

## FEATURES

- | 480Watts peak pulse power ( $t_p = 8/20\mu s$ )
- | Standard Capacitance 100pF
- | Low Clamping Voltage:  $V_C = 12V @ I_{PP} = 40A$
- | Reverse Working (Stand-off) Voltage: 4.5V
- | Low Leakage current
- | Response Time is Typically  $< 1\text{ ns}$

## APPLICATIONS

- | Smartphones, tablet computers
- | Blu-ray and DVD recorders and players
- | Video equipment and accessories



DFN1006

45

Marking

## IEC COMPATIBILITY

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

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003



Schematic Symbol

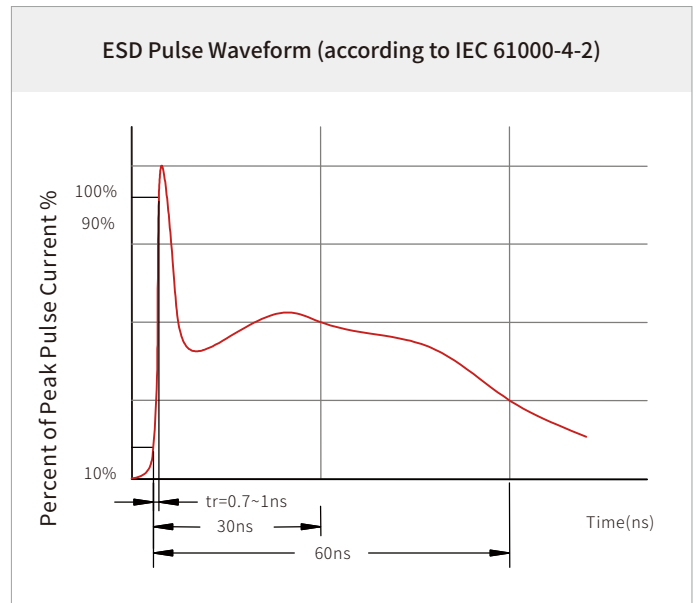
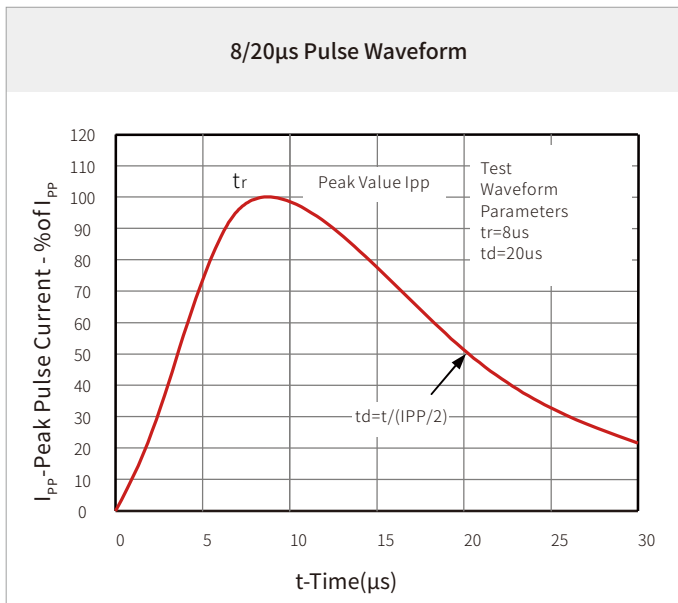
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power ( $t_p=8/20\mu s$ waveform)	480	Watts
$T_J$	Operating Temperature Range	-55 to +150	$^{\circ}C$
$T_{STG}$	Storage Temperature Range	-55 to +150	$^{\circ}C$

