

## FEATURES

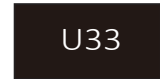
- | 200W Peak Pulse Power per Line (tp=8/20μs)
- | Protects Up To Two Bidirectional I/O Lines
- | Low Capacitance (0.4pF) For High-Speed Interfaces
- | Working Voltages : 3.0V
- | Ultra-small Package Requires Less Than 2.0x1.0mm of PCB area

## APPLICATIONS

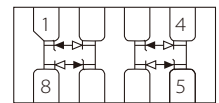
- | 10/100/1000 Ethernet
- | Integrated magnetics/RJ-45 connectors
- | LAN/WAN Equipment
- | Security Cameras
- | Industrial Controls
- | Peripherals
- | Notebooks & Desktop Computers



DFN2010-8L



Marking



Schematic Symbol

## 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

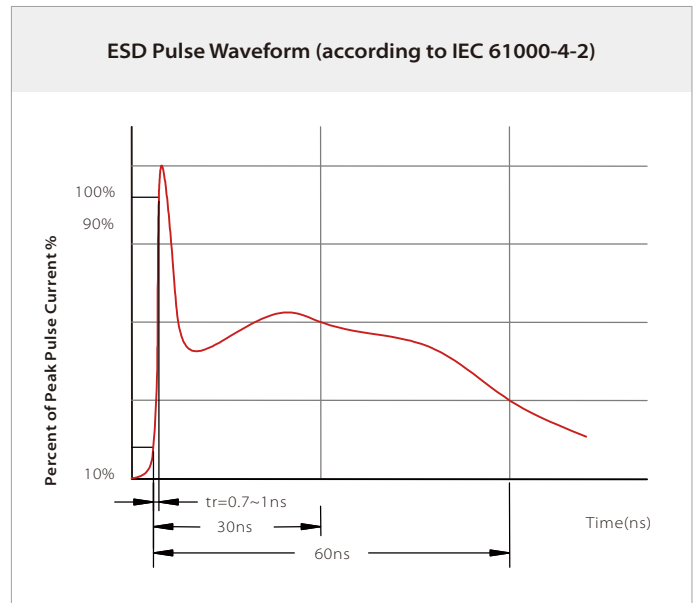
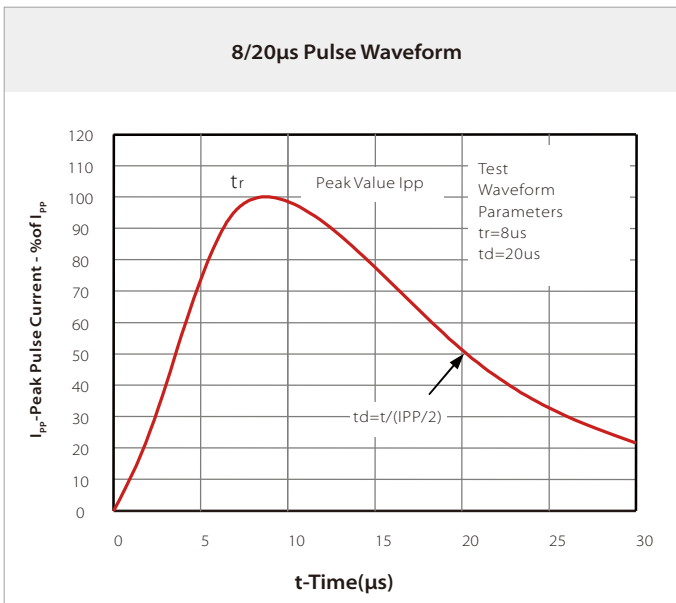
## THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
$P_{PP}$	Peak Pulse Power (tp=8/20μs waveform)	200	Watts
$T_J$	Operating Temperature Range	-55 to +150	°C
$T_{STG}$	Storage Temperature Range	-55 to +150	°C

