

FEATURES

- | 30W Peak Pulse Power per Line (tp=8/20μs)
- | ESD protection for 4 high-speed I/O channels
- | Solid-state silicon-avalanche technology
- | Low clamping voltage
- | Low leakage current
- | Ultra-low capacitance: 0.15pF typical
- | Response time is typically < 1.0ns

APPLICATIONS

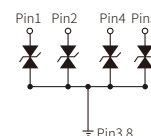
- | HDMI2.0/2.1
- | USB3.X/USB4 interfaces
- | USB Type-C interfaces
- | Digital Visual Interface(DVI)
- | High speed serial interfaces



DFN2510-10L

324M

Marking



Schematic Symbol

IEC COMPATIBILITY

- | IEC61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- | IEC61000-4-4 (EFT) 40A (5/50ns)

APPROVALS

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

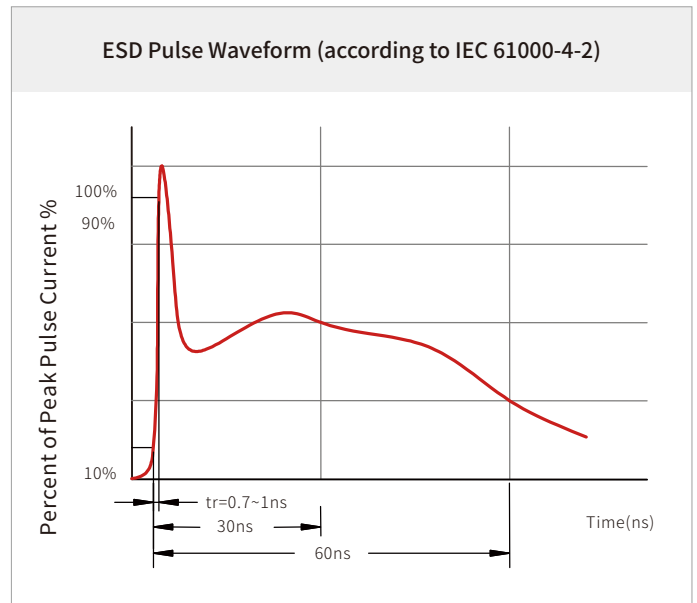
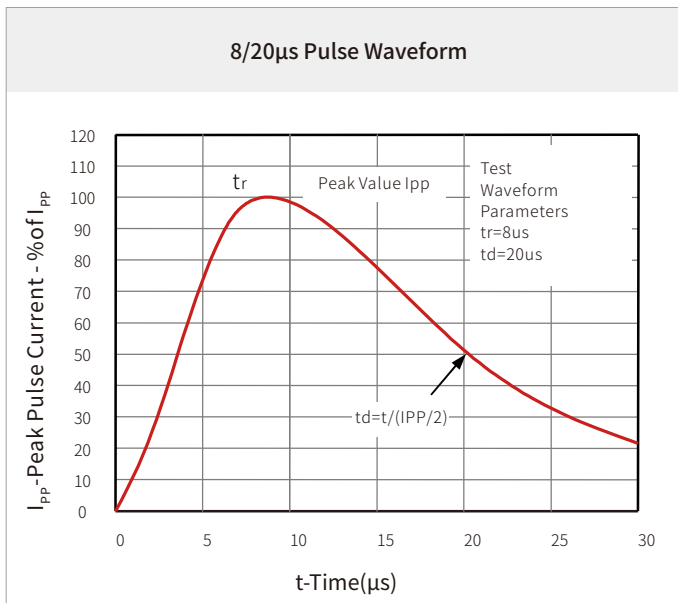
THERMAL CONSIDERATIONS

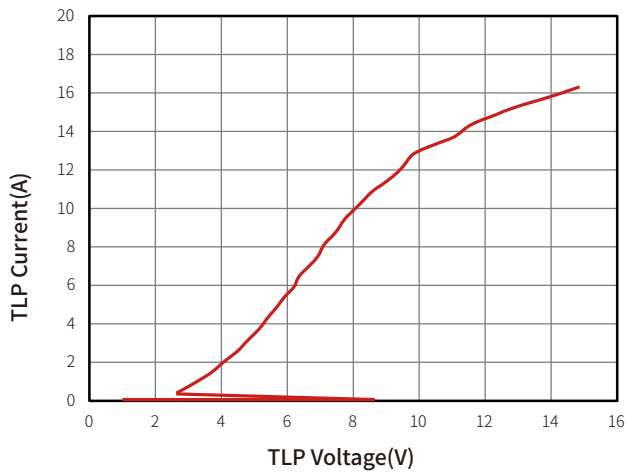
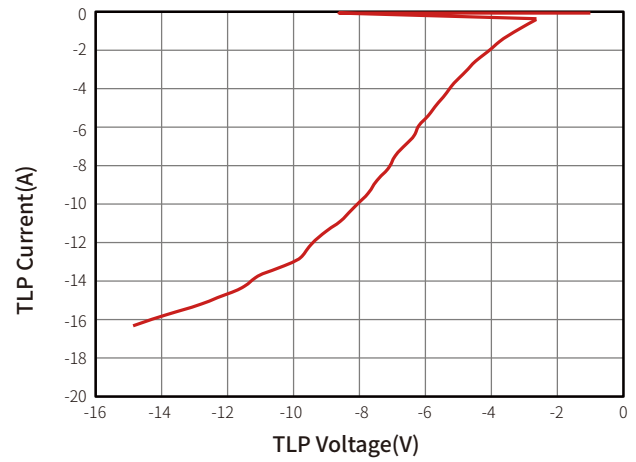
Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power (tp=8/20μs waveform)	30	Watts
T_J	Operating Temperature Range	-55 to +125	°C
T_{STG}	Storage Temperature Range	-55 to +125	°C

