

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

## RCLAMP0531T-MS

Product specification


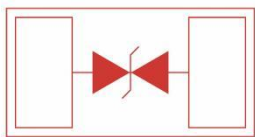
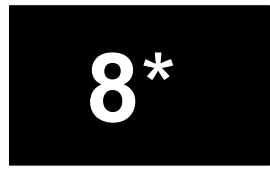
**Features**

- Ultra-low Capacitance 0.5pF
- Low Clamping Voltage
- Small Body Outline Dimensions: 0.039" x 0.024" (1.0 mm x 0.60 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 data lines
- These are Pb-Free Devices

**Applications**

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

**Reference News**

PACKAGE OUTLINE	PIN Configuration	Marking
 <p>DFN1006</p>		

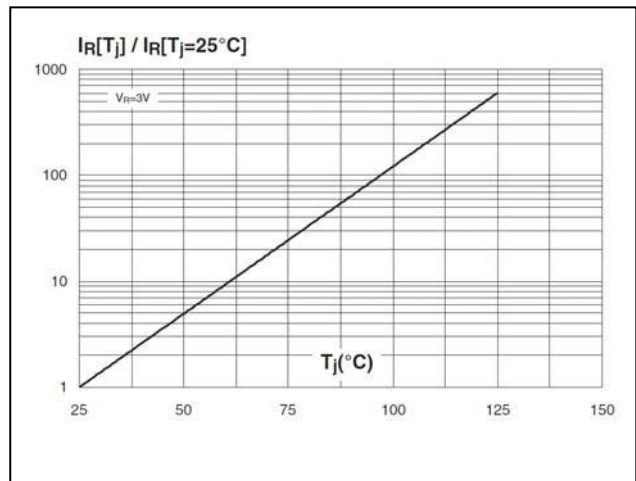
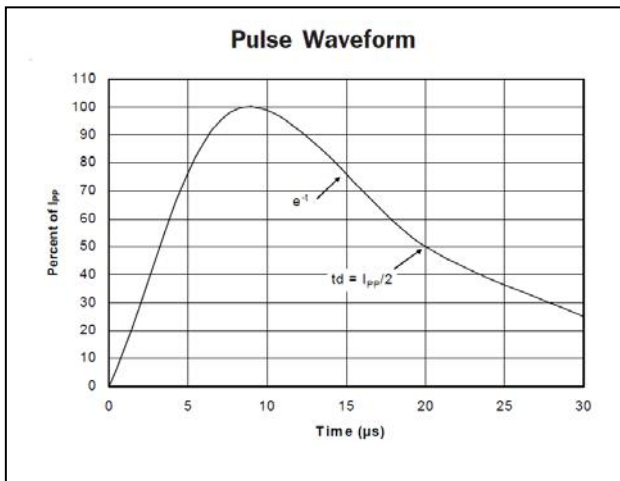
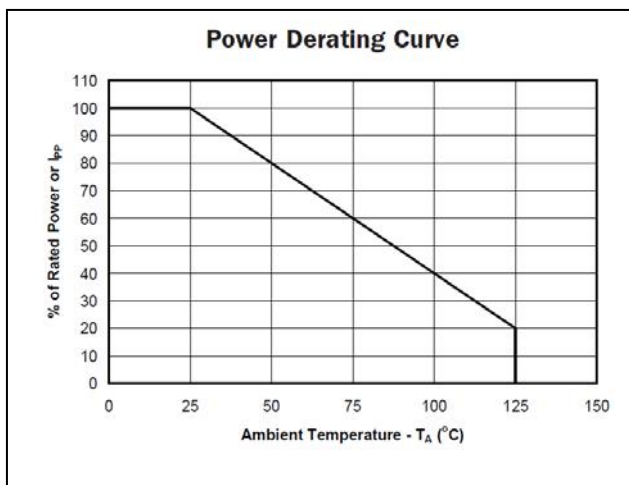
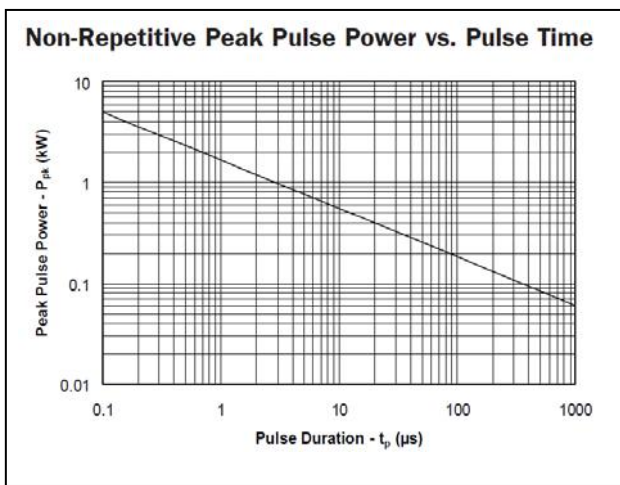
**Maximum Rating @ Ta=25°C unless otherwise specified**

