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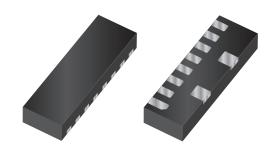
CESD3310UC5VU-M

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Ultra Low Capacitance ESD TVS Array in DFN3310

Features

- 30Watts peak pulse power (tp = 8/20µs)
- Tiny DFN3310 package
- Protect up to 6-lines
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (Cj=0.2pF typ. I/O to I/O)
- IEC 61000-4-2 ±8kV contact ±15kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 3A (8/20µs



DFN3310

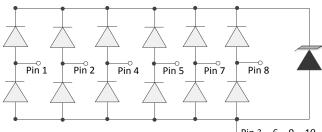
Applications

- USB 3.0/3.1,Type C
- HDMI 1.4/2.0, Display Port 1.3
- Unified Display interface
- Digital visual interface

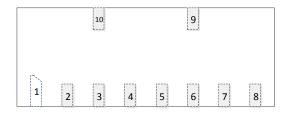
Mechanical Data

- DFN3310 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration







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Absolute Maximum Rating

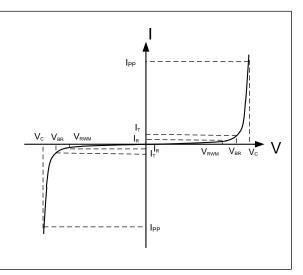
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20 \mu s$)	P _{PP}	30	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I _{pp}	3	А
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	15 8	kV
Lead Soldering Temperature	TL	260(10seconds)	°C
Junction Temperature	TJ	-55 to + 125	°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	7.2	9.5	V
Reverse Leakage Current	I _R	V _{RWM} =5V,T=25℃		0.1	0.5	μA
Peak Pulse Current	I _{PP}	tp =8/20µs			3	А
Clamping Voltage	V _C	I _{PP} =3A,t _p =8/20μs			10	V
Junction Capacitance	Cj	V _R = 0V, f = 1MHz I/O to I/O		0.2		pF
		V _R = 0V, f = 1MHz I/O to GND		0.4		pF

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

Symbol	Parameter
Ірр	Maximum Reverse Peak Pulse Current
Vc	Clamping Voltage @ IPP
VRWM	Working Peak Reverse Voltage
IR	Maximum Reverse Leakage Current @ VRWM
VBR	Breakdown Voltage @ I⊤
Iτ	Test Current



Note: 8/20µs pulse waveform.

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Typical Characteristics

Fig.1 IEC61000-4-2 Waveform

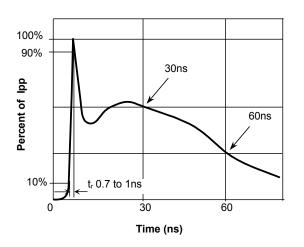
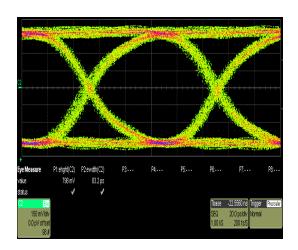


Fig.3 Eye Diagram - USB3.1 at 10Gbps per channel



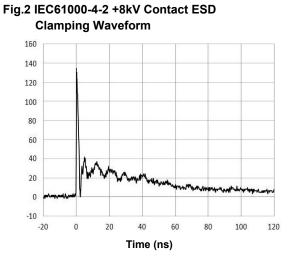
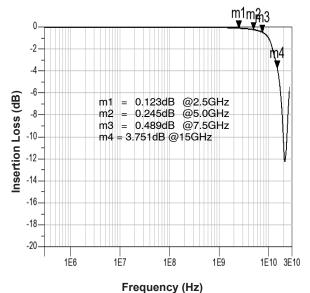


Fig.4 Insertion Loss S21 - I/O to I/O

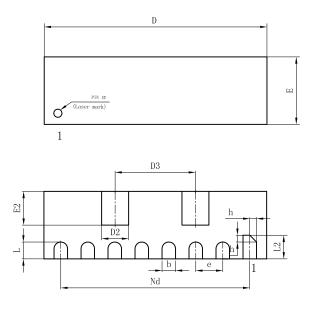


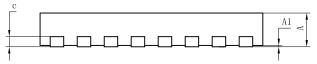
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Outline Drawing – DFN3310





SYMBOL	MILLIMETER			
STWBUL	MIN	NOM	MAX	
А	0.45	0.50	0.55	
A1	-	0.02	0.05	
b	0.15	0.20	0.25	
с	0.100	0.152	0.200	
D	3.25	3. 30	3.35	
D2	0.30	0.35	0.40	
D3	1.19BSC			
e	0.40BSC			
Nd	2.80BSC			
Е	0.95	1.00	1.05	
E2	0.45	0.50	0.55	
L	0.20	0.25	0.30	
L2	0.30	0.35	0.40	
h	0.05	0.10	0.15	

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
CESD3310UC5VU-M	DFN3310	3000	Tape and reel

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CESD3310UC5VU-M

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