

FEATURES

- | 60W Peak Pulse Power per Line (tp=8/20μs)
- | Package optimized for high-speed lines
- | Protects four data lines
- | Low capacitance: 0.2pF (I/O to I/O)
- | Low leakage current
- | Low clamping voltage
- | Meet AEC-Q101 Requirements

APPLICATIONS

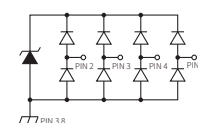
- | USB2.0,USB3.0,Ethernet
- | HDMI2.0,Displayport 1.3,eSATA
- | Unified Display Interface
- | Digital Visual Interface
- | High Speed Serial Interface



DFN2510-10L



Marking



Schematic Symbol

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±25kV (air), ±20kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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

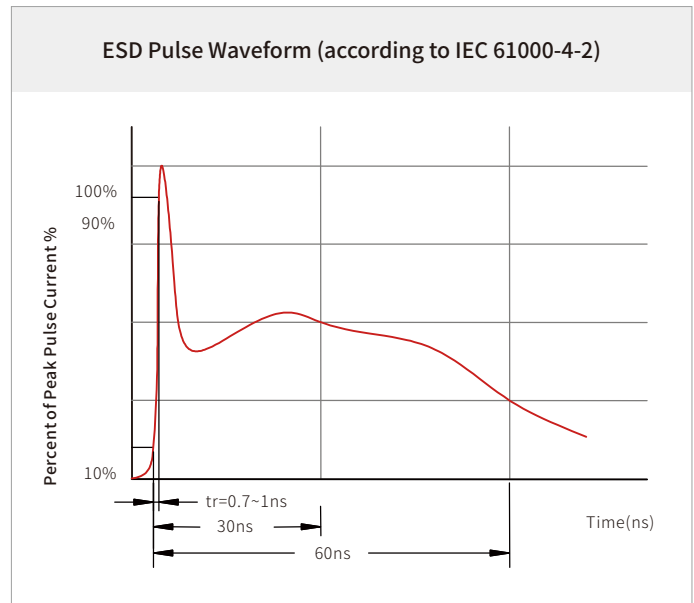
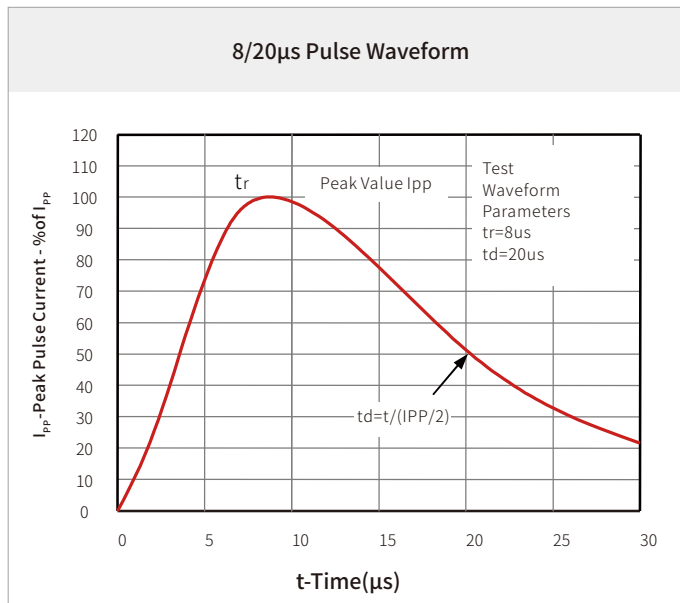
THERMAL CONSIDERATIONS

Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power (tp=8/20μs waveform)	60	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

