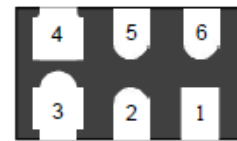


»Features

- Solid-state silicon-avalanche technology
- Low operating and clamping voltage
- Up to four I/O Lines of Protection
- Ultra low capacitance: 0.2pF typical(I/O to I/O)
- Low Leakage
- Low operating voltage:5V
- Flow-Through design
- IEC 61000-4-2 (ESD) ±25kV (air), ±20kV (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 5A (8/20μs)



DFN1610-6L

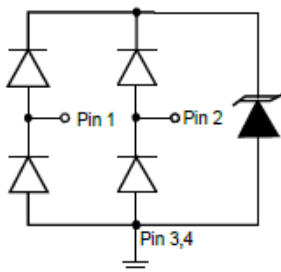
»Applications

- Digital Visual Interface(DVI)
- MDDI Ports
- Display Port TM Interface
- PCI Express
- High Definition Multi-Media Interface(HDMI)
- HDMI Interfaces

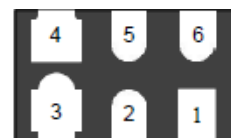
»Mechanical Data

- DFN1610-6L package
- Molding compound flammability rating: UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel
- RoHS Compliant

»Schematic & PIN Configuration



2-Line Protection



Pin	Identificaion
1,2	Input line
5,6	Output Lines (No Internal Connection)
3,4	Ground

» **Absolute Maximum Rating**

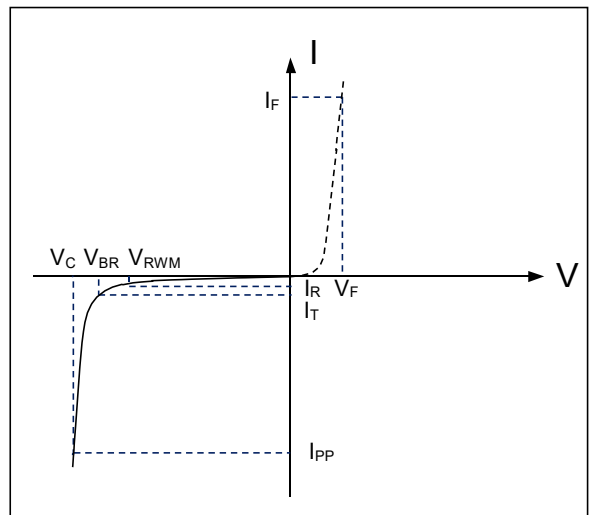
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	75	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{pp}	5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 20	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

» **Electrical Characteristics**

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	5.6	8.0		V
Reverse Leakage Current	I_R	$V_{RWM} = 5V, T = 25^\circ C$		0.1	0.5	μA
Peak Pulse Current	I_{pp}	$t_p = 8/20\mu s$		5		A
Clamping Voltage	V_C	$I_{pp} = 5A, t_p = 8/20\mu s$		14	15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ I/O to I/O		0.20	0.40	pF
		$V_R = 0V, f = 1MHz$ I/O to GND		0.45	0.80	pF

» **Electrical Parameters (TA = 25°C unless otherwise noted)**

Symbol	Parameter
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Maximum Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_F	Forward Current
V_F	Forward Voltage @ I_F



Note: 8/20 μs pulse waveform.

