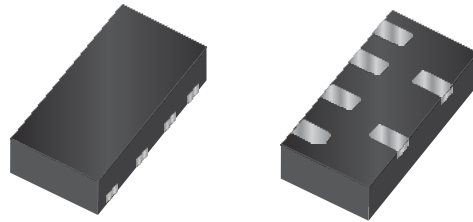


»Features

- 60Watts peak pulse power (tp = 8/20μs)
- Tiny DFN1710 package
- Protect up to 4-lines
- 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 ±30kV contact ±30kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20μs)



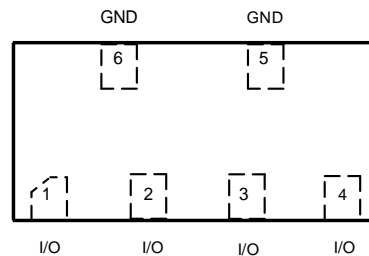
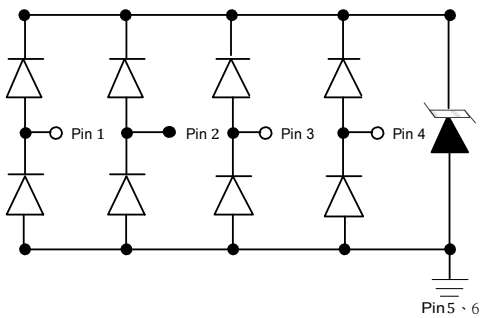
»Applications

- USB 2.0
- USB OTG
- Micro USB

»Mechanical Data

- DFN1710 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

»Schematic & PIN Configuration



» **Absolute Maximum Rating**

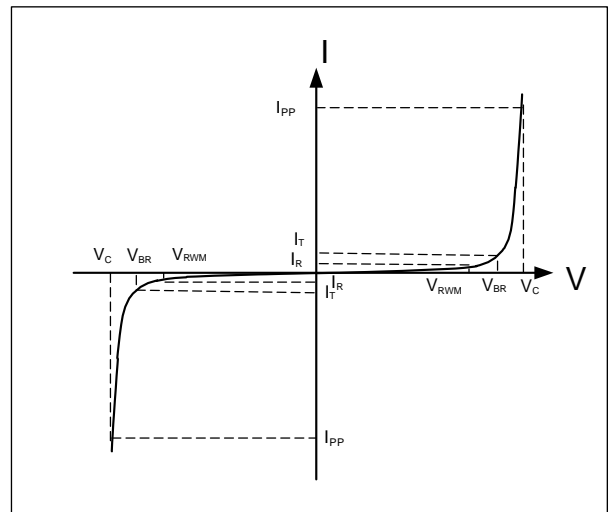
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	60	Watts
Peak Pulse Current ($t_p = 8/20\mu s$)(note1)	I_{pp}	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°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}	$I_T = 1mA$	6.0	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}	$t_p = 8/20\mu s$			3.5	A
Clamping Voltage	V_C	$I_{pp} = 3.5A, t_p = 8/20\mu s$		10	15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$ I/O to I/O		0.35		pF
		$V_R = 0V, f = 1MHz$ I/O to GND		0.70		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



Note: 8/20 μs pulse waveform.

