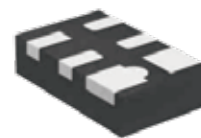


FEATURES

- Package optimized for high-speed lines
- Protects two I/O lines
- Ultra Low capacitance:0.2pf
(typical between I/O channel)
- Low operating and clamping voltages

APPLICATIONS

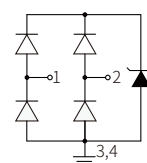
- High Definition Multi-Media Interface (HDMI)
- USB 1.1/2.0/3.0/OTG
- IEEE 1394 Firewire Ports
- Projection TV Monitors and Flat Panel Displays
- Notebook Computers
- Set Top Box



DFN1610-6L

0522P

Marking



Schematic Symbol

IEC COMPATIBILITY

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

APPROVALS

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

THERMAL CONSIDERATIONS

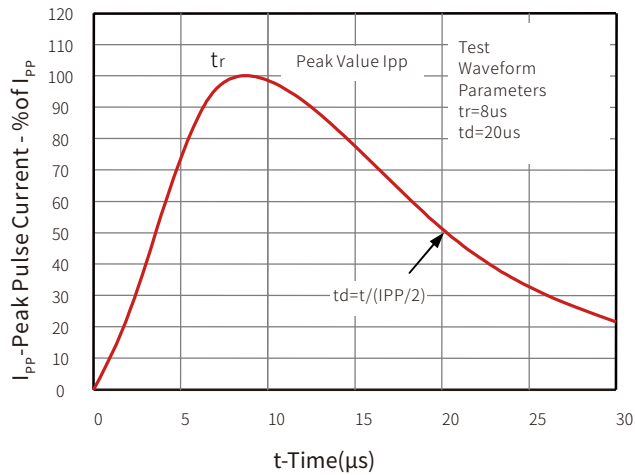
Symbol	Parameter	Value	Unit
P_{pp}	Peak Pulse Power ($t_p=8/20\mu\text{s}$ waveform)	70	Watts
T_J	Operating Temperature Range	-55 to +125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS

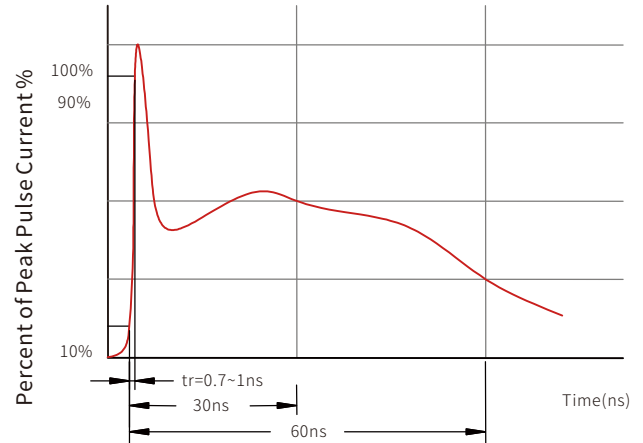
Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
V_{RWM}	Reverse Stand-off Voltage				5	V
V_{BR}	Reverse Breakdown Voltage	$I_T=1\text{mA}$	6			V
I_R	Reverse Leakage Current	$V_{RWM}=5\text{V}$			0.1	μA
V_F	Diode Forward Voltage	$I_F=15\text{mA}$			1.2	V
V_C	Clamping Voltage	$I_{pp}=11.2\text{A}, t_p=8/20\mu\text{s}$			7	V
I_{pp}	Peak Pulse Current	$t_p=8/20\mu\text{s}$			11.2	A
C_J	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-GND		0.5	0.6	pF
C_J	Off State Junction Capacitance	$V_R=0\text{V}, f=1\text{MHz}$ I/O-I/O		0.1	0.2	pF

CHARACTERISTIC CURVES

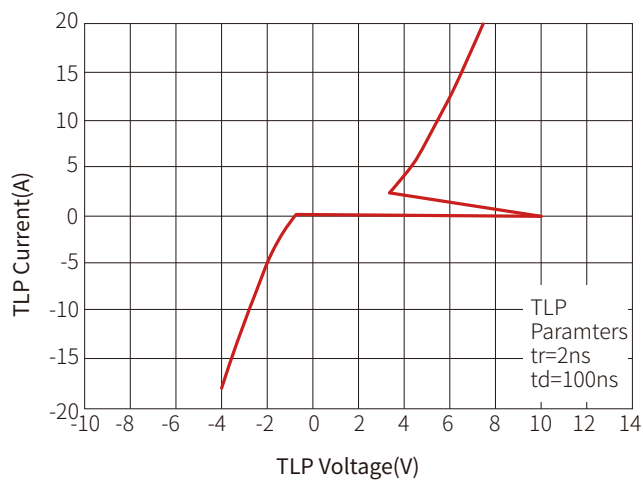
8/20 μ s Pulse Waveform



ESD Pulse Waveform (according to IEC 61000-4-2)

