

MSKSEMI

SEMICONDUCTOR



ESD



TVS



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PLED

Product data sheet

Applications

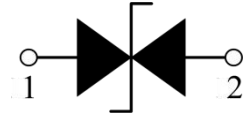
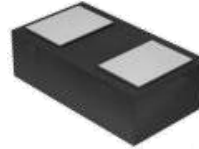
- Cellular phones audio
- MP3 players
- Digital cameras
- Portable applications
- mobile telephone

Features

- Small Body Outline Dimensions:
0.039" x 0.024"(1.0 mm x 0.60 mm)
- Low Body Height: 0.020" (0.50 mm) Max
- Stand-off Voltage: 12 V
- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000-4-2 Level 4 ESD Protection
- We declare that the material of product compliance with RoHS requirements.

Pin Description

Schematic Diagram



DFN1006-2L

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted, V_F=0.9V Max. @ I_F=10Ma for all types)

P/N	V _{RWM} (V)	I _R (μA) @ V _{RWM}	V _{BR} (V) @ I _T (Note 2)	I _T (mA)	I _{PP} (A) (Note 3)	V _C (V) @ Max I _{PP} (Note 3)	P _{PK} (W) (8*20 μs)	C (pF)
	Max	Max	Min		Max	Max	Typ	Typ
ESD9N12BA-MS	12	1.0	13.3	1.0	5.8	23.4	140	30

Other voltage available upon request.

2. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C
3. Surge current waveform per Figure 3.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air Contact Contact discharge		±15 ±8	kV kV
ESD Voltage Per Human Body Model		16	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T _A =25°C	PD	150	Mw
Junction and Storage Temperature Range	T _J ,T _{STTh}	-55 to 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1 FR-5 = 1 0*0 75*0 62 in

Electrical Parameter

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T

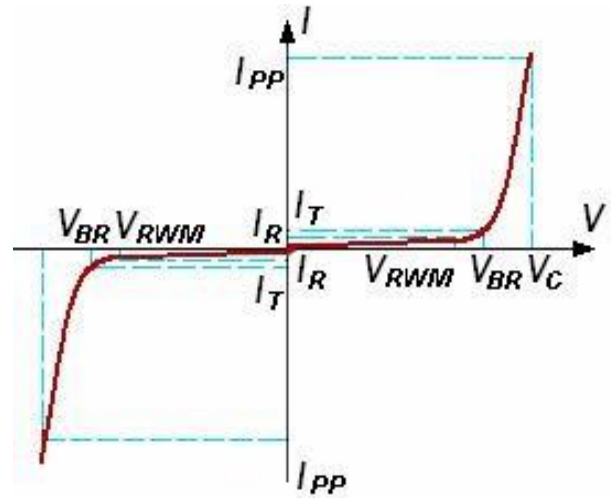


FIG1: Pulse Waveform

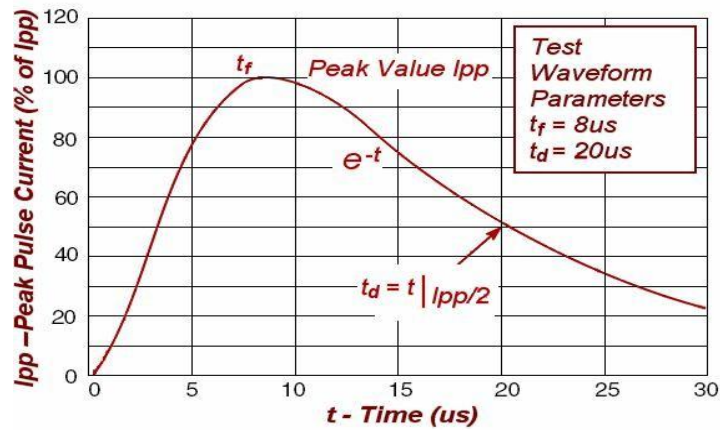
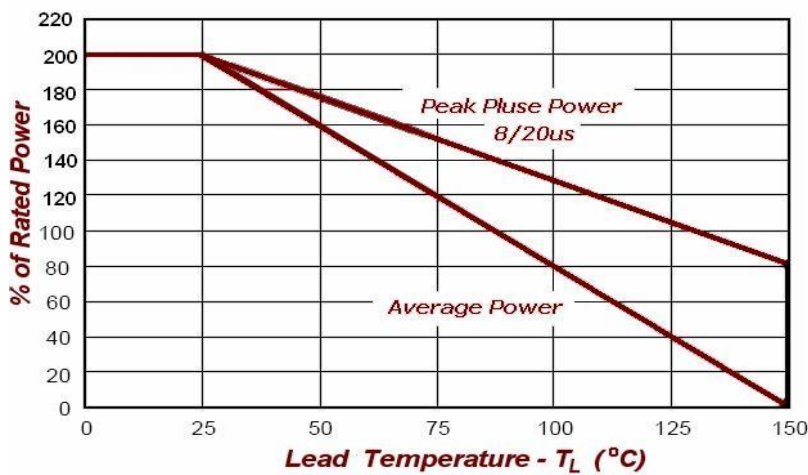
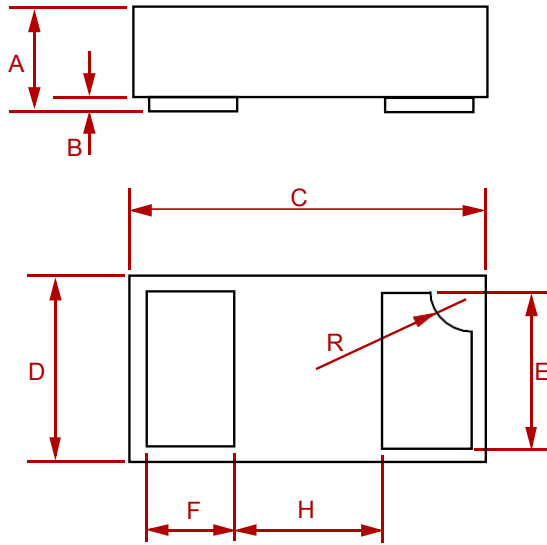


FIG2: Power Derating

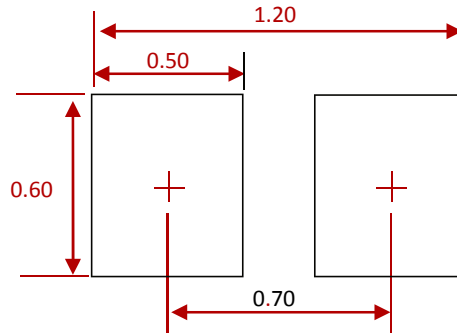


PACKAGE MECHANICAL DATA



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
ESD9N12BA-MS	DFN1006-2L	10000

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