

Features

- ◆ 40Watts peak pulse power (tp = 8/20μs)
- ◆ Bidirectional configurations
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Low capacitance (Cj=0.35pF typ. I/O to I/O)
- ◆ IEC 61000-4-2 ±25kV contact ±25kV air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 3.5A (8/20μs)
- ◆ RoHS Compliant
- ◆ AEC-Q101 qualified (Automotive grade with suffix " Q".)



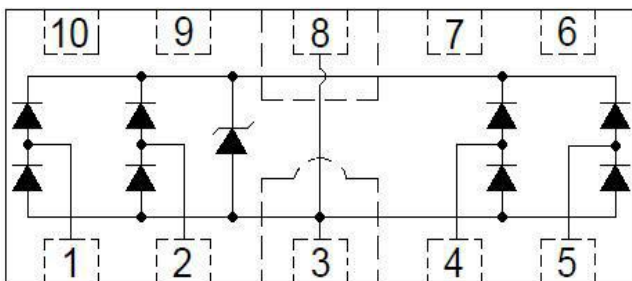
Mechanical Characteristics

- ◆ Tiny DFN10L(2.5mmx1.0mm) package
- ◆ Molding compound flammability rating: UL 94V-0
- ◆ Packaging: Tape and Reel
- ◆ RoHS/WEEE Compliant

Applications

- ◆ USB3.0, USB2.0,Ethernet
- ◆ HDMI 1.4, Displayport 1.3,eSATA
- ◆ Unified Display interface
- ◆ Digital Visual Interface
- ◆ High speed serial interface

Dimensions and Pin Configuration



Marking Information



Ordering Information

Part Number	Marking	Packaging	Reel Size
EPDFN10A054U	5R2P	10000/Tape & Reel	7 inch

Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$)	P_{PP}	40	Watts
Peak Pulse Current ($t_p=8/20\mu\text{s}$) (note1)	I_{PP}	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	25 25	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	T_J	-55 to + 125	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	5.5	7.8		V
Reverse Leakage Current	I_R	$V_{RWM}=5\text{V}, T=25^{\circ}\text{C}$			0.5	μA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu\text{s}$			4	A
Clamping Voltage	V_C	$I_{PP}=3.5\text{A}, t_p=8/20\mu\text{s}$		10	12	V
Junction Capacitance	C_j	$V_R=0\text{V}, f=1\text{MHz}$ I/O to I/O		0.35		pF
		$V_R=0\text{V}, f=1\text{MHz}$ I/O to GND		0.70		

Typical Performance Characteristics (TA=25°C unless otherwise Specified)

Fig.1 Peak Pulse Power Rating Curve

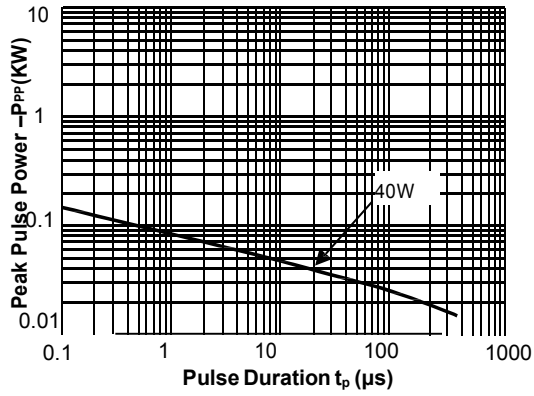


Fig.2 Pulse Derating Curve

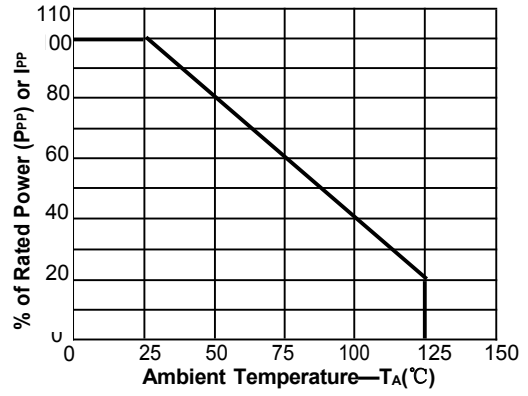


Fig.3 PulseWaveform-8/20μs

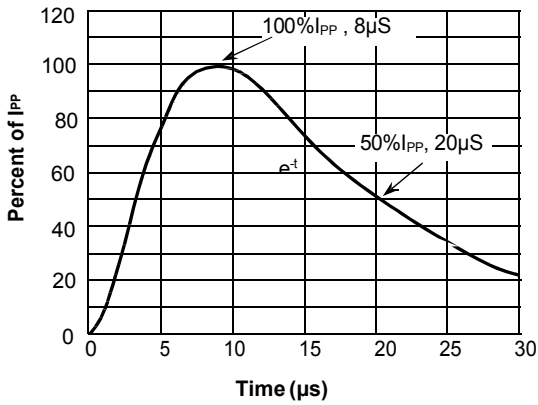
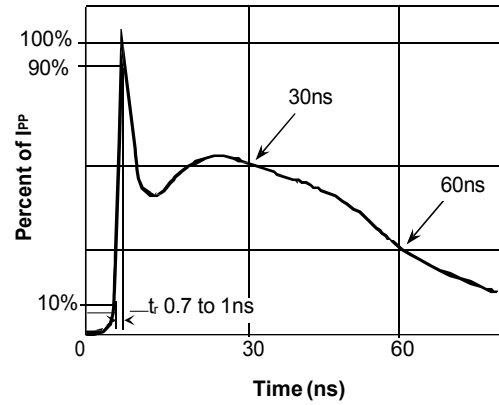
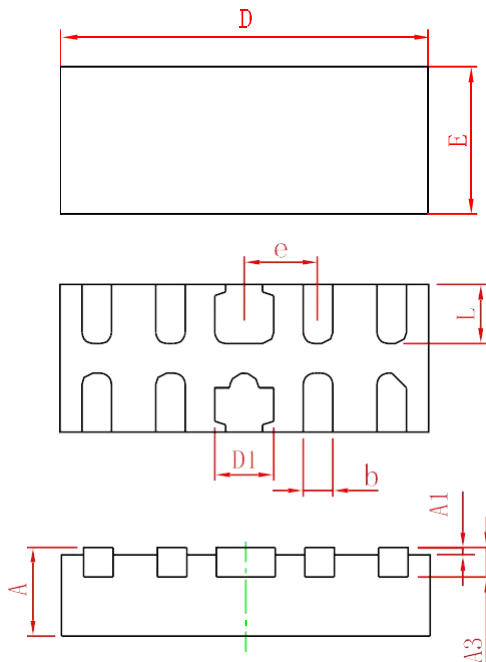


Fig.4 PulseWaveform-ESD(IEC61000-4-2)



DFN10L Package Outline Drawing



Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.45	0.50	0.55
A1	-	0.02	0.05
A3	0.10	0.15	0.20
D	2.45	2.50	2.55
E	0.95	1.00	1.05
D1	0.35	0.40	0.45
b	0.15	0.20	0.25
e	0.50BSC		
L	0.35	0.40	0.45