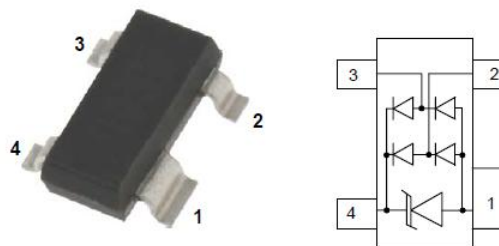


Features

- ◆ 100Watts peak pulse power ($t_p = 8/20\mu s$)
- ◆ SOT143 Package
- ◆ Unidirectional configurations
- ◆ Solid-state silicon-avalanche technology
- ◆ Low clamping voltage
- ◆ Low leakage current
- ◆ Low capacitance
- ◆ ESD Protection for high-speed data lines to:
IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 6A (8/20 μs)



Applications

- ◆ USB2.0
- ◆ Ethernet 10BaseT
- ◆ I2C Bus Protection
- ◆ T1/E1 secondary IC Side Protection
- ◆ ISDN S/T Interface

Mechanical data

- ◆ Case: SOT-143 (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

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}	30/30	kV
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	6	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics ($T_A = 25$ °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	$V_R=5V$			0.5	μA
Clamping Voltage(SURGE)	V_C	$I_{PP}=1A$, $T_P=8/20\mu s$			9.8	V
Clamping Voltage(SURGE)	V_C	$I_{PP}=6A$, $T_P=8/20\mu s$		14	16	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$, I/O to I/O		0.3		pF
	C_J	$V_R=0V, f=1MHz$, I/O to GND		0.6		pF

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

Fig.1 Peak Pulse Power Rating Curve

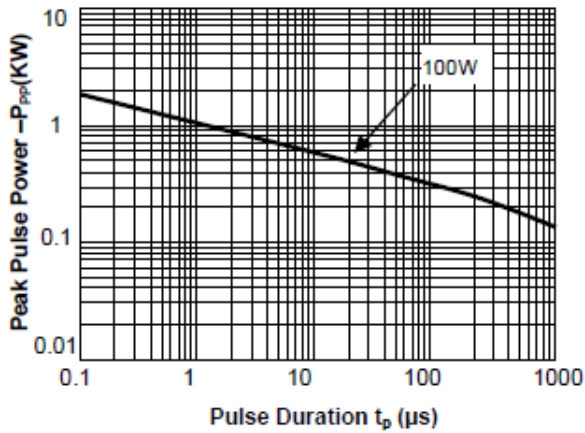


Fig.2 Pulse Derating Curve

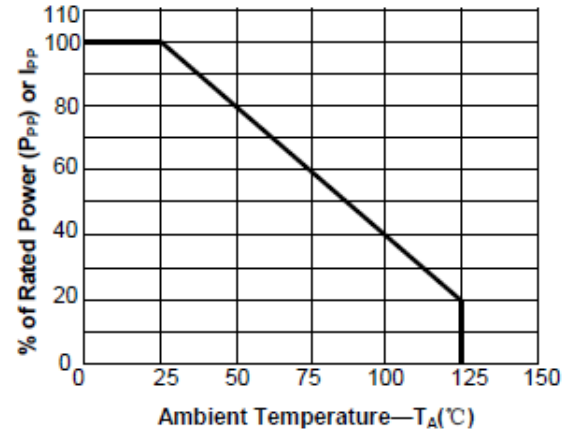


Fig.3 Pulse Waveform-8/20μs

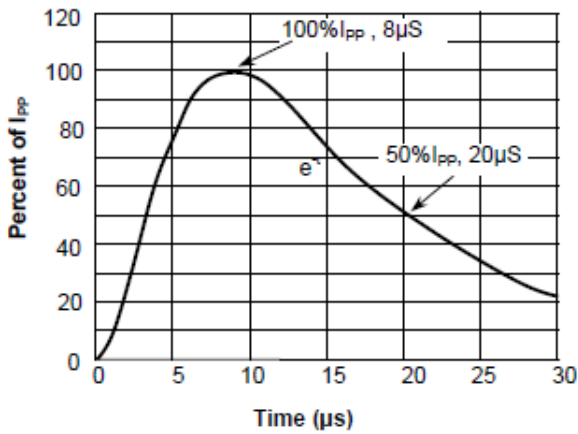
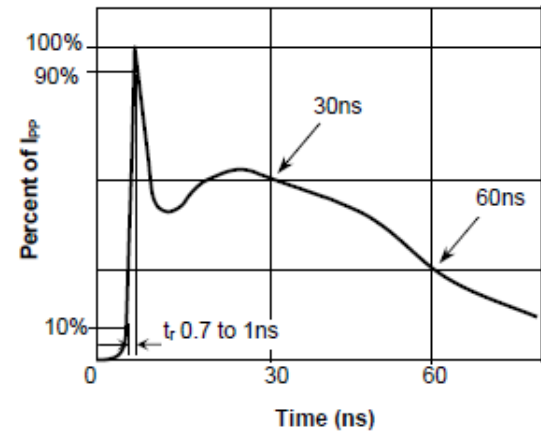