»Typical Characteristics

Fig.1 IEC61000-4-2 Waveform

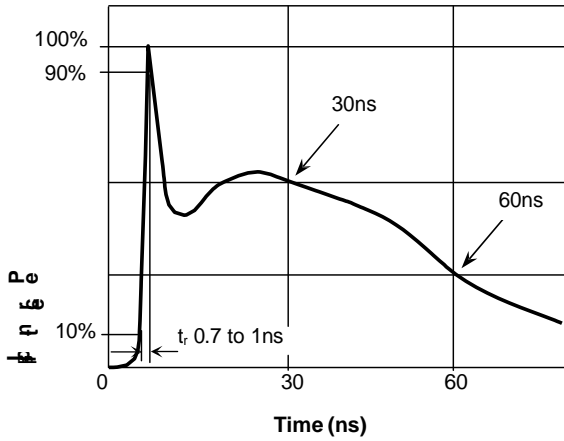


Fig.2 IEC61000-4-2 +8kV Contact ESD Clamping Waveform

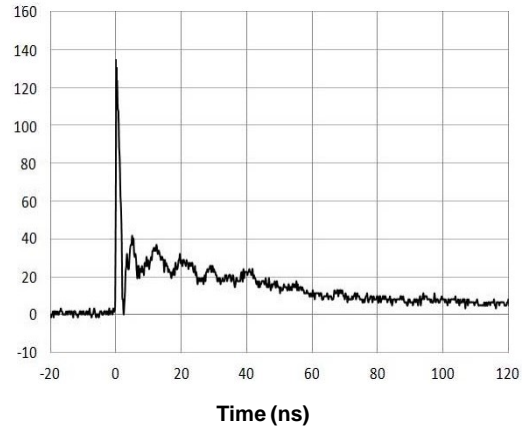


Fig.3 Eye Diagram - USB3.1 at 10Gbps per channel

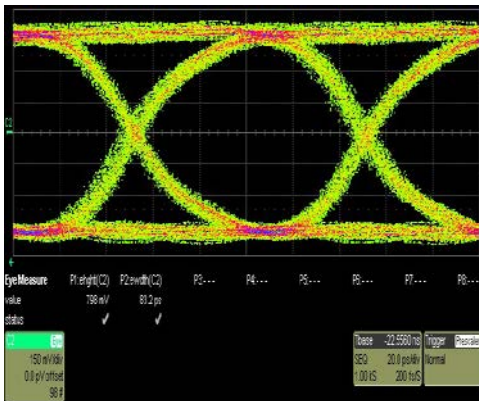
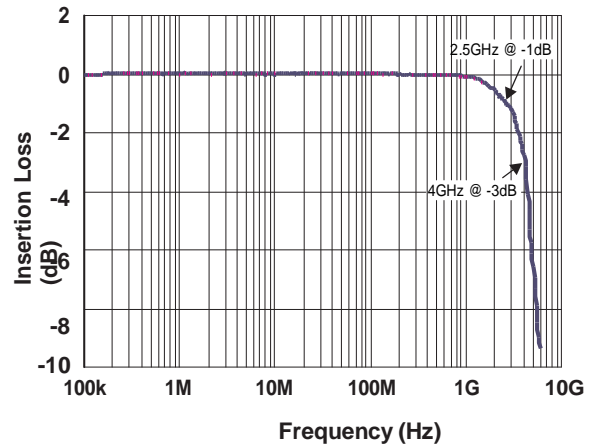
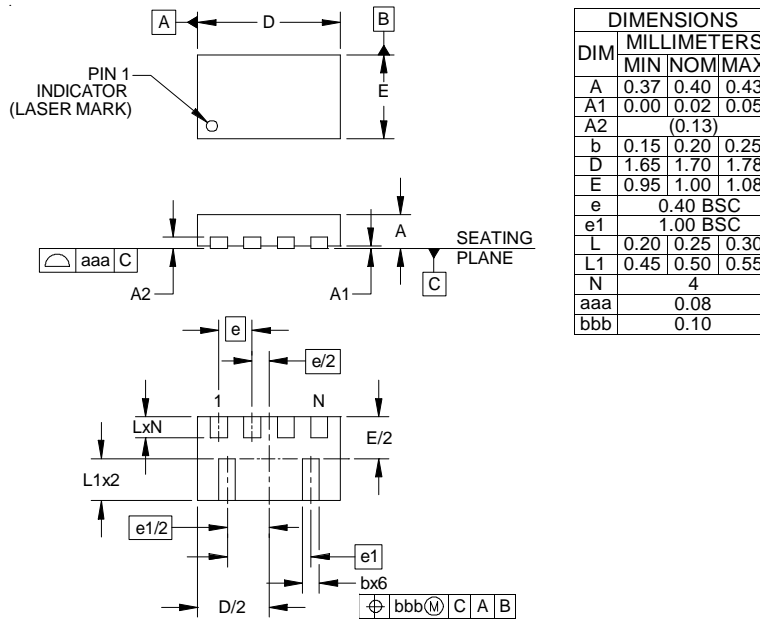


Fig.4 Insertion Loss S21 - I/O to I/O

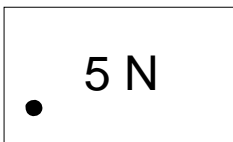


»Outline Drawing – DFN1710



- NOTES:
1. CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
 2. COPLANARITY APPLIES TO THE EXPOSED PAD AS WELL AS THE TERMINALS.

»Marking



»Ordering information

Order code	Package	Base qty	Delivery mode
BDFN1710A054U	DFN1710	3000	Tape and reel