

## DESCRIPTION

The SELC12CI is an ultra low capacitance transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. This series is rated at 350 Watts for an 8/20 $\mu$ s waveshape.

The SELC12CI 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 SELC12CI offers an ultra low capacitance and low leakage current in a miniature SOD-323 package.

## FEATURES

- >350 Watts Peak Pulse Power per Line (tp=8/20 $\mu$ s)
- >Protects One Signal Line or I/O Port
- >Low clamping voltage
- >Low leakage current

## APPLICATIONS

- >Ethernet - 10/100/1000 Base T
- >Cellular Phones
- >I<sup>2</sup>C Bus Protection
- >Parallel & Serial Port Protection
- >Personal Digital Assistant (PDA)
- >Microcontroller Input Protection
- >WAN/LAN Equipment

## IEC COMPATIBILITY

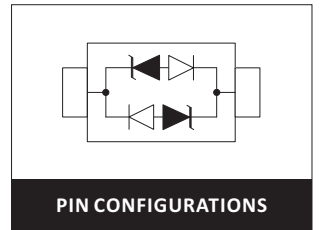
- >IEC61000-4-2 (ESD)  $\pm$ 30kV (air),  $\pm$ 30kV (contact)
- >IEC61000-4-4 (EFT) 40A (5/50ns)

## MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

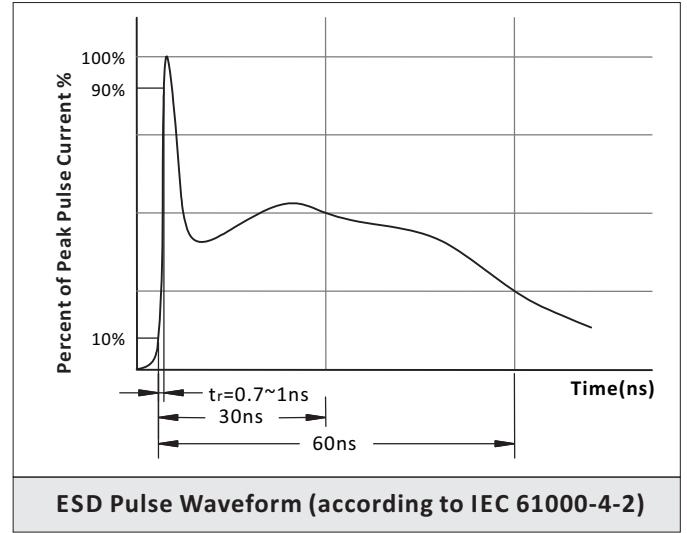
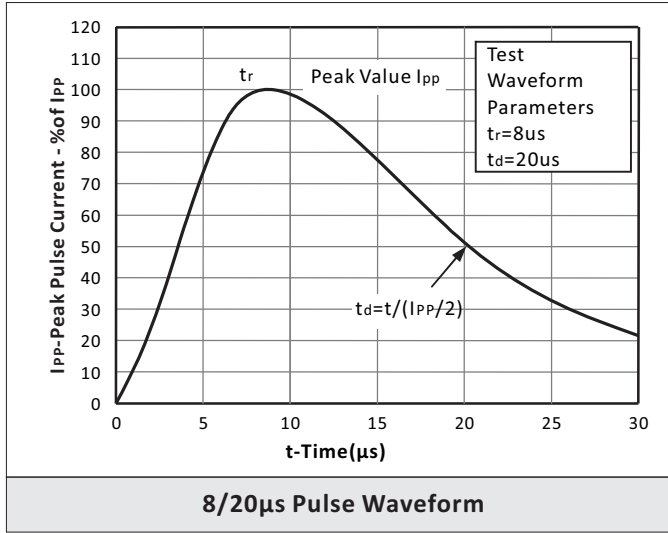
PARAMETER	SYMBOL	VALUE	UNIT
Peak Pulse Power (tp=8/20 $\mu$ s waveform)	PPP	350	Watts
Operating Temperature Range	TJ	-55~125	°C
Storage Temperature Range	TSTG	-55~150	°C