ELECTRICAL CHARACTERISTICS

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				3.3	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1mA$	5			V
I_R	Reverse Leakage Current	$V_{RWM}=3.3V$			0.2	μA
V_H	Holding Voltage	$I_H=120mA$	2.0			V
V_C	Clamping Voltage	$I_{PP}=4A, tp=8/20\mu s$			7	V
V_C	ESD Clamping Voltage ⁽¹⁾	$I_{TLP}=4A$ $tp=0.2/100ns$		5.4		V
V_C	ESD Clamping Voltage ⁽²⁾	$I_{TLP}=16A$ $tp=0.2/100ns$		14.5		V
R_{DYN}	ESD Dynamic Resistance ⁽²⁾	$TLP=0.2/100ns$		0.75		Ω
I_{PP}	Peak Pulse Current	$tp=8/20\mu s$			4	A
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$ Any I/O to Ground		0.15	0.22	pF
C_J	Off State Junction Capacitance	$V_R=0V, f=1MHz$ Between I/O pins		0.08	0.12	pF

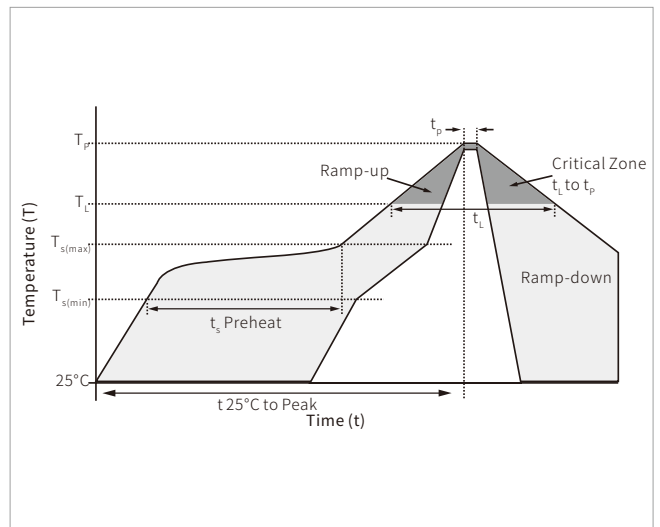
CHARACTERISTIC CURVES



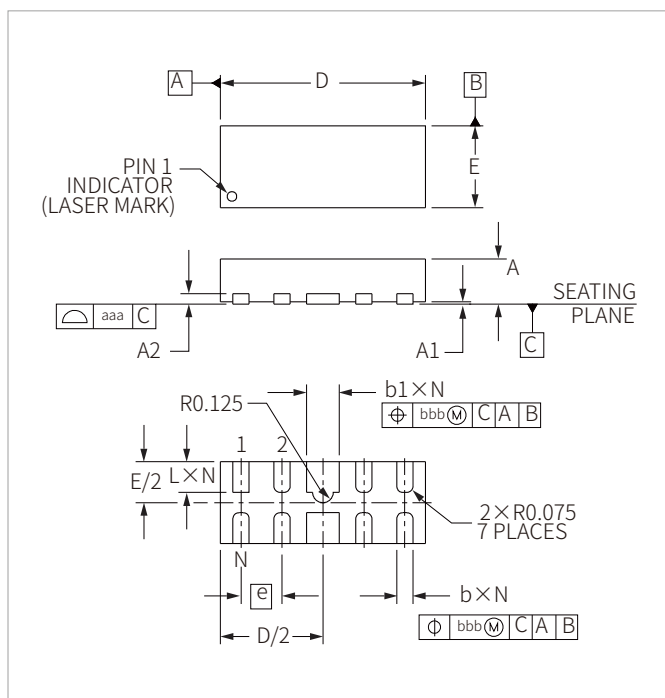
TLP Positive I-V Curve

TLP Negative I-V Curve


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

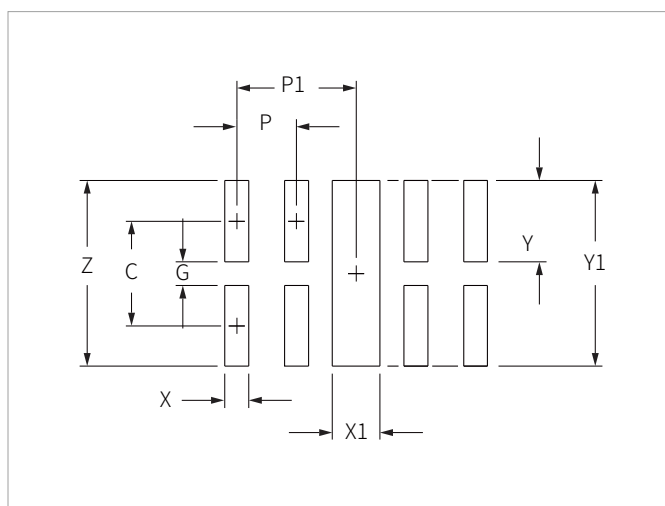


DFN2510-10L PACKAGE INFORMATION



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
SEULC3324P10U-SP	DFN2510-10L	3000PCS	7"

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