

DESCRIPTION

The SESRV05-4B is a dual USB port protection array that features ultra low capacitance. This device can be used in applications such as video cards, SMART phones, Gigabit Ethernet and other computer interfaces. Designed for ESD protection, the SESRV05-4B can clamp the effects of electrical fast transients on the power bus.

The SESRV05-4B combines 9 low capacitance steering diodes for up to four individual data or transmission lines and one TVS diode for power bus protection. This device is available in the space-saving SOT-23-6 package configuration, which minimizes lead inductance to prevent overshoot voltages during high ESD current events. The SESRV05-4B meets the IEC 61000-4-2, 61000-4-2 and 61000-4-5 requirements.

FEATURES

- >70 Watts peak pulse power($t_p=8/20\mu s$)
- >Protects four I/O lines
- >Low clamping voltage
- >Small package: SOT23-6L
- >Low leakage current

APPLICATIONS

- >USB 2.0 Power and Data Line Protection
- >Video Graphics Cards
- >Monitors and Flat Panel Displays
- >Digit Video Interface (DVI)
- >10/100/1000 Ethernet
- >Notebook Computers
- >ATM Interfaces

IEC COMPATIBILITY

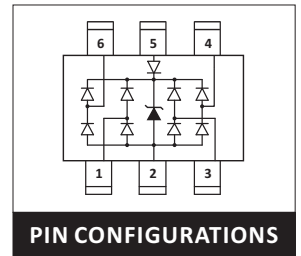
- >IEC 61000-4-2(ESD) $\pm 15KV$ (air), $\pm 8KV$ (contact)
- >IEC61000-4-4 (EFT) 40A (5/50ns)
- >IEC61000-4-5 (Lightning) 5A (8/20 μs)

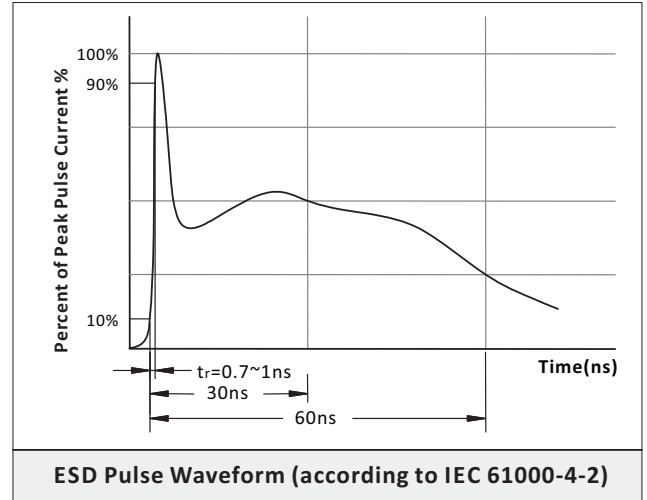
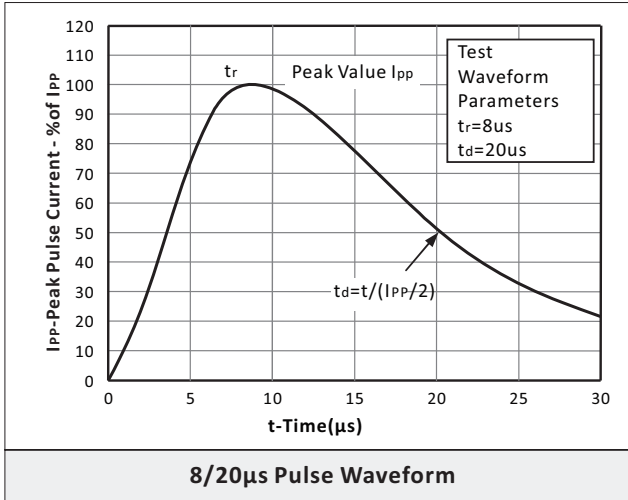
MAXIMUM RATINGS AND CHARACTERISTICS Ratings at 25°C ambient temperature unless otherwise specified.

MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED			
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power ($t_p=8/20\mu s$ waveform)	P_{PP}	70	Watts
Operating Temperature Range	T_J	-55~125	°C
Storage Temperature Range	T_{STG}	-55~150	°C

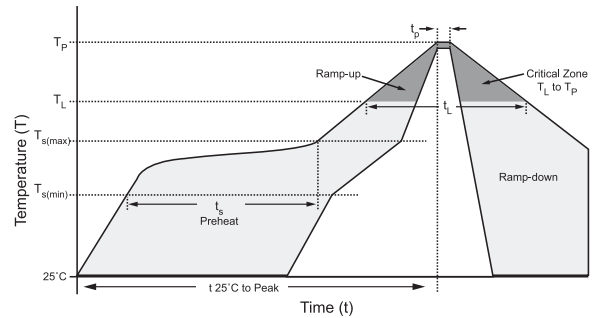
ELECTRICAL CHARACTERISTICS

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C UNLESS OTHERWISE SPECIFIED										
PART NUMBER	DEVICE MARKING	V_{RWM} (V) Max.	V_B (V) Min.	I_T (mA)	V_C @1A Max.	V_C		I_R (uA) Max.	C_T I/O-GND (pF) Typ.	C_T I/O-I/O (pF) Typ.
						Max.	@A			
SESRV05-4B	0504A	5.0	6.0	1	11	14	5	1	0.5	0.3



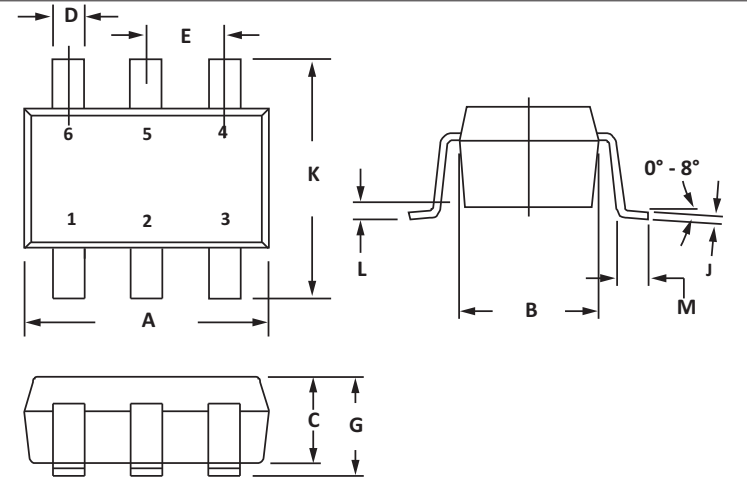
CHARACTERISTIC CURVES

REFLOW PROFILE

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max
Ts(max)to TL - Ramp-up Rate		3°C/second max
Reflow	Temperature (TL) (Liquidus)	217°C
	Time (min to max) (tl)	60 – 150 seconds
Peak Temperature (TP)		260°C
Time within 5°C of actual peak Temperature (tp)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (TP)		8 minutes Max.
Do not exceed		260°C

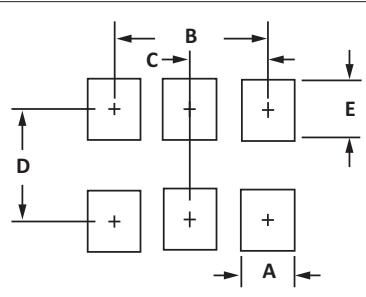


SOT-23-6 PACKAGE INFORMATION

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.05	0.110	0.120
B	1.50	1.75	0.059	0.070
C	0.90	1.30	0.036	0.051
D	0.30	0.40	0.012	0.016
E	0.85	1.05	0.033	0.040
G	0.90	1.45	0.036	0.057
J	0.09	0.20	0.003	0.008
K	2.60	3.00	0.102	0.118
L	0.0	0.15	0.0	0.006
M	0.30	0.60	0.012	0.024


RECOMMENDED PAD LAYOUT DIMENSIONS

PAD LAYOUT DIMENSIONS		
DIM	MILLIMETERS	INCHES
	NOMINAL	NOMINAL
A	0.70	0.028
B	1.90	0.074
C	0.95	0.037
D	2.40	0.094
E	1.00	0.039


ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SESRV05-4B	SOT-23-6	3000PCS	7"



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