

## DESCRIPTION

The SESMCxx is a standard capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. It is rated at 350 Watts for an 8/20μs waveshape.

The SESMCxx meets IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. At higher operating frequencies or faster edge rates, insertion loss and signal integrity are a major concern. The SESMCxx offers a low leakage current in a miniature SOT-23 package.

## FEATURES

- >350 Watts Peak Pulse Power per Line (tp=8/20μs)
- >Ultra low leakage: uA level
- >Operating voltage: 3.3V,5V,8V,12V,15V,18V,24V,36V
- >Low clamping voltage
- >Weight: 8.0mg

## APPLICATIONS

- >USB 2.0 power and data line
- >Set-top box and digital TV
- >Digital video interface (DVI)
- >Notebook Computers
- >SIM Ports
- >10/100 Ethernet

## IEC COMPATIBILITY

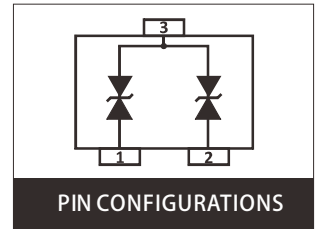
- >IEC61000-4-2 (ESD) ±30kV (air), ±30kV (contact)-3.3~18V
- >IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)-24~36V
- >IEC61000-4-4 (EFT) 40A (5/50ns)
- >IEC61000-4-5 (Lightning) 24A (8/20μs)

## MAXIMUM RATINGS @ 25° C UNLESS OTHERWISE SPECIFIED

PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20μs waveform)	PPP	350	Watts
Lead Soldering Temperature	TL	260(10 sec.)	°C
Operating Temperature Range	TJ	-55~125	°C
Storage Temperature Range	TSTG	-55~150	°C

## ELECTRICAL CHARACTERISTICS PER LINE @ 25° C UNLESS OTHERWISE SPECIFIED

PART NUMBER	DEVICE MARKING	VRWM (V) Max.	VBR (V) Min.	IT (mA)	Vc @1A Max.	Vc		Ir (uA) Max.	CT (pF) Typ.
						Max.	@A		
SESMC33	C03	3.3	4.0	1	7.0	10.5	20.0	40	220
SESMC05	C05	5.0	6.0	1	9.8	18.0	17.0	10	150
SESMC08	C08	8.0	8.5	1	13.4	24.0	12.0	1	75
SESMC12	C12	12.0	13.3	1	19.0	32.0	11.0	1	65
SESMC15	C15	15.0	16.7	1	24.0	38.0	10.0	1	60
SESMC18	C18	18.0	20.0	1	29.0	45.0	9.0	1	55
SESMC24	C24	24.0	26.7	1	43.0	52.0	7.0	1	40
SESMC36	C36	36.0	40.0	1	60.0	75.0	5.0	1	15



**SOT-23 PACKAGE INFORMATION**

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.80	3.04	0.110	0.120
B	1.20	1.40	0.047	0.055
C	0.89	1.11	0.035	0.044
D	0.37	0.50	0.015	0.020
G	1.78	2.04	0.070	0.081
H	0.013	0.100	0.001	0.004
J	0.085	0.177	0.003	0.007
K	0.45	0.60	0.018	0.024
L	0.89	1.02	0.035	0.040
S	2.10	2.50	0.083	0.098
V	0.45	0.60	0.018	0.024

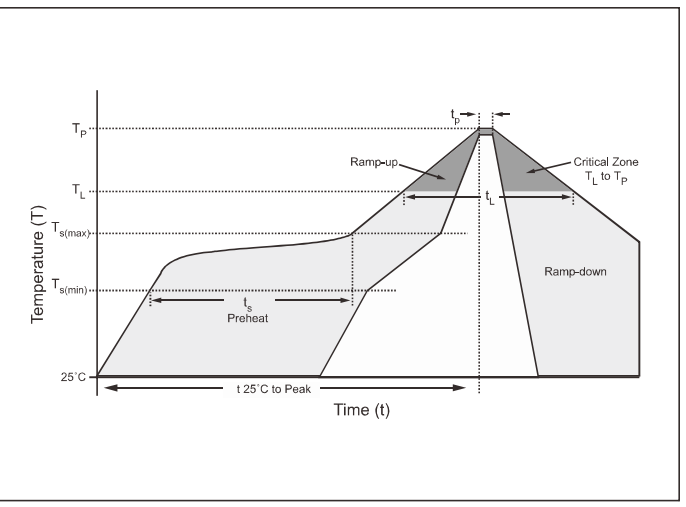
**NOTES**  
1. Controlling dimension: inches.  
2. Dimensions are exclusive of mold flash and metal burrs.

PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

**NOTES**  
1. Controlling dimension: inches.

**SOLDERING PARAMETERS**

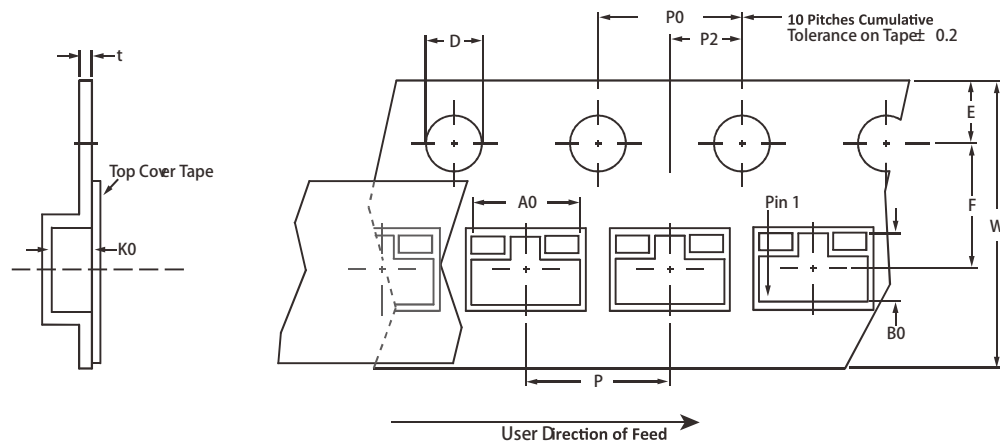
Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min (Ts(min))	150°C
	Temperature Max (Ts(max))	200°C
	Time (min to max) (ts)	60 – 180 secs
Average ramp up rate (Liquidus Temp (TL) to peak)		3°C/second max
Ts(max) to TL - Ramp-up Rate		3°C/second max
Reflow	Temperature (TL) (Liquidus)	217°C
	Time (min to max) (ts)	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



**ENVIRONMENTAL CHARACTERISTICS**

Testing Items	Technical Standards
High Temperature Reverse Bias Test	Temperature:150±3℃;Bias=80%V <sub>DRM</sub> ;Time:168H
High Temperature Life Test	Temperature:150℃;Time:168H
High-Low Temperature Cycle Test	Temperature:From -40℃ to 150℃;Dwell Time:30min,10-100 Cycles
High Temperature&High Humidity Test	Temperature:85℃.Humidity:85%; Time:168H
Pressure Cooker Test	Temperature:121℃,2 atm.Humidity:100%; Time:24H To 168H
Resistance Of Soldering Heat	Temperature:260±5℃;Time Of Dip Soldering:10s,3 Times

**TAPE AND REEL**



SPECIFICATIONS												
REEL DIA.	TAPE WIDTH	A0	B0	K0	D	E	F	W	P0	P2	P	tmax
178mm (7")	8mm	3.15 ± 0.10	2.77 ± 0.10	1.30 ± 0.10	1.55 ± 0.10	1.75 ± 0.10	3.50 ± 0.05	8.00 ± 0.30	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	0.228
<b>NOTES</b> 1. Dimensions are in millimeters. 2. Surface mount product is taped and reeled in accordance with EIA-481.												

**ORDERING INFORMATION**

Part Number	Component Package	QTY/Reel	Reel Size
SESMCXX	SOT-23	3000PCS	7"

## **CONTACT US**

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