

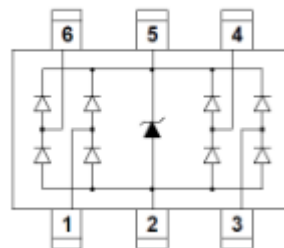


CEST236LC5VU

CREATEK Microelectronics

Features

- 100Watts peak pulse power ($t_p = 8/20\mu s$)
- SOT23-6 Package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (0.2pF typical I/O to I/O)
- ESD Protection for high-speed data lines to:
 - IEC 61000-4-2 $\pm 15KV$ contact $\pm 15KV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 6A (8/20 μs)



Mechanical Data

- **Case:** SOT23-6 (plastic package).
Lead free; RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- USB 3.0, USB 2.0, MHL
- HDMI 2.0, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu S$)	P_{PP}	100	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	15/15	kV
Peak Pulse Current ($t_P = 8/20\mu S$)	I_{PP}	6.0	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

 $(T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6	6.8	8.5	V
Reverse Leakage Current	I_R	$V_R=5V$		0.01	1	μA
Clamping Voltage(SURGE)	V_C	$I_{PP}=6A, T_P=8/20\mu S$		14	16	V
Trigger Voltage(ESD)	V_T	$V_{ESD} = +8kV$		90		V
Clamping Voltage(ESD)	V_C	$V_{ESD} = +8kV$		15		V
Junction Capacitance	C_J	$V_R=0V, f=1MHz, I/O$ to I/O		0.2	0.4	pF
	C_J	$V_R=0V, f=1MHz, I/O$ to GND		0.4	0.8	pF

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Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

Fig.1 Peak Pulse Power Rating Curve

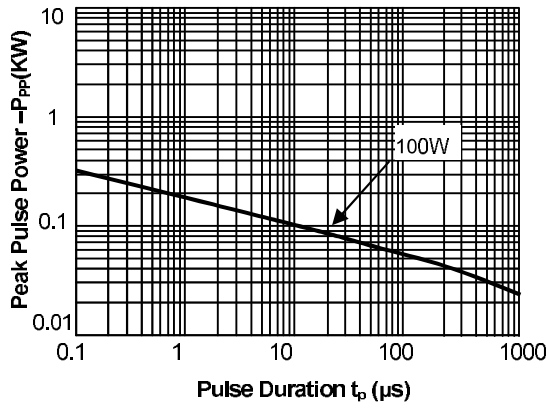


Fig.2 Pulse Derating Curve

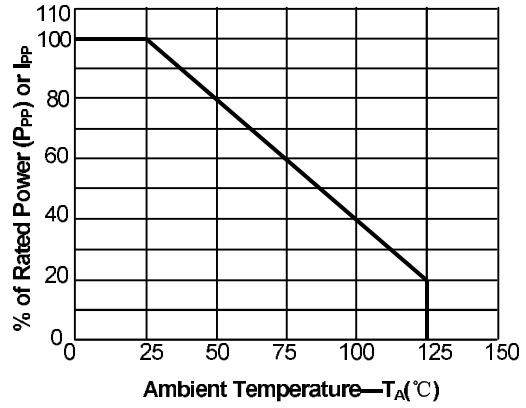


Fig.3 Pulse Waveform-8/20 μs

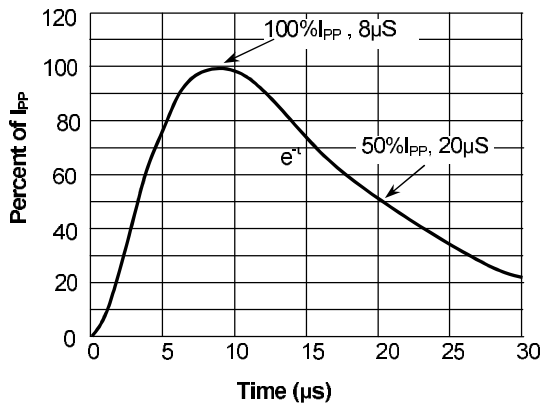


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

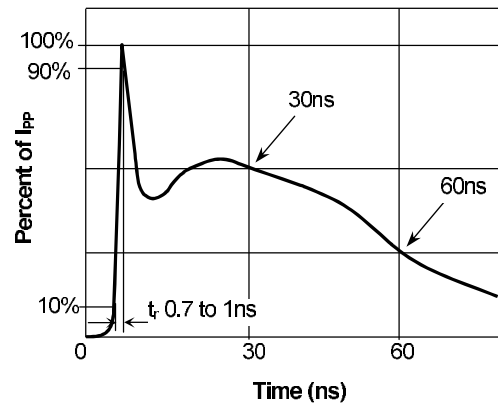


Fig.5 Eye Diagram - HDMI mask at 3.4Gbps per channel (with CESD2510LC5VU)