ELECTRICAL CHARACTERISTICS

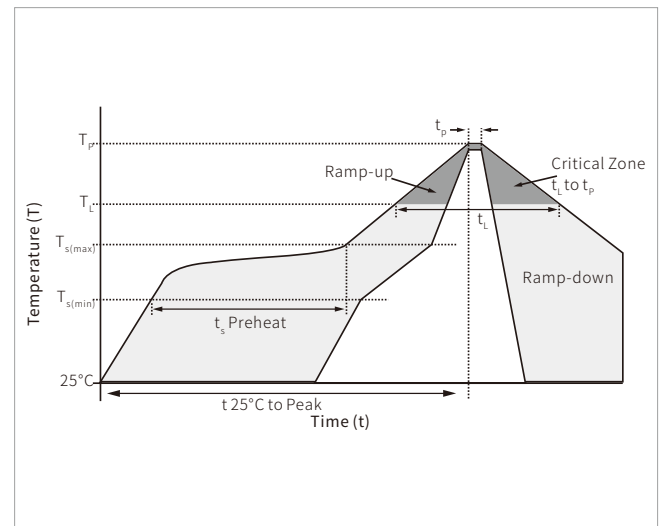
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage	Any I/O pin to GND			5	V
V_{BR}	Reverse Breakdown Voltage	$I_R=1mA$ Any I/O pin to GND	6.0		9.0	V
I_R	Reverse Leakage Current	$V_{RWM}=5V$			1.0	μA
V_C	Clamping Voltage	$I_{pp}=1A, tp=8/20μs$			10	V
V_C	Clamping Voltage	$I_{pp}=4A, tp=8/20μs$			15	V
I_{PP}	Peak Pulse Current	tp=8/20μs			4	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-I/O		0.3		pF
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$ I/O-GND		0.6		pF

CHARACTERISTIC CURVES

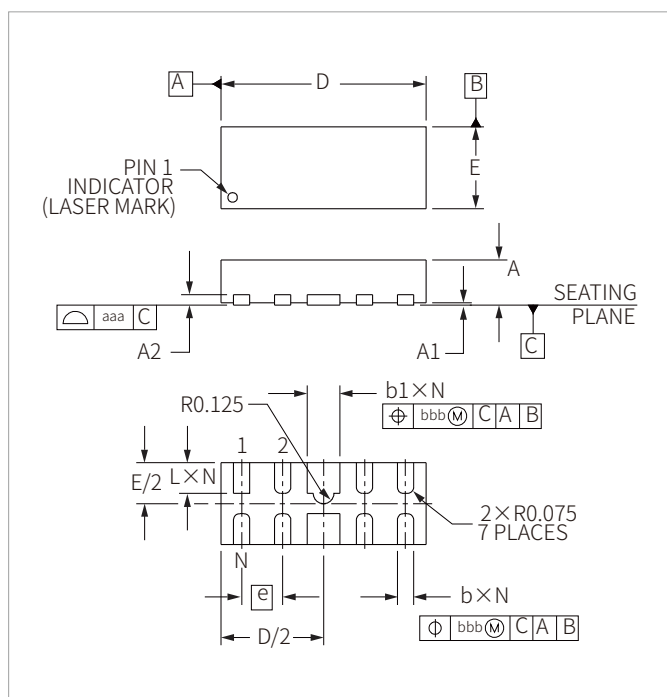


SOLDERING PARAMETERS

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

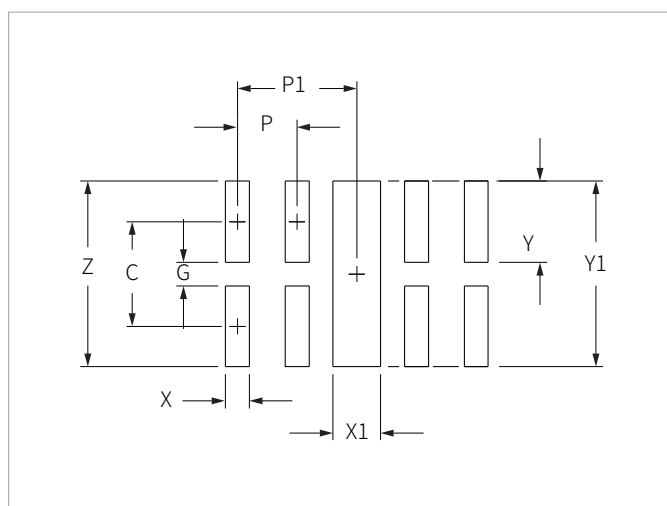


DFN2510-10L PACKAGE INFORMATION



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
TPSEULC0524PA	DFN2510-10L	3000PCS	7"

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