

FEATURES

- | 250W Peak Pulse Power per Line ($t_p=8/20\mu s$)
- | Protects Four High Speed Lines
- | Ultra Low Capacitance: 0.4pF typical (I/O to GND)
- | Low Clamping Voltage
- | Meet AEC-Q101 Requirements

APPLICATIONS

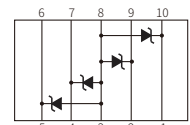
- | USB 3.0/3.1 Interfaces
- | HDMI 1.4/2.0 Interfaces
- | Video Graphics Cards
- | Notebooks, Desktops and Servers
- | Portable Instrumentations
- | Industrial Controls



DFN2510-10L

304U

Marking



Schematic Symbol

IEC COMPATIBILITY

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

APPROVALS

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

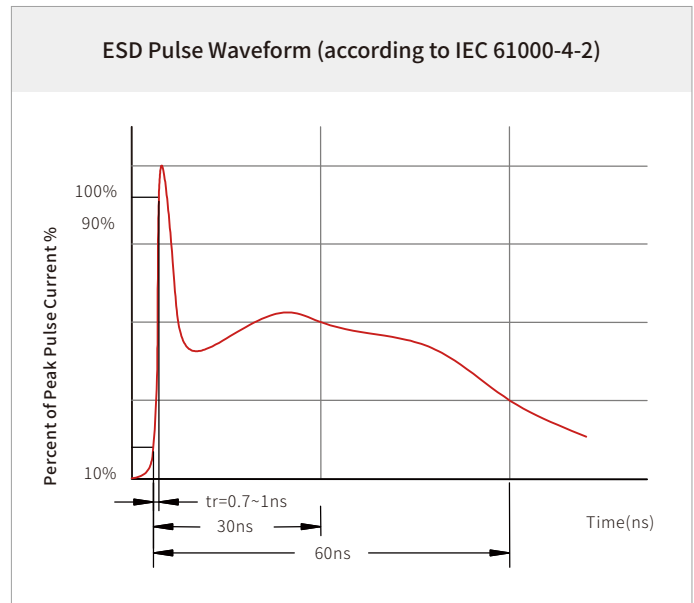
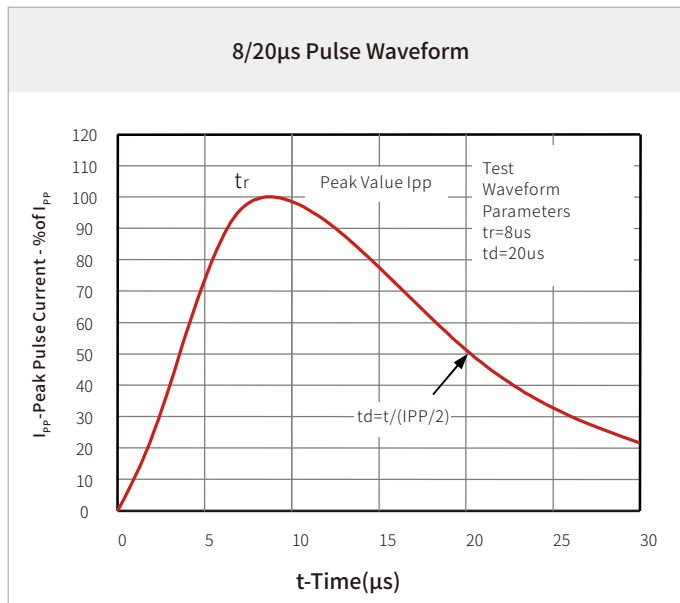
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power ($t_p=8/20\mu s$ waveform)	250	Watts
T_J	Operating Temperature Range	-55 to +150	$^{\circ}C$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}C$

