

## DESCRIPTION

The SG10F30B5.0A is a transient voltage suppressor array, designed to protect applications such as portable electronics and SMART phones. This series is rated at 300 Watts for an 8/20 $\mu$ s wave shape.

The SG10F30B5.0A 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 SG10F30B5.0A offers low leakage current in a miniature DFN-1006 package.

## FEATURES

- > Low clamping voltage
- > Protects one bidirectional I/O line
- > 300 Watts peak pulse power per line (tp=8/20 $\mu$ s)
- > ROHS Compliant

## APPLICATIONS

- > Cellular handsets & accessories
- > Keypads, Side keys, Audio ports
- > Portable instrumentation
- > Notebooks, Desktops, and servers
- > Digital lines
- > Tablet PC

## IEC COMPATIBILITY

- > IEC61000-4-2 (ESD)  $\pm$ 30KV (air),  $\pm$ 25KV (contact)
- > IEC61000-4-4 (EFT) 40A (5/50ns)

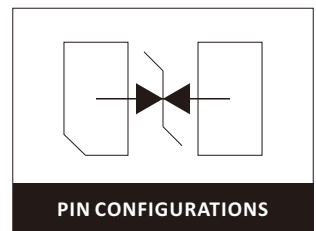
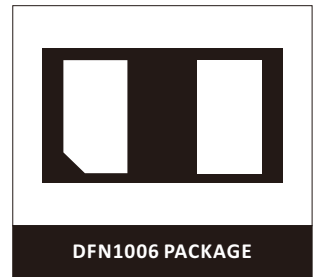
## MAXIMUM RATINGS @ 25°C UNLESS OTHERWISE SPECIFIED

RATING	SYMBOL	VALUE	UNITS
Peak Pulse Power (tp=8/20 $\mu$ s waveform).	PPPM	300	Watts
Operating Temperature Range.	T <sub>J</sub>	-55~+125	°C
Storage Temperature Range.	T <sub>STG</sub>	-55~+125	°C
Lead Soldering Temperature.	T <sub>L</sub>	260(10 Sec)	°C

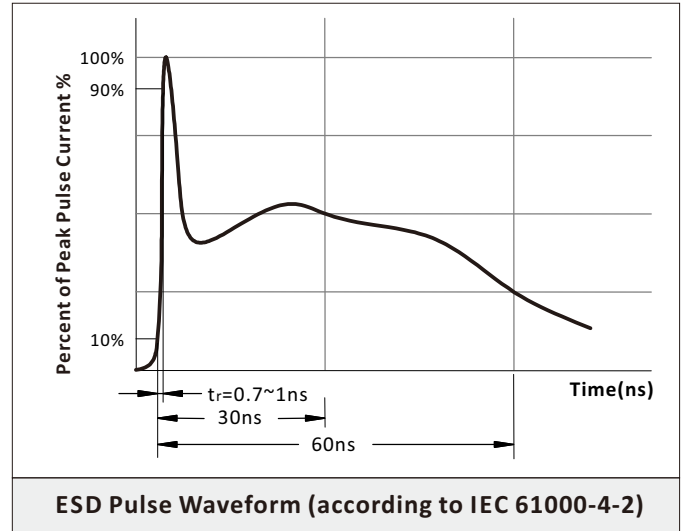
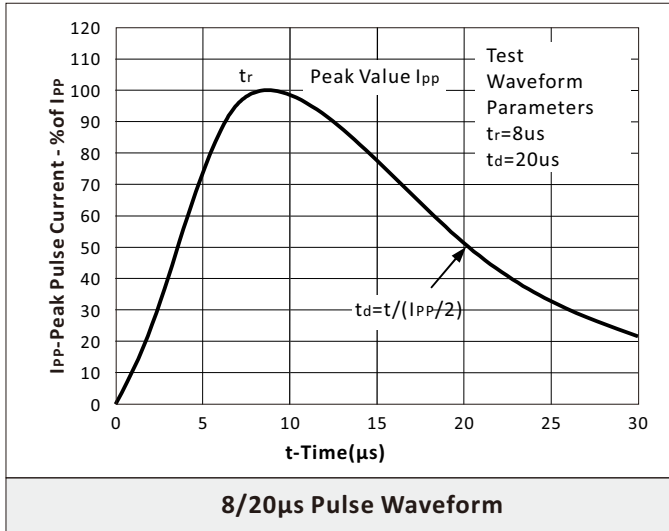
Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

