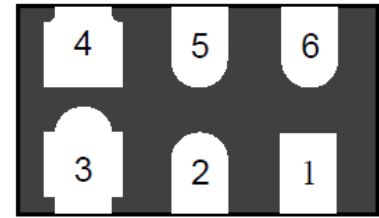




FEATURES

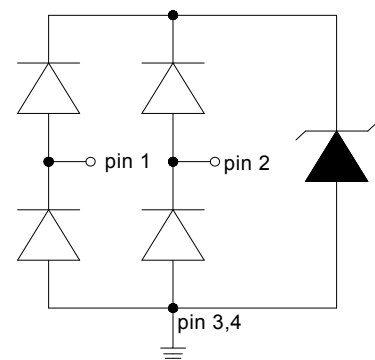
- ✧ Solid-state silicon-avalanche technology
- ✧ Low operating and clamping voltage
- ✧ Up to four I/O lines of protection
- ✧ Ultra low capacitance: 0.25pF typical(I/O to I/O)
- ✧ Low leakage
- ✧ Low operating voltage: 5V
- ✧ RoHS compliant



DFN1610-6L

MAIN APPLICATIONS

- ✧ Digital visual interface(DVI)
- ✧ MDDI ports
- ✧ Display port TM interface
- ✧ PCI express
- ✧ High definition multi-media interface(HDMI)
- ✧ HDMI interfaces



Circuit Diagram

PROTECTION SOLUTION TO MEET

- ✧ IEC61000-4-2 (ESD) $\pm 25\text{kV}$ (air), $\pm 20\text{kV}$ (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ IEC61000-4-5 (Lightning) 5A (8/20 μs)

MECHANICAL CHARACTERISTICS

- ✧ DFN1610-6L package
- ✧ Molding compound flammability rating: UL 94V-0
- ✧ Quantity per reel: 3,000pcs
- ✧ Lead finish: lead free
- ✧ Marking code: 0522P

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, RH=45%-75%, unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 8/20 μs waveform	P_{PP}	100	W
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 (10 sec.)	$^{\circ}\text{C}$
Operating junction temperature range	T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse working voltage	V_{RWM}				5.0	V
Reverse breakdown voltage	V_{BR}	$I_T=1\text{mA}$	5.6			V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$			0.5	μA
Peak pulse current	I_{PP}	$t_P=8/20\mu\text{s}$			5	A
Clamping voltage	V_C	$I_{PP}=5\text{A}$, $t_P=8/20\mu\text{s}$			15	V
Junction capacitance	C_J	$V_{RWM}=0\text{V}$, $f=1\text{MHz}$ I/O pin to GND		0.6	0.8	pF
		$V_{RWM}=0\text{V}$, $f=1\text{MHz}$ Between I/O pins		0.25	0.4	pF

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^{\circ}\text{C}$, unless otherwise noted)

FIG.1: V- I curve characteristics (Uni-directional)

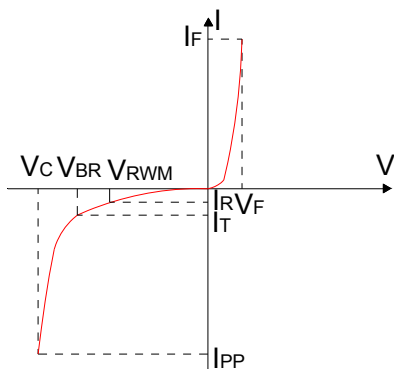


FIG.2: Pulse waveform (8/20 μs)