ELECTRICAL CHARACTERISTICS

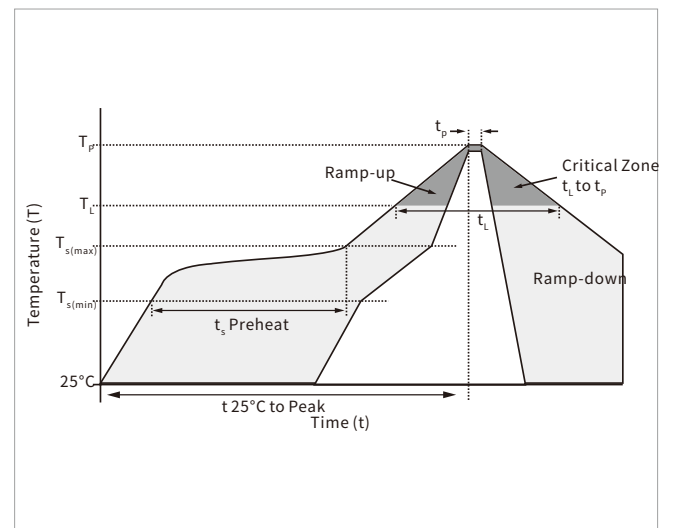
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	4			V
I_R	Reverse Leakage Current	$V_{RWM}=3.3V$			1	μA
V_C	Clamping Voltage	$I_{pp}=1A, t_p=8/20\mu s$			7	V
V_C	Clamping Voltage	$I_{pp}=10A, t_p=8/20\mu s$			25	V
I_{PP}	Peak Pulse Current	$t_p=8/20\mu s$			10	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$		0.45		pF

CHARACTERISTIC CURVES

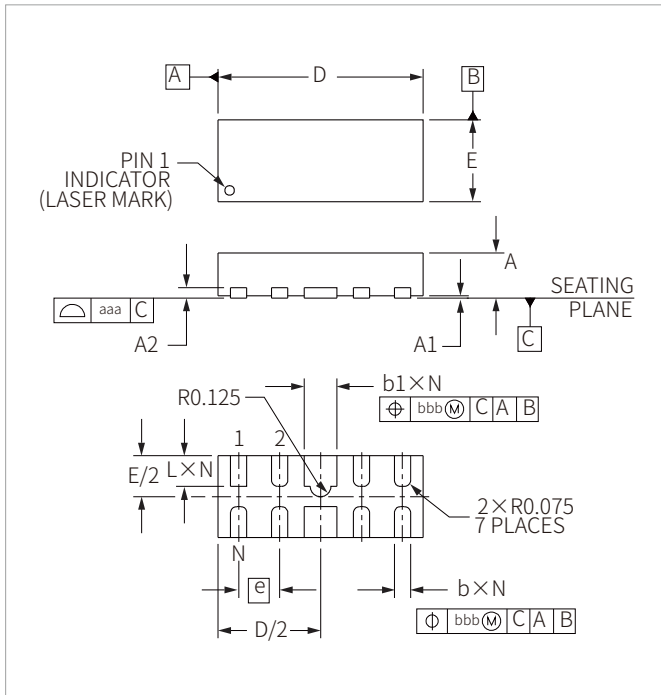


SOLDERING PARAMETERS

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

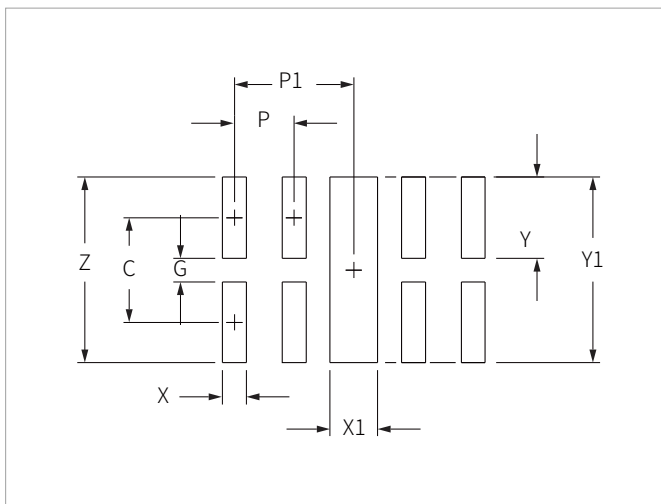


DFN2510-10L PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.40	0.65	0.016	0.026
A1	0	0.05	0	0.002
A2	(0.13)		(0.005)	
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
D	2.40	2.60	0.094	0.102
E	0.90	1.10	0.035	0.043
e	0.50BSC		0.020BSC	
L	0.30	0.45	0.012	0.018
N	8		8	
aaa	0.08		0.003	
bbb	0.10		0.004	

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	0.87	0.034
G	0.20	0.008
P	0.50	0.020
P1	1.00	0.039
X	0.20	0.008
X1	0.40	0.016
Y	0.68	0.027
Y1	1.55	0.061
Z	1.55	0.061

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TPSEULC3304P	DFN2510-10L	3000PCS	7"

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