»Typical Characteristics

Figure1:Non-Repetitive Peak Pulse Power vs. Pulse Time

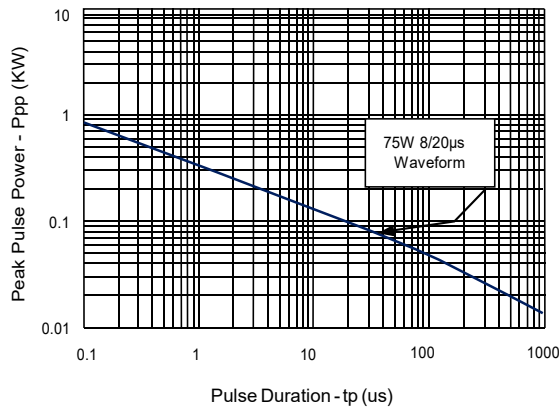


Figure2:Power Derating curve

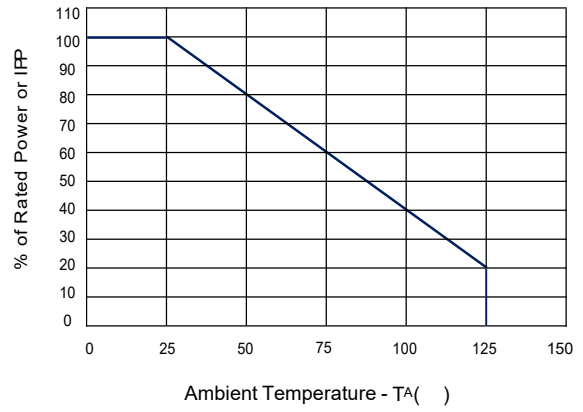


Figure3:Pulse Waveform

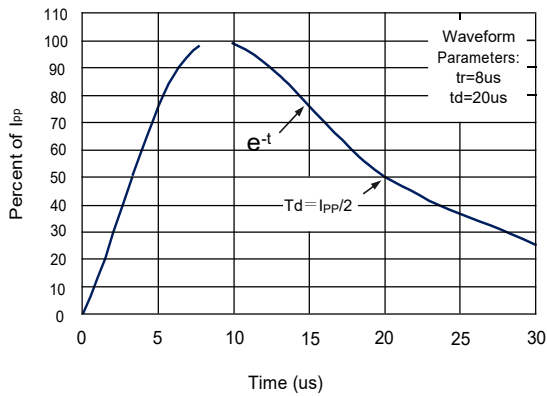


Figure3: Clamping Voltage vs. Peak Pulse Current

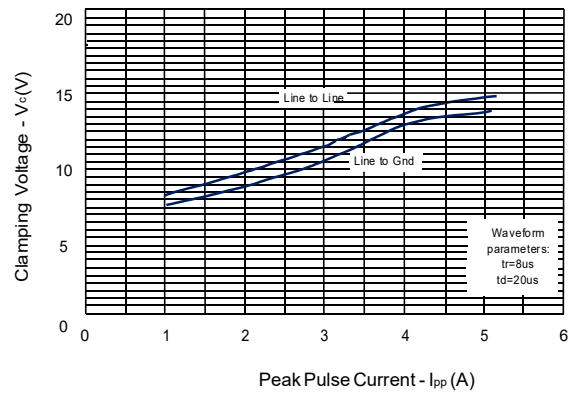
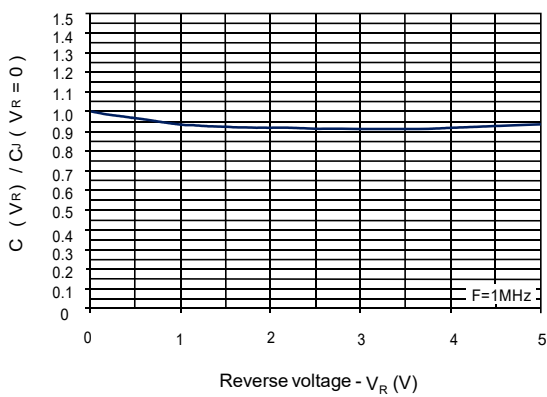


Figure5:Normalized Capacitance vs. Reverse Voltage



» Outline Drawing – DFN1610-6L

PIN1 INDICATOR (LASER MARK)

NOTES:
CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

DIMENSIONS

DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
D	1.55	1.65	0.061	0.065
E	0.95	1.05	0.037	0.041
L	0.33	0.43	0.013	0.017
b	0.15	0.25	0.006	0.010
b1	0.35	0.45	0.014	0.018
b2	0.25	0.35	0.010	0.014
e	0.50BSC		0.020BSC	
e1	1.00BSC		0.039BSC	
A	0.45	0.55	0.018	0.022
A1	0.15REF		0.006REF	
A2	0.00	0.05	0.000	0.002

DIMENSIONS

DIM	INCHES	MILLIMETERS
C	0.024	0.60
G	0.004	0.10
P	0.020	0.50
P1	0.039	1.0
X	0.012	0.30
Y	0.020	0.50
Y1	0.063	1.60

NOTES:

1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).

2. THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY.

CONSULT YOUR MANUFACTURING TO ENSURE YOUR COMPANYS MANUFACTURING GUIDELINES ARE MET.

» Marking



» Ordering information

Order code	Package	Base qty	Delivery mode
BDFN1610A052U	DFN1610-6L	3000	Tape and reel