Part Number	Device Marking Code	Reverse Stand-off Voltage Max.	Breakdown Voltage Min.	Test Current	Peak Pulse Current	Junction Capacitance Typ.	Reverse Leakage Max.
		V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> (V) Max. @A	C <sub>J</sub> (PF)	IR( $\mu$ A)
SG10F30B5.0A	B8	5.0	6.0	1	12 25	60	1

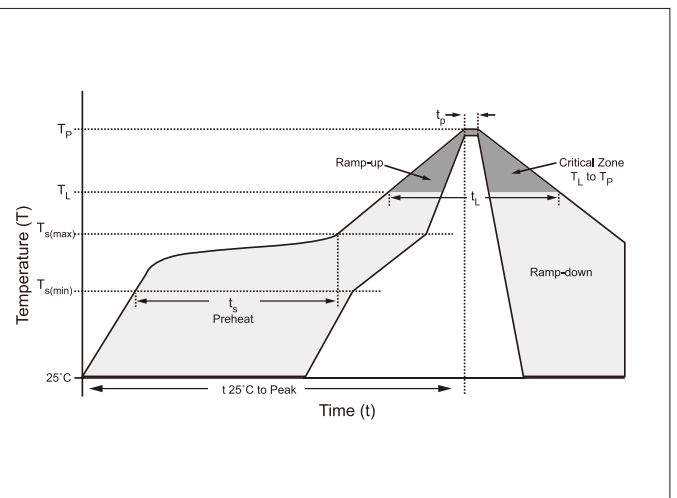


### CHARACTERISTIC CURVES



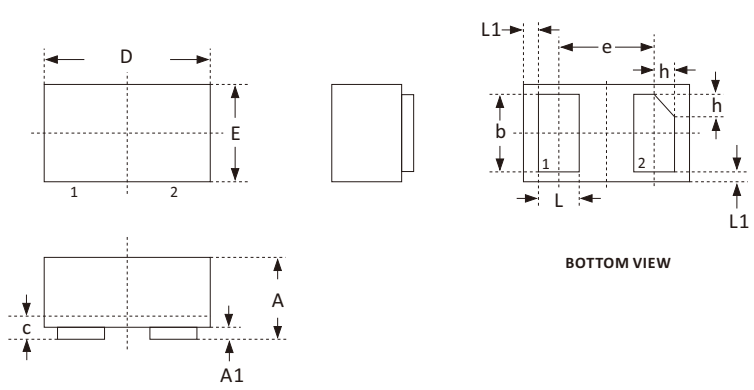
### REFLOW PROFILE

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Min ( $T_{s(min)}$ )	150°C
	Temperature Max ( $T_{s(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_P$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_P$ )		8 minutes Max.
Do not exceed		260°C



**DFN1006 PACKAGE DIMENSIONS**

OUTLINE DIMENSIONS				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	0.45	0.55	0.018	0.022
A1	0	0.05	0	0.002
b	0.40	0.60	0.016	0.024
c	0.12	0.18	0.005	0.007
D	0.95	1.05	0.037	0.041
e	0.65TYP		0.026TYP	
E	0.55	0.65	0.022	0.026
L	0.15	0.35	0.006	0.014
L1	0.05REF		0.002TYP	
h	0.07	0.17	0.003	0.007



The diagrams show the top, side, and bottom views of the DFN1006 package. The top view shows dimensions D (width), E (height), and L (lead length). The side view shows dimensions A (height) and A1 (lead height). The bottom view shows dimensions L1 (lead width), e (pitch), h (lead height), b (lead width), and L (lead length).

**RECOMMENDED PAD LAYOUT DIMENSIONS**

DIM	MILLIMETERS	INCHES
A	1.20	0.047
B	0.47	0.019
C	0.60	0.024



The diagram shows the recommended pad layout dimensions for the DFN1006 package. It includes dimensions A (width), B (width), and C (height). A label 'PIN1' points to the first pin location.

**ORDERING INFORMATION**

Part Number	Component Package	QTY/Reel	Reel Size
SG10F30B5.0A	DFN1006	10000PCS	7"