

## FEATURES

- | 1500W Peak Pulse Power per Line (tp=8/20μs)
- | Protects one Unidirectional I/O line
- | Working voltages :12 V
- | Low leakage current
- | Meet AEC-Q101 Requirements

## APPLICATIONS

- | Cell Phone Handsets and Accessories
- | Microprocessor based equipment
- | Personal Digital Assistants (PDA' S)
- | Notebooks,Desktops,and Servers
- | Portable Instrumentation
- | Set-Top Box



DFN1610



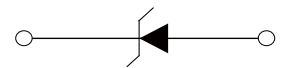
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## IEC COMPATIBILITY

- | 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

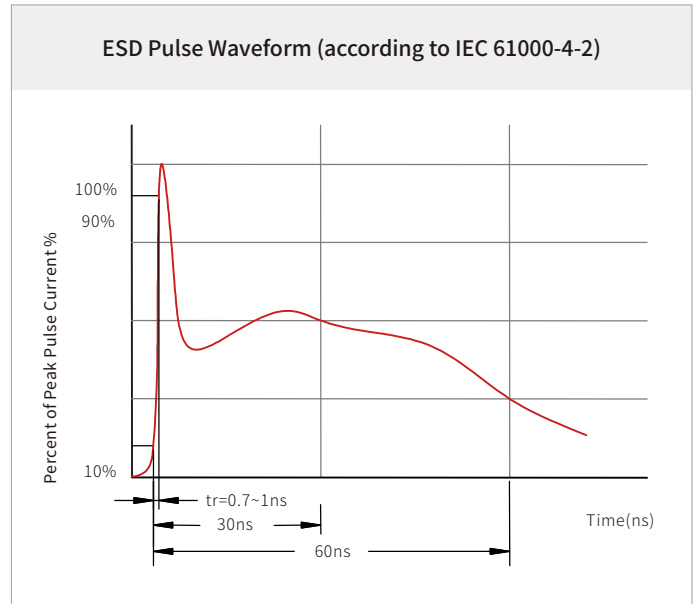
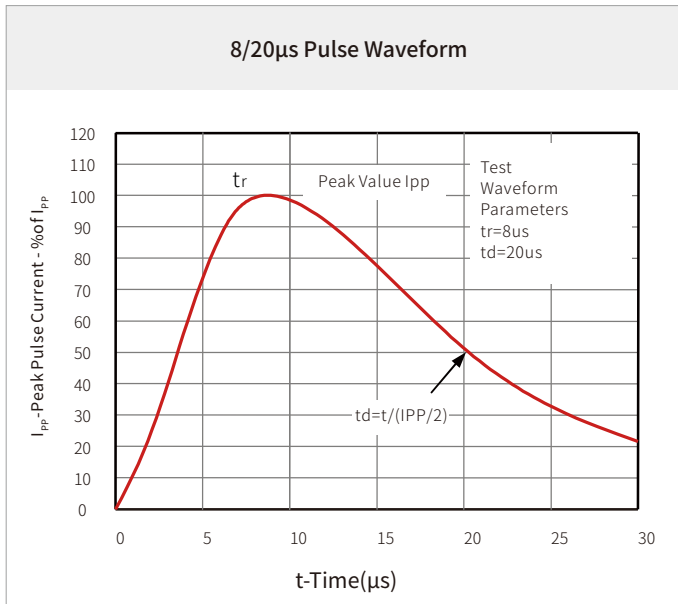
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	1500	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

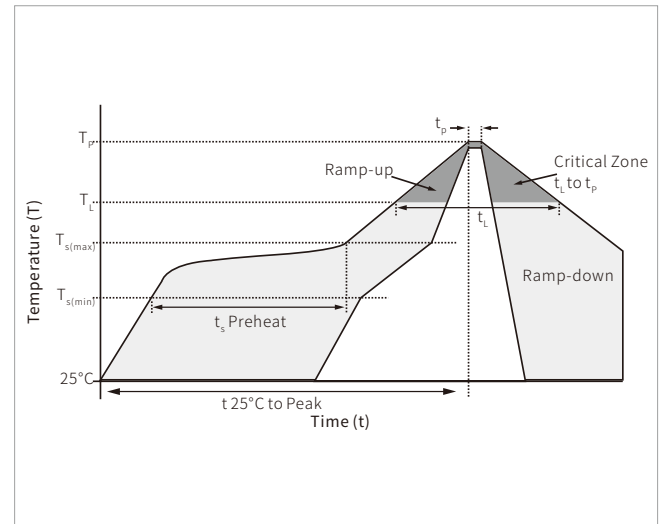
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				12	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	13.3		12.5	V
$I_R$	Reverse Leakage Current	$V_{RWM}=12V$			1	μA
$V_C$	Clamping Voltage	$I_{PP}=25A, tp=8/20\mu s$			20	V
$V_C$	Clamping Voltage	$I_{PP}=57A, tp=8/20\mu s$			28.5	V
$I_{PP}$	Peak Pulse Current	tp=8/20μs			57	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$			430	pF

## CHARACTERISTIC CURVES

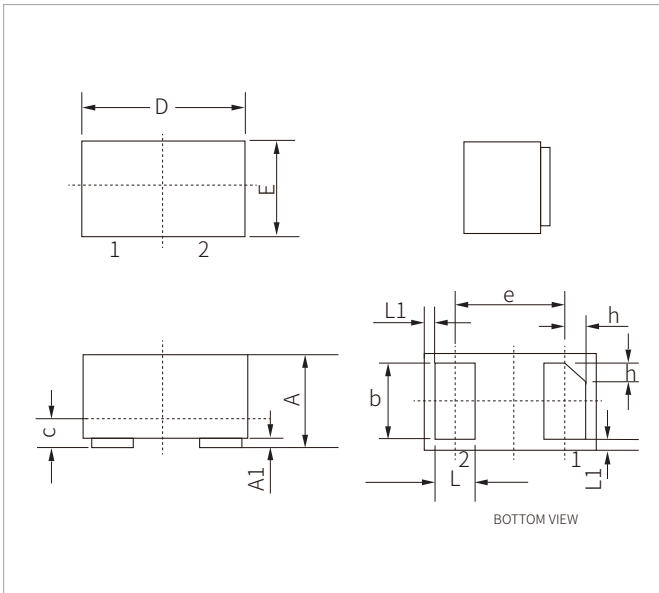


## SOLDERING PARAMETERS

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

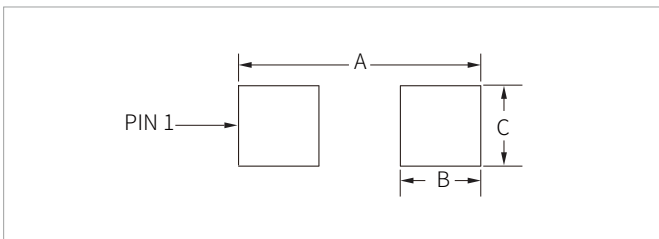


## DFN1610 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.40	0.60	0.016	0.024
A1	0	0.05	0	0.002
b	0.75	0.85	0.030	0.033
c	0.10	0.20	0.004	0.008
D	1.55	1.65	0.061	0.065
e	1.10TYP		0.043TYP	
E	0.95	1.05	0.037	0.041
L	0.35	0.45	0.014	0.018
L1	0.05REF		0.002REF	
h	0.15	0.25	0.006	0.010

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	1.85	0.073
B	0.625	0.025
C	1.00	0.039

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSE16F150U12A	DFN1610	3000PCS	7"

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