

## FEATURES

- | 550Watts peak pulse power (tp = 8/20μs)
- | Ultra low leakage: nA level
- | Low clamping voltage
- | REACH & SVHC Compliant
- | Halogen Compliant
- | Meet AEC-Q101 Requirements

## APPLICATIONS

- | Cell phone handsets and accessories
- | Power supply protection
- | Power management



DFN1006



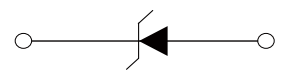
Marking

## IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±30kV (air), ±30kV (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

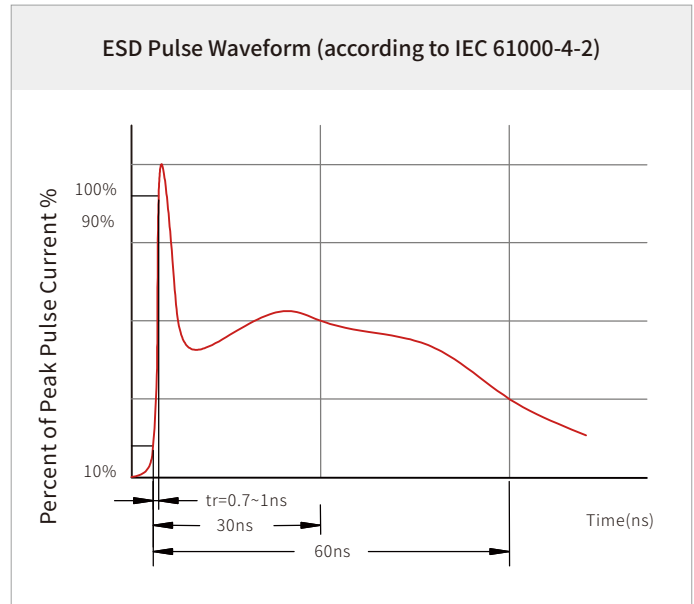
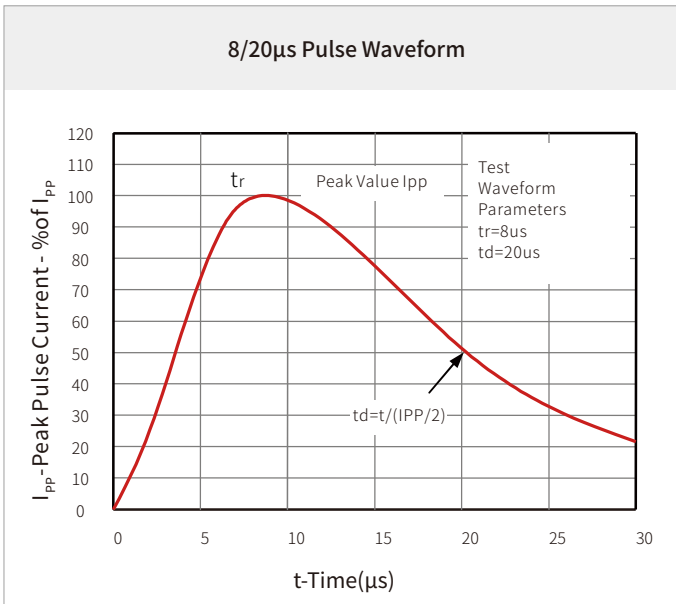
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	550	Watts
$T_J$	Operating Temperature Range	-40 to +125	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

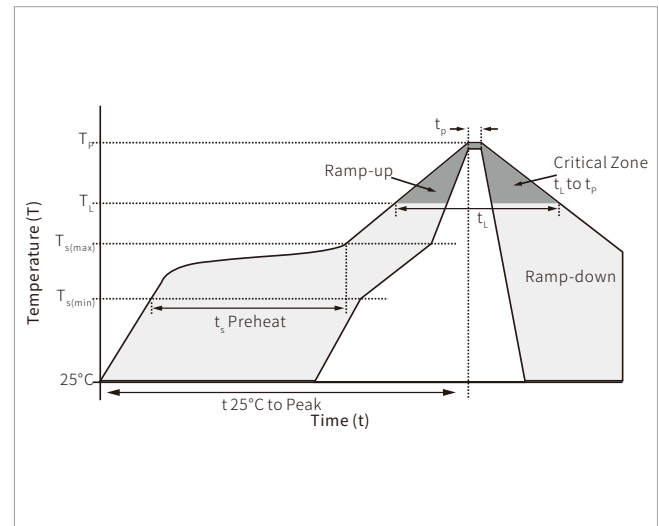
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				4.85	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	5.5	6	7.5	V
$I_R$	Reverse Leakage Current	$V_{RWM}=4.85V$		<10	100	nA
$V_C$	Clamping Voltage	$I_{PP}=1A, tp=8/20\mu s$		6.4	8	V
$V_C$	Clamping Voltage	$I_{PP}=25A, tp=8/20\mu s$		7	9.5	V
$V_C$	Forward Clamping Voltage	$I_{PP}=50A, tp=8/20\mu s$		8	11	V
$I_{PP}$	Peak Pulse Current	tp=8/20μs			50	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$		120	180	pF

## CHARACTERISTIC CURVES

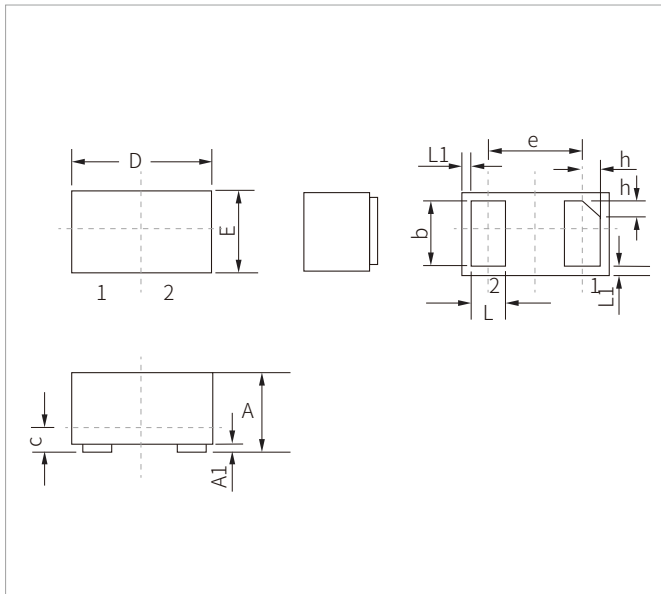


## SOLDERING PARAMETERS

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

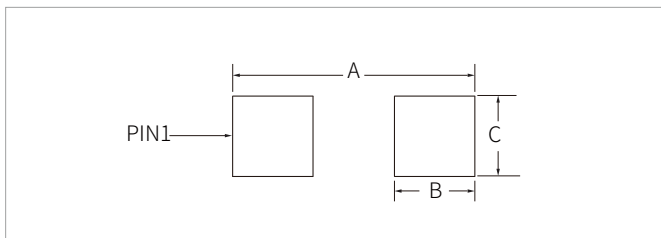


## DFN1006 PACKAGE INFORMATION



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
TPSE10F55U4.5A	DFN1006	10000PCS	7"

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