Unit
V _{ESD}	Electrostatic Discharge Voltage	IEC 61000-4-2; Contact Discharge	-	±20	kV
		IEC 61000-4-2; Air Discharge	-	±20	kV
P _{PP}	Peak Pulse Power	t _p = 8/20 µs	-	110	W
I _{PPM}	Rated Peak Pulse Current	t _p = 8/20 µs	-	5.0	A
T _A	Operating Temperature Range	-	-55	125	°C
T _{stg}	Storage Temperature Range	-	-55	150	°C

Electrical Characteristics($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

Symbol	Parameter	Conditions	Min	Typ.	Max	Unit
V_{RWM}	Reverse Working Voltage	$T_A = 25\text{ }^\circ\text{C}$	-	-	5.0	V
V_{BR}	Breakdown Voltage	$I_R = 1\text{ mA}; T_A = 25\text{ }^\circ\text{C}$	6.0	8.5	9.5	V
I_R	Reverse Leakage Current	$V_{RWM} = 5\text{ V}; T_A = 25\text{ }^\circ\text{C}$	-	-	0.1	μA
V_C	Clamping Voltage	$I_{PP}=1\text{ A}, t_p=8/20\mu\text{s}$	-	-	10	V
		$I_{PP}=5.0\text{ A}, t_p=8/20\mu\text{s}$	-	-	22	V
C_J	Junction Capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$	-	0.30	0.40	pF

Typical Characteristics

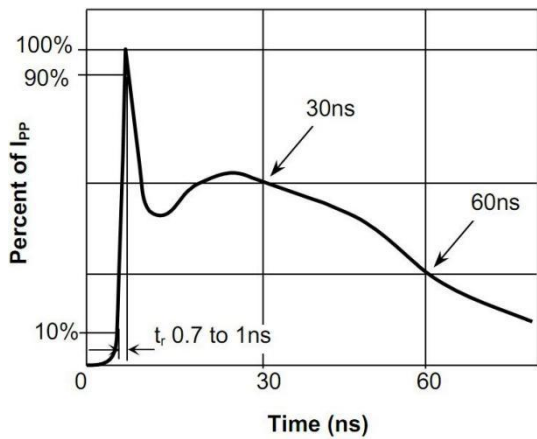


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

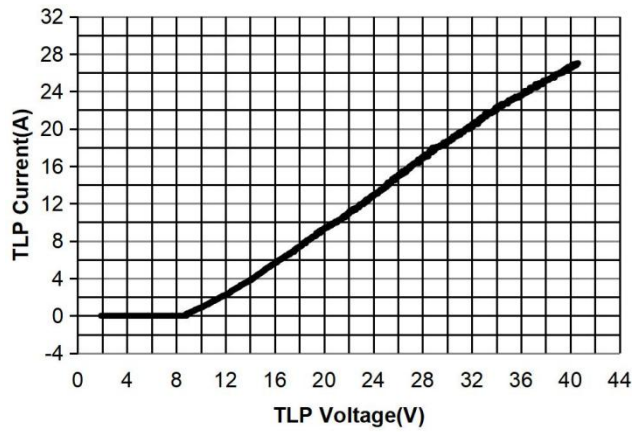


Fig.2 Transmission Line Pulse (TLP)

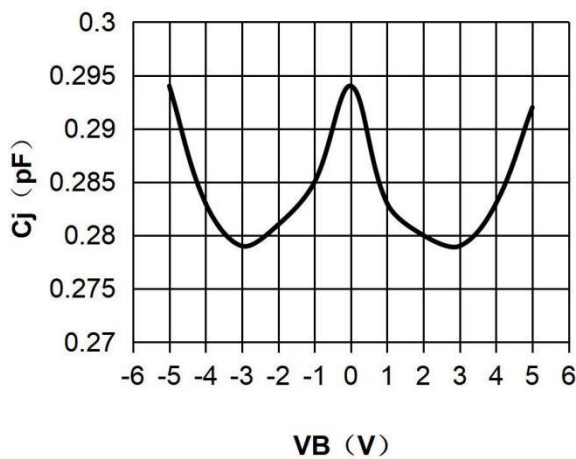


Fig.3 Capacitance vs. Reverse Voltage

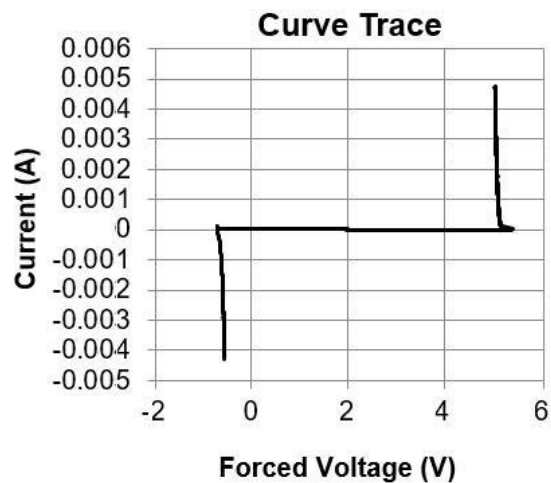
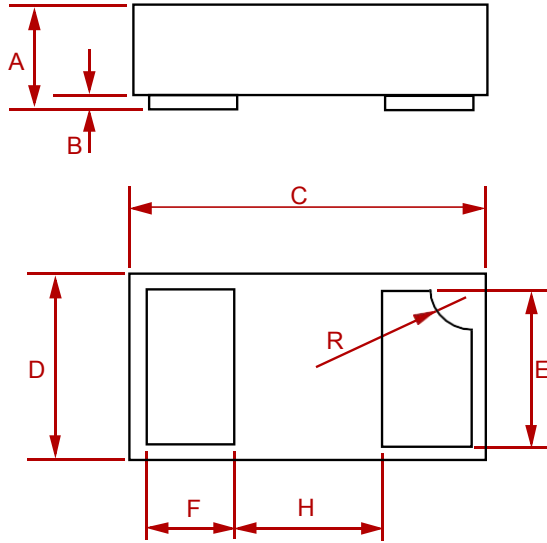


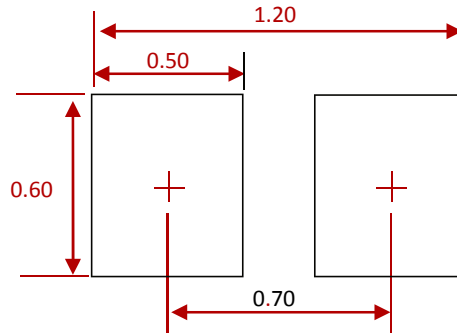
Fig.4 IV Curve

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
ESD5301N-MS	DFN1006-2	10000

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