

DESCRIPTION

The SESR70 is a low capacitance steering diode array . Designed for protection against Electrostatic Discharge (ESD), Electrical Fast Transients (EFT) and secondary lightning threats, this device is ideal for use in high-speed signal interface application such as USB, microprocessor bus and mobile electronics.

The SESR70 is capable of protects one line pair or two single lines via the steering of transient voltage to power lines or ground. Its low capacitance allows maintenance of signal integrity for high-speed data lines while protecting the circuit ICs from the damage of severe transients. An extremely low leakage current makes the SESR70 suitable for battery powered devices and POE applications. The SESR70 is available in the small SOT-143 package , which reduces internal lead inductance for low, overshoot voltage during fast front time transient events like ESD. This device meets the IEC 61000-4-2 and IEC 61000-4-4 requirements.

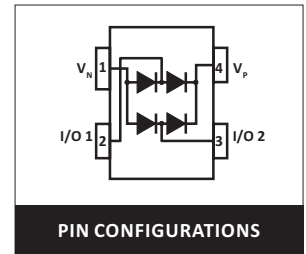


FEATURES

- > Array of surge rated, low capacitance diodes
- > Protects two I/O lines
- > Low clamping voltage
- > Low capacitance (5pF typical) for high-speed interfaces
- > Low leakage current

APPLICATIONS

- > USB Interface Ports
- > Video
- > Handheld Electronics
- > Laptops
- > 10/100 Ethernet



IEC COMPATIBILITY

- > IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- > IEC61000-4-4 (EFT) 40A (5/50ns)
- > IEC61000-4-5 (Lightning) 24A (8/20μs)

MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNIT
Forward Peak Pulse Current (tp = 8/20μs)	I _{PP}	24	A
Operating Temperature Range	T _J	-55~125	°C
Storage Temperature Range	T _{STG}	-55~150	°C

ELECTRICAL CHARACTERISTICS PER LINE @ 25°C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	V _{RWM} (V) Max.	V _{BR} (V) Min.	I _T (mA)	V _c @1A Max.	V _c		I _R (uA) Max.	C _T (pF) Typ.
						Max.	@A		
SESR70	CKA	70.0	100.0	50	1.5	8.0	24.0	1	5



SOT-143 PACKAGE INFORMATION

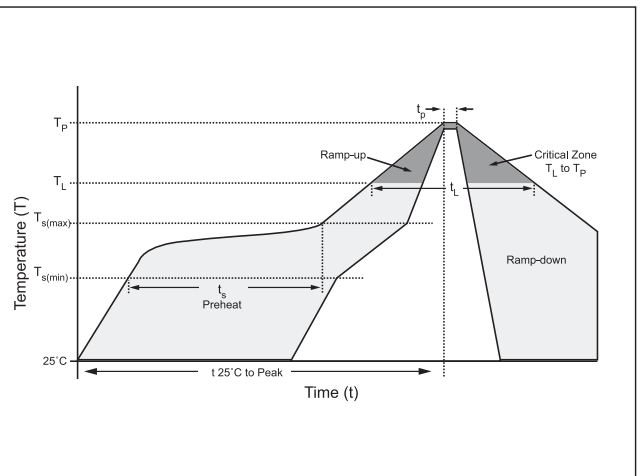
OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.120
B	1.20	1.39	0.047	0.055
C	0.84	1.14	0.033	0.045
D	0.39	0.50	0.015	0.020
F	0.79	0.93	0.031	0.037
G	1.78	2.03	0.070	0.080
J	0.08	0.15	0.003	0.006
K	0.46	0.60	0.018	0.024
L	0.445	0.60	0.0175	0.024
L1	0.40	0.60	0.016	0.024
R	0.72	0.83	0.028	0.033
S	2.11	2.48	0.083	0.098

RECOMMENDED PAD LAYOUT DIMENSION

PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.88	2.13	0.074	0.084
B	1.80	2.06	0.071	0.081
C	0.71	0.97	0.028	0.038
D	0.76	1.02	0.030	0.040
E	1.07	1.32	0.042	0.052
F	0.71	0.97	0.028	0.038

SOLDERING PARAMETERS

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



ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SESR70	SOT-143	3000PCS	7"

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