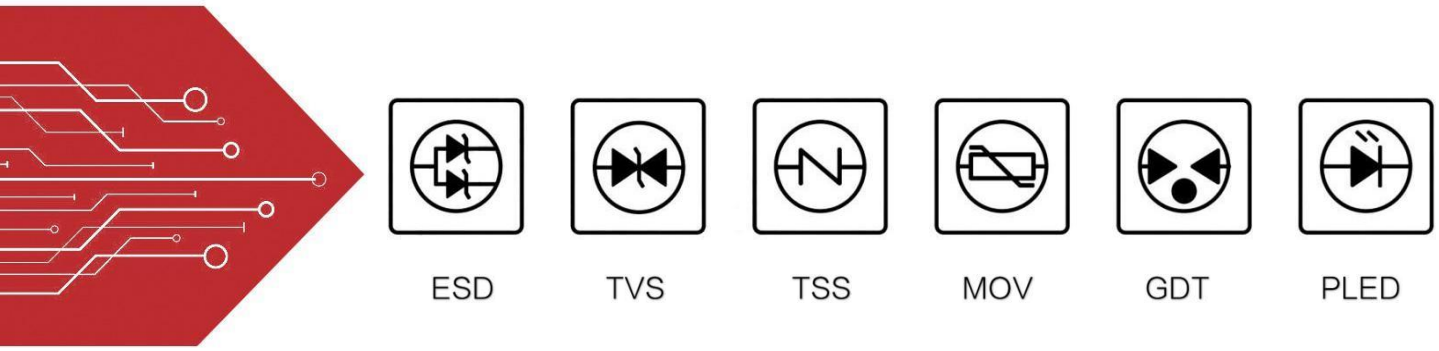
MSKSEMI
SEMICONDUCTOR



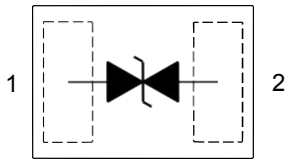
Product data sheet

www.msksemi.com

Features

- Ultra-low Capacitance 0.9pF
- Low Clamping Voltage
- Small Body Outline Dimensions: 0.039″ x 0.024″ (1.0 mm x0.60 mm)
- Low Body Height: 0.019″ (0.5 mm)
- Stand−off Voltage: 5.0V
- Low Leakage
- Response Time is Typically < 1 ns
- IEC61000−4−2 Level 4 ESD Protection for datalines
- These are Pb−Free Devices

DFN1006



Applications

- 10/100/1000 Mbits/s Ethernet
- FireWire
- Display ports
- MDDI ports
- Digital Visual Interface (DVI)
- Cellular handsets & accessories
- Computer and peripherals

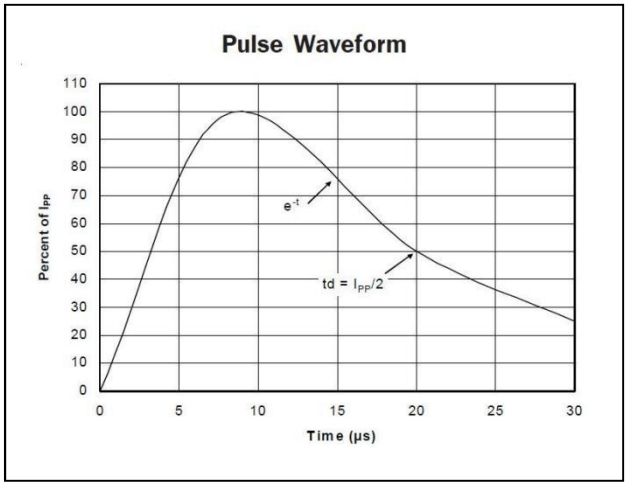
Electrical Characteristics@ Ta=25℃ unless otherwise

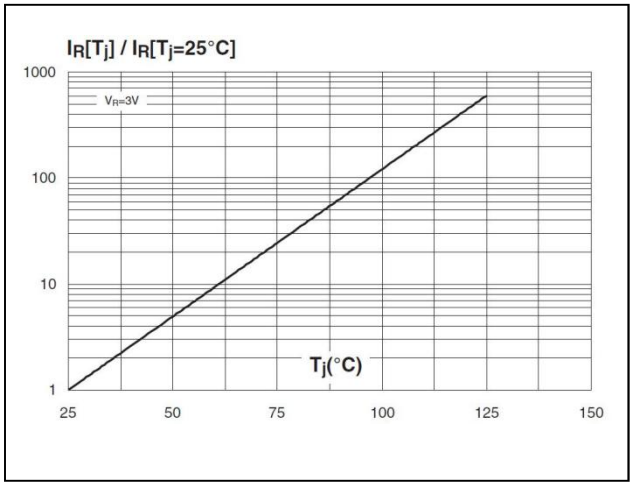
P/N	V_{RWM} @I_R		V_{BR}@ImA	V_C@1A	V_C@I_{PP}		C_J
	V	**μA**	V	V	V	A	pF
		MAX	MIN	MAX	MAX		MAX
ESD9X5VU-MS	5	0.5	6.3	11	16	3	0.9