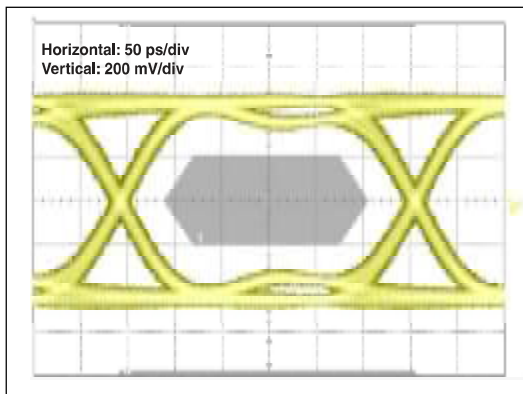
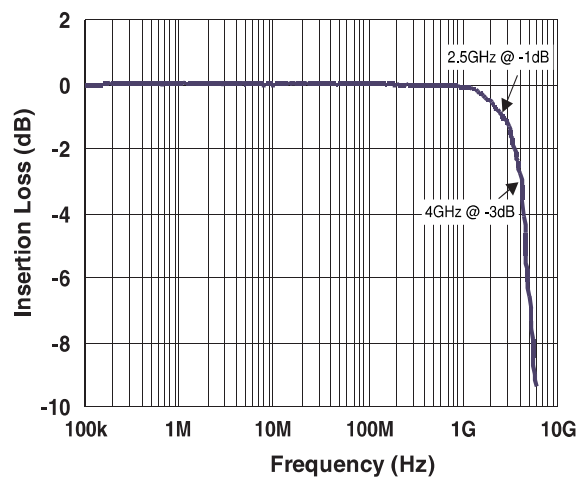


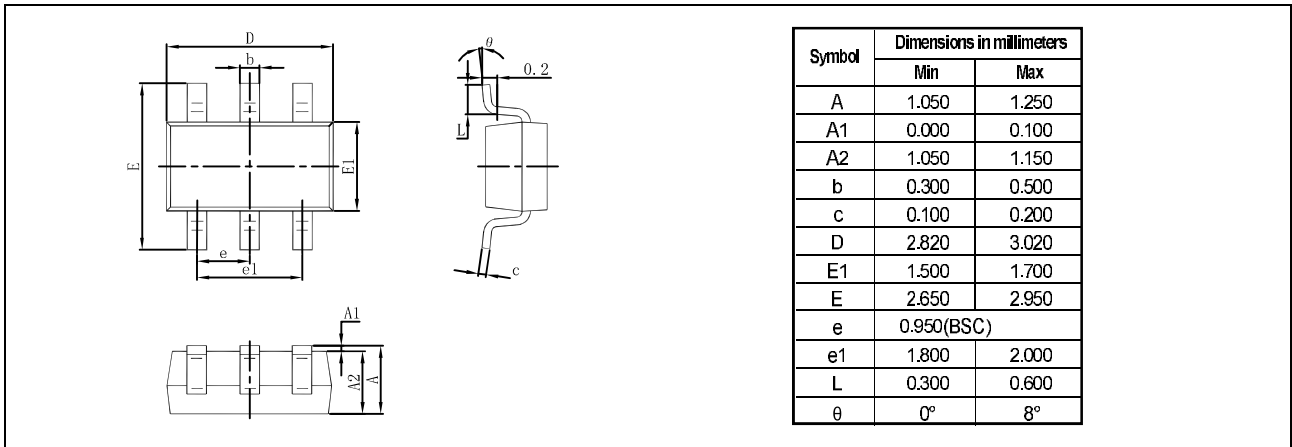
Fig.6 Insertion Loss S21 - I/O to GND



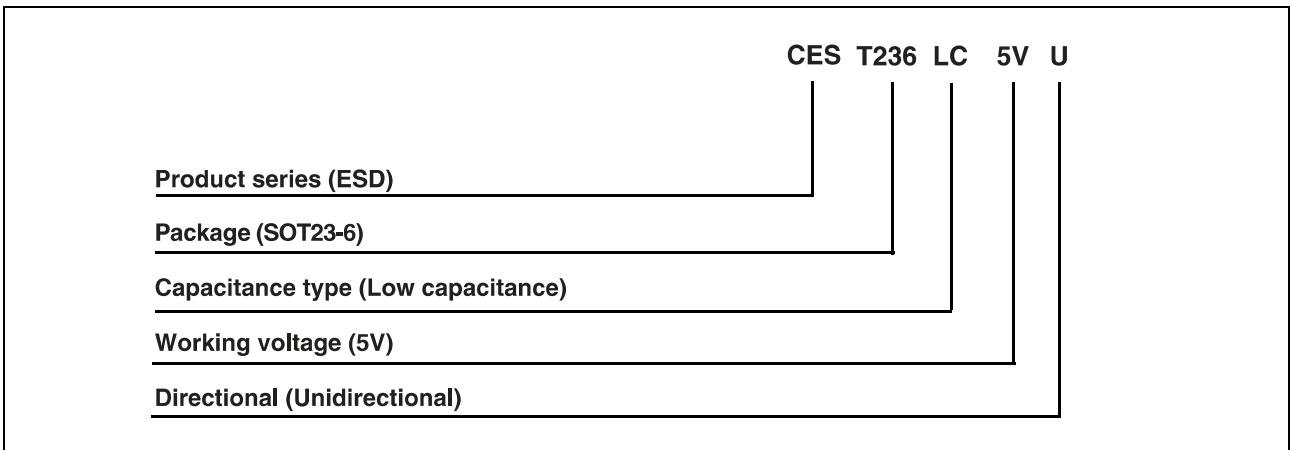
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Package Dimensions



Part number system



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CEST236LC5VU	SOT23-6	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2012	2.0	Initial release
30-May-2017	3.0	update marking