Symbol	Parameter	Ratings	Units	
ESD	IEC 61000-4-2 (HBM-ESD)	Contact	8	KV
		Air	15	
T <sub>L</sub>	Lead Soldering Temperature	260( 10sec.)	°C	
T <sub>J</sub>	Operating Temperature	-55 to +125	°C	
T <sub>STG</sub>	Storage Temperature	-55 to +150	°C	

**Electrical Characteristics@ Ta=25°C unless otherwise**

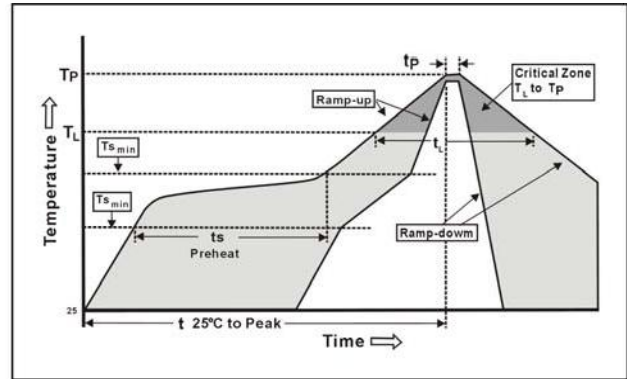
Parameter	VRWM @IR		VBR@ImA	Vc@1A	Vc@IPP		CJ
	V	μA	V	V	V	A	pF
		MAX	MIN	MAX	MAX		MAX
RCLAMP0531T-MS	5	0.5	6.3	11	16	4	0.5

**Typical Characteristics@ Ta=25°C unless otherwise specified**

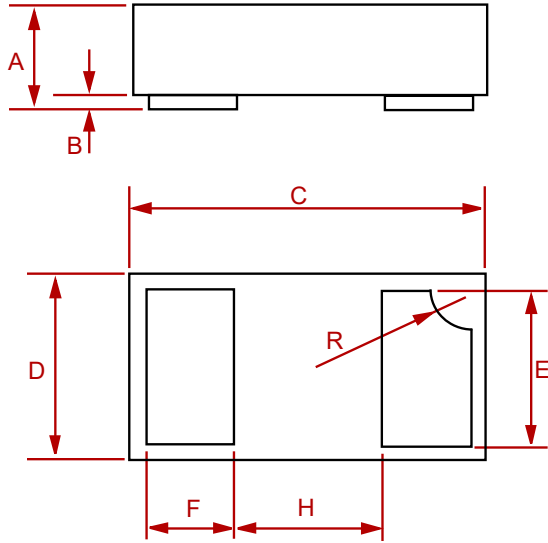


**Soldering Parameters**

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

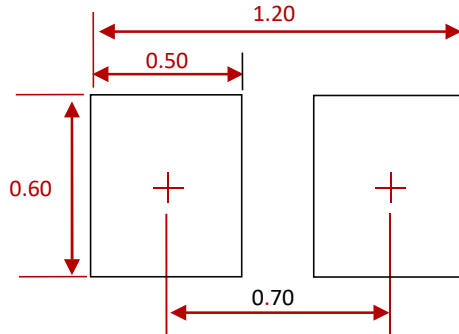


**PACKAGE MECHANICAL DATA**



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
RCLAMP0531T-MS	DFN1006	10000

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