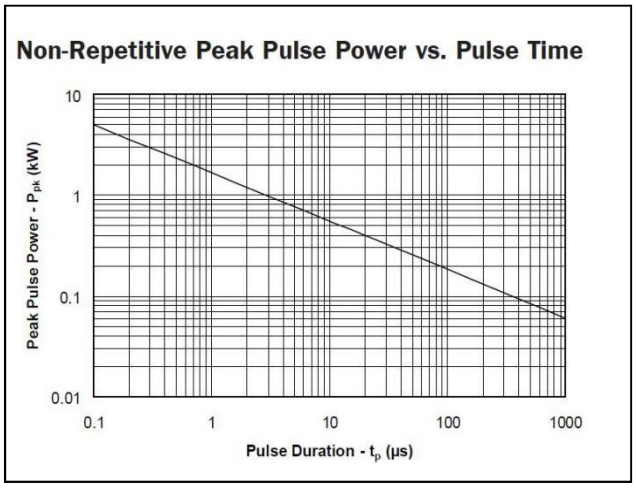
Maximum Rating @ Ta=25℃ unless otherwise specified

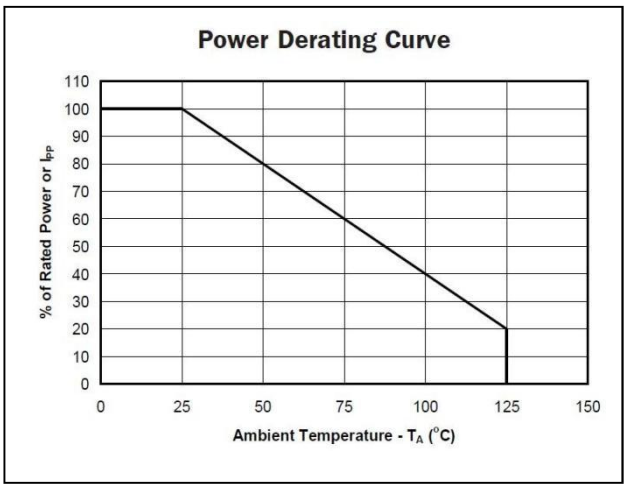
Symbol	Parameter		Ratings	Units
ESD	IEC 61000-4-2 (HBM-ESD)	Contact	8	KV
		Air	15	
T_L	Lead Soldering Temperature		260(10sec.)	℃
T_J	Operating Temperature		-55 to +125	℃
T_{STG}	Storage Temperature		-55 to +150	℃

Typical Characteristics@ Ta=25℃ unless otherwise specified



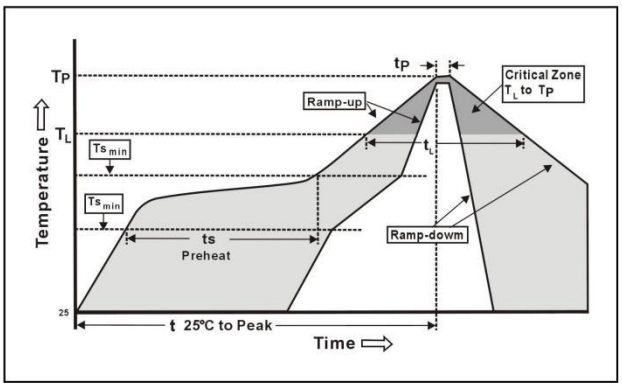




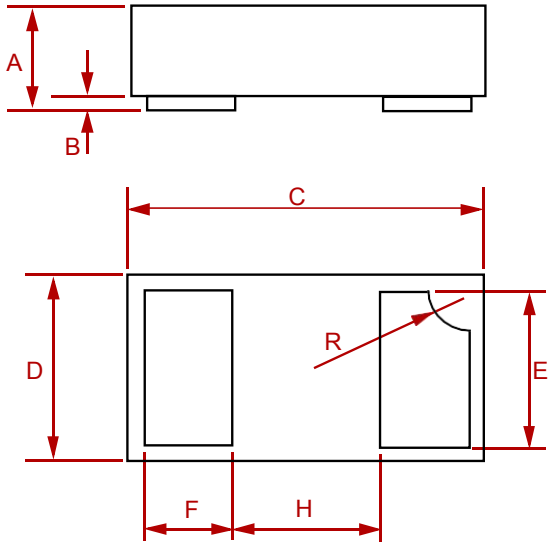


Soldering Parameters

Reflow Condition		Fb – Free assembly
Pre Heat	-Temperature Min ($T_{s(Min)}$)	150°C
	-Temperature Max ($T_{s(Max)}$)	200°C
	-Time (Min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus) Temp (T_L) to peak		3°C/second Max
$T_{S(Max)}$ to T_L - Ramp-up Rate		3°C/second Max
Reflow	-Temperature (T_L) (Liquidus)	217°C
	-Temperature (t_L)	60 – 150 seconds
Peak Temperature (T_p)		$250^{+0/-5}$ °C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-dowm Rate		6°C/second Max
Time 25°C to peak Temperature (T_p)		8 minutes Max.
Do not exceed		260°C

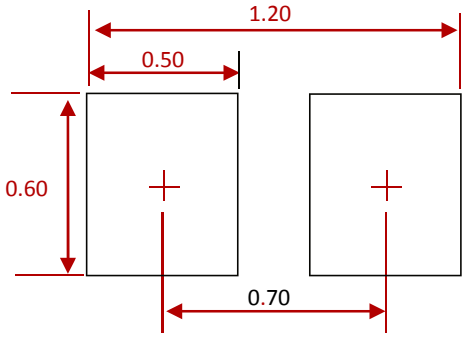


PACKAGE MECHANICAL DATA



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
ESD9X5VU-MS	DFN1006	10000

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