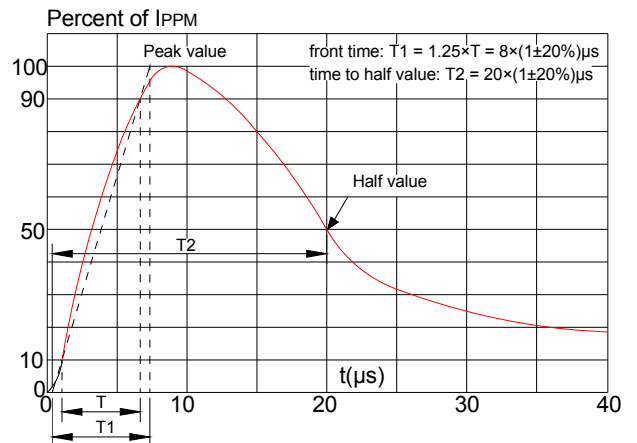


FIG.3: Pulse derating curve

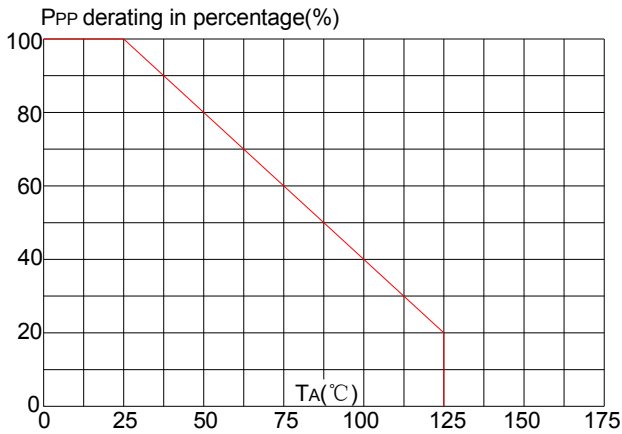
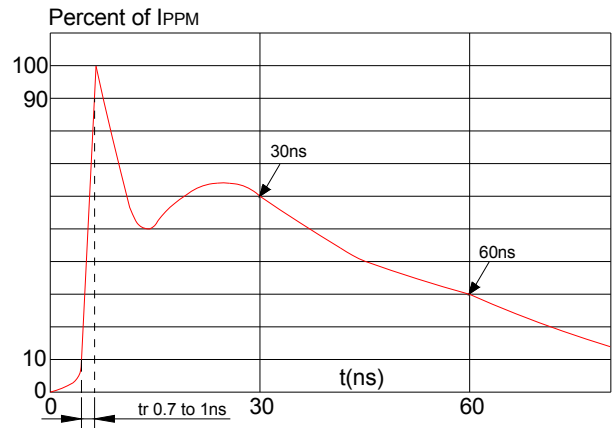
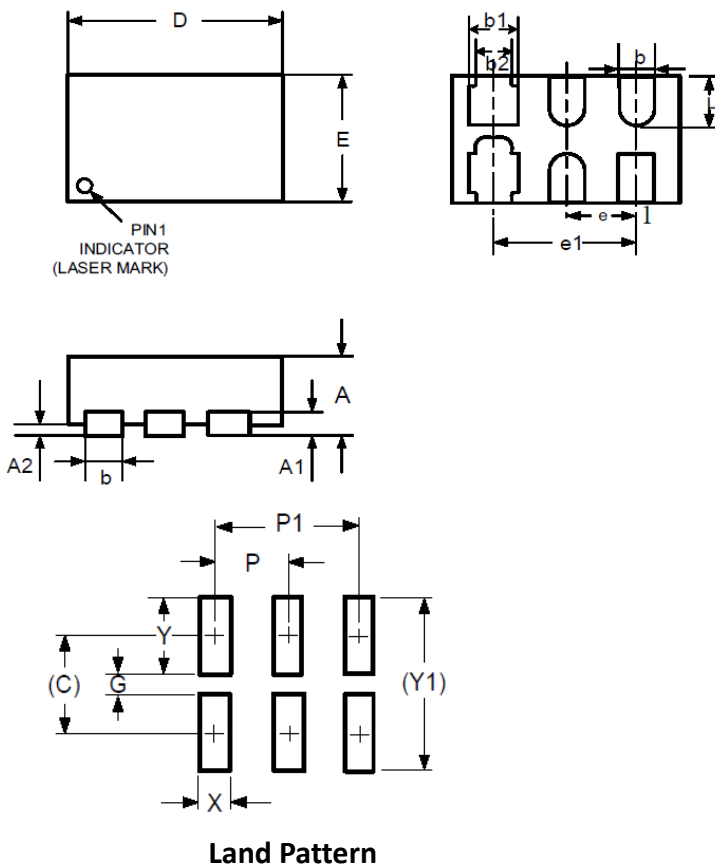