## ELECTRICAL CHARACTERISTICS

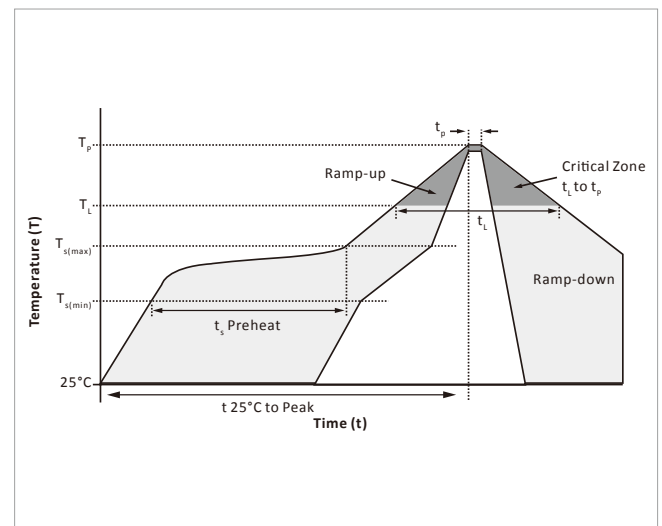
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
$V_{RWM}$	Reverse Stand-off Voltage				3	V
$V_{BR}$	Reverse Breakdown Voltage	$I_T=1mA$	3.5			V
$I_R$	Reverse Leakage Current	$V_{RWM}=3V$			0.1	μA
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=1A, tp=8/20us$			7	V
$V_C$	Clamping Voltage (Tp=8/20us)	$I_{pp}=13A, tp=8/20us$			17	V
$I_{pp}$	Peak Pulse Current (Tp=8/20us)	tp=8/20us			13	A
$C_J$	Off State Junction Capacitance	$V_R=0V, f=1MHz$			0.6	pF

## CHARACTERISTIC CURVES

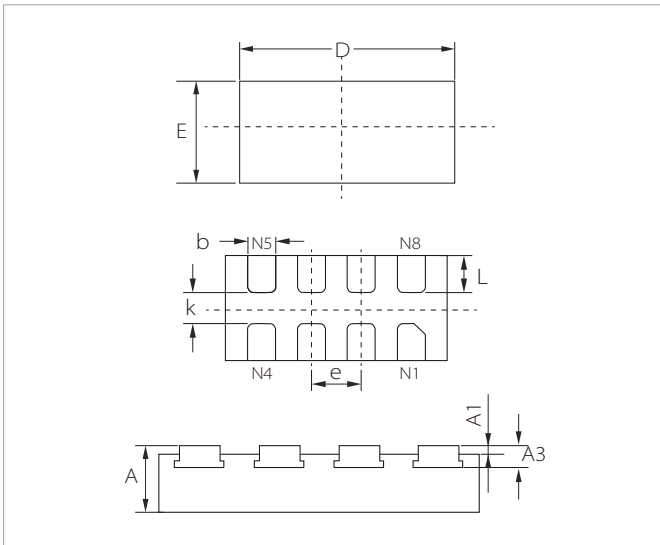


## SOLDERING PARAMETERS

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

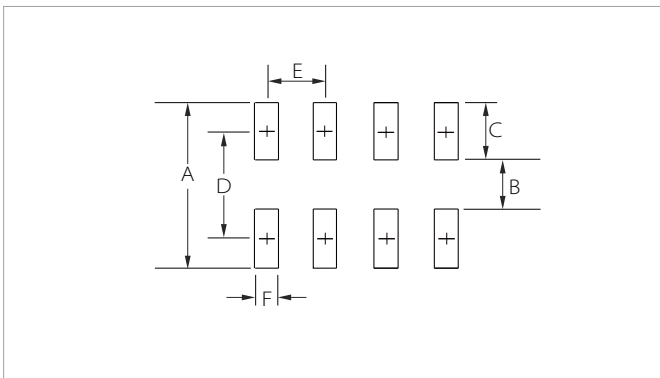


## DFN2010-8L PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.320	0.400	0.013	0.016
A1	0.000	0.046	0.000	0.002
A3	0.110REF		0.004REF	
D	1.900	2.100	0.075	0.083
E	0.900	1.100	0.035	0.043
k	0.300REF		0.012REF	
b	0.200	0.300	0.008	0.012
e	0.500TYP		0.020TYP	
L	0.274	0.426	0.011	0.017

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	1.55	0.061
B	0.25	0.010
C	0.65	0.026
D	0.90	0.035
E	0.50	0.020
F	0.30	0.012

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE20F20B3.0MA	DFN2010-8L	10000PCS	7"

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