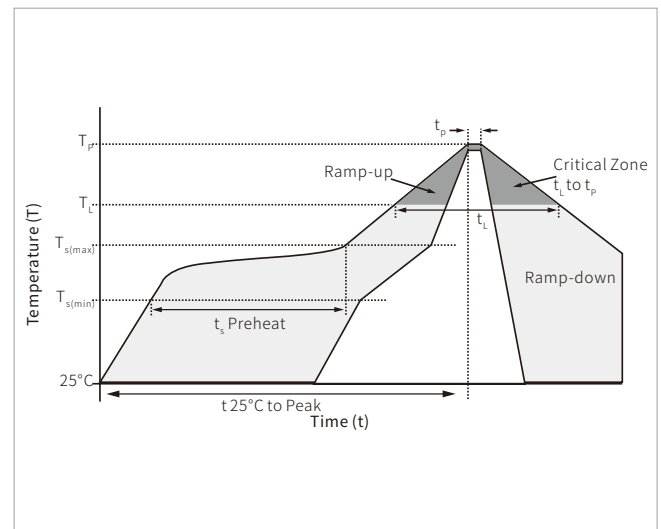


TLP I-V Curve

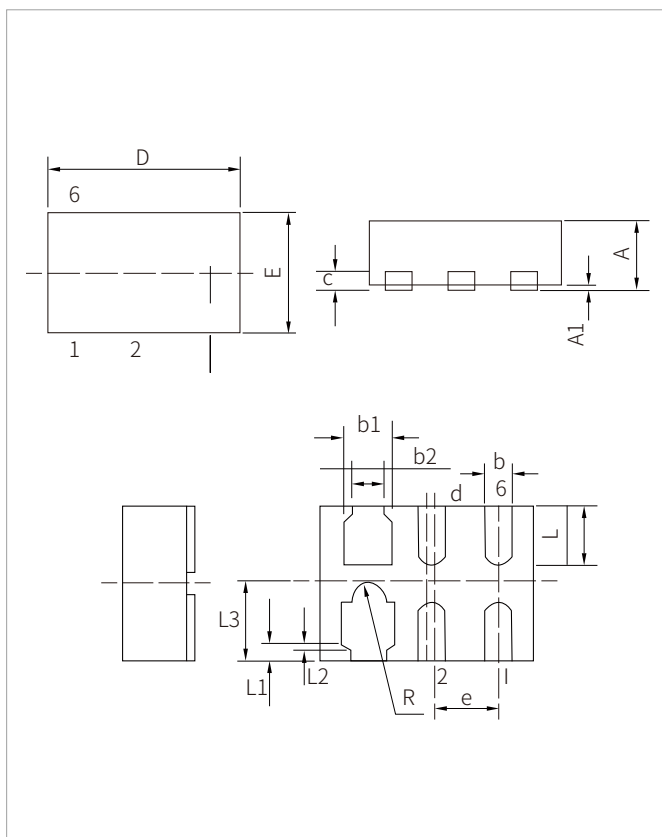


SOLDERING PARAMETERS

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

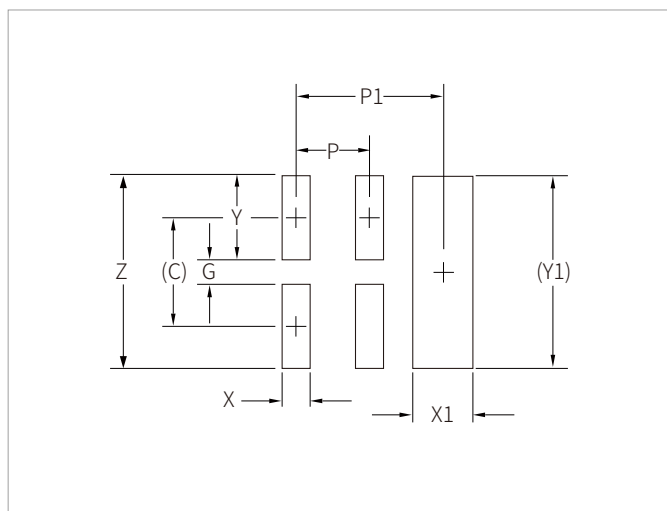


DFN1610-6L PACKAGE INFORMATION



Ref.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	0.40	0.50	0.60	0.016	0.020	0.024
A1	0	0.03	0.05	0	0.001	0.002
b	0.15	0.20	0.25	0.006	0.008	0.010
b1	0.35	0.40	0.45	0.014	0.016	0.018
b2	0.20	0.25	0.30	0.008	0.010	0.012
c	0.10	0.15	0.20	0.004	0.006	0.008
d	0.05TYP			0.002TYP		
D	1.50	1.60	1.70	0.060	0.063	0.067
e	0.50BSC			0.020BSC		
E	0.90	1.00	1.10	0.035	0.039	0.043
L	0.30	0.40	0.45	0.012	0.016	0.018
L1	0.10REF			0.004REF		
L2	0.05REF			0.002REF		
L3	0.49REF			0.019REF		
R	0.08	0.10	0.18	0.003	0.004	0.007

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
C	0.875	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	0.675	0.027
Y1	1.55	0.061
Z	1.55	0.061

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SE16P6F10U5.0MB-SP	DFN1610-6L	3000PCS	7"

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By QR Code

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Wechat

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