## ELECTRICAL CHARACTERISTICS

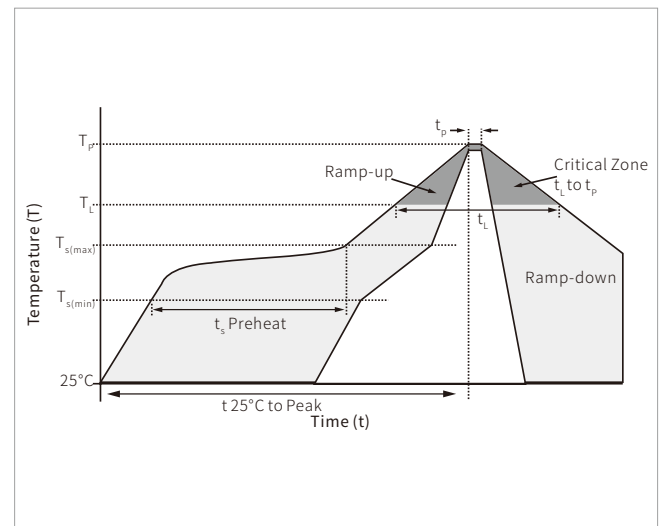
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				4.5	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T = 1mA$	4.8			V
$I_R$	Reverse Leakage Current	$V_{RWM} = 4.5V$			200	nA
$V_C$	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$			6.5	V
$V_C$	Clamping Voltage	$I_{PP} = 40A, t_p = 8/20\mu s$			12	V
$I_{PP}$	Peak Pulse Current	$t_p = 8/20\mu s$			40	A
$C_J$	Off State Junction Capacitance	$V_R = 0V, f = 1MHz$			100	pF

## CHARACTERISTIC CURVES

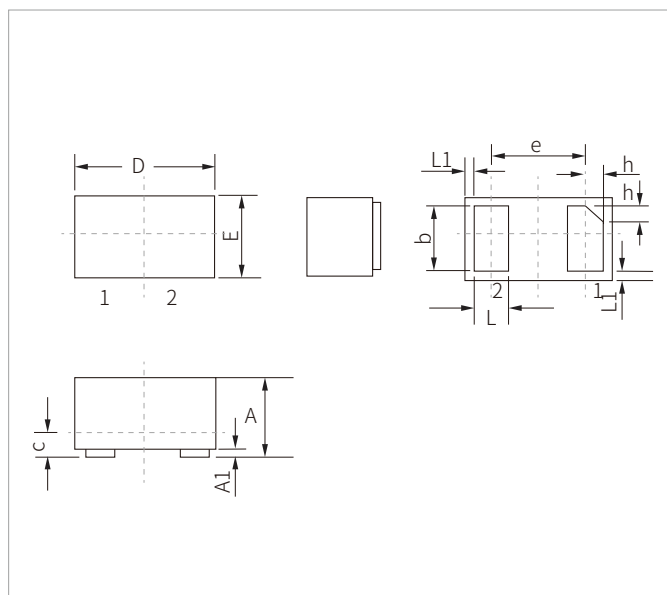


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(min)}$ )	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

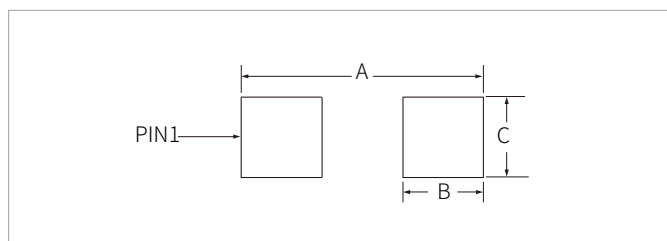


## DFN1006 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.40	0.60	0.016	0.024
A1	0	0.05	0	0.002
b	0.40	0.55	0.016	0.022
c	0.12	0.18	0.005	0.007
D	0.90	1.10	0.035	0.043
e	0.65BSC		0.026BSC	
E	0.55	0.75	0.022	0.030
L	0.20	0.35	0.008	0.014
L1	0.05REF		0.002REF	
h	0.07	0.17	0.003	0.007

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	1.20	0.047
B	0.47	0.019
C	0.60	0.024

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE10F50B4.5A	DFN1006	10000PCS	7"

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