FIG.4: ESD clamping (20kV contact)

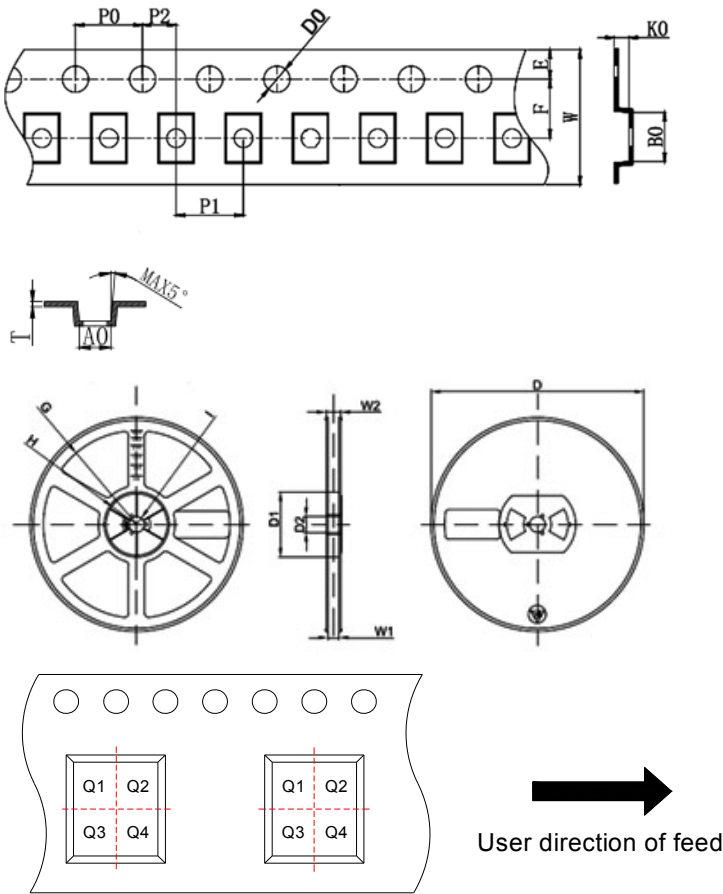


PACKAGE MECHANICAL DATA



Symbol	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
C	0.60		0.024	
G	0.10		0.004	
P	0.50		0.020	
P1	1.0		0.039	
X	0.30		0.012	
Y	0.50		0.020	
Y1	1.10		0.043	

TAPE AND REEL INFORMATION-DFN1610-6L



Pin 1 quadrant:Q1&Q2

Packaging Description:

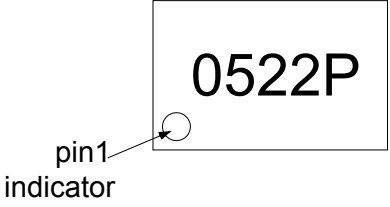
DFN1610-6L parts are shipped in tape. The carrier tape is made from a dissipative(carbon filled) polycarbonate resin. The cover tape is a multilayer film(heat activated adhesive in nature)primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and made of polystyrene plastic(anti-static coated).

Symbol	Millimeters	Inches
	Typ.	Typ.
A0	1.15	0.045
B0	1.75	0.069
K0	0.67	0.026
D0	1.55	0.061
P0	4.00	0.157
P1	4.00	0.157
P2	2.00	0.079
E	1.75	0.069
F	3.50	0.138
W	8.00	0.315
D	Φ178	Φ7.008
D1	54.40	2.142
D2	13.00	0.512
G	R78.00	R3.071
H	R25.60	R1.008
I	R6.50	R0.256
W1	9.50	0.374
W2	12.30	0.484

ORDERING INFORMATION

PART No.	PACKAGE TYPE	QUANTITY(PCS) REEL	DESCRIPTION
JEU0522P	DFN1610-6L	3,000	7 inch reel pack

MARKING CODE

Part Number	Marking Code
JEU0522P	

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