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

PART NUMBER	DEVICE MARKING	V <sub>RWM</sub>	V <sub>BR</sub>	I <sub>T</sub>	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub>	C <sub>T</sub>
		(V) Max.	(V) Min.	(mA)	Max.	Max.	@A	( $\mu$ A) Max.	(pF) Typ.
SELC12CI	DC	12.0	13.3	1	18	29.0	12.0	0.5	1.0

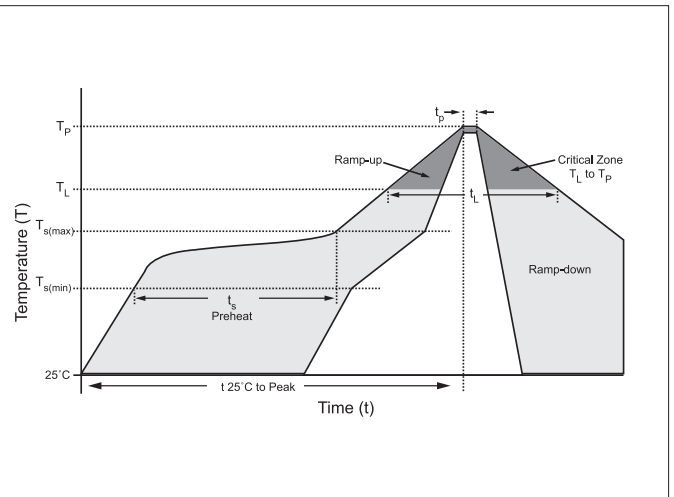


### CHARACTERISTIC CURVES



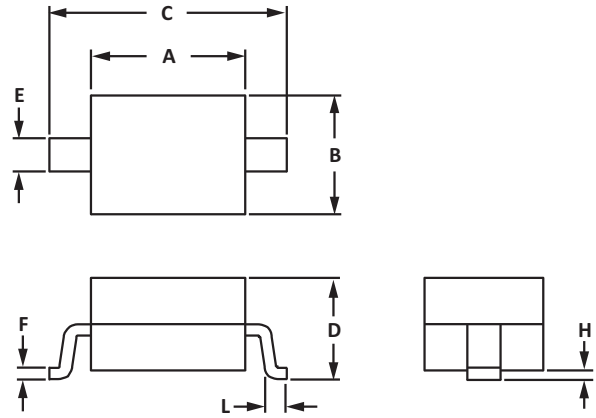
### REFLOW PROFILE

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 (T <sub>L</sub> ) to peak)		3°C/second max
Ts(max) to T <sub>L</sub> - Ramp-up Rate		3°C/second max
Reflow	Temperature (T <sub>L</sub> ) (Liquidus)	217°C
	Time (min to max) (t <sub>L</sub> )	60 – 150 seconds
Peak Temperature (T <sub>P</sub> )		260°C
Time within 5°C of actual peak Temperature (t <sub>p</sub> )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T <sub>P</sub> )		8 minutes Max.
Do not exceed		260°C



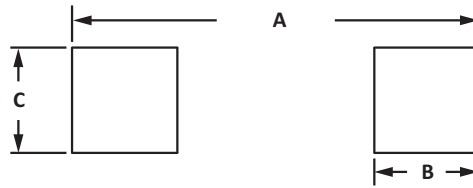
**SOD-323 PACKAGE INFORMATION**

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	1.60	1.90	0.063	0.075
B	1.15	1.45	0.045	0.057
C	2.39	2.70	0.094	0.106
D	0.80	1.10	0.031	0.043
E	0.25	0.40	0.010	0.016
F	0.10	0.20	0.004	0.008
H	-	0.10	-	0.004
L	0.20	-	0.008	-



**RECOMMENDED PAD LAYOUT DIMENSION**

PAD LAYOUT DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.87	3.12	0.113	0.123
B	0.66	0.91	0.026	0.036
C	0.66	0.91	0.026	0.036



**ORDERING INFORMATION**

Part Number	Component Package	QTY/Reel	Reel Size
SELC12CI	SOD-323	3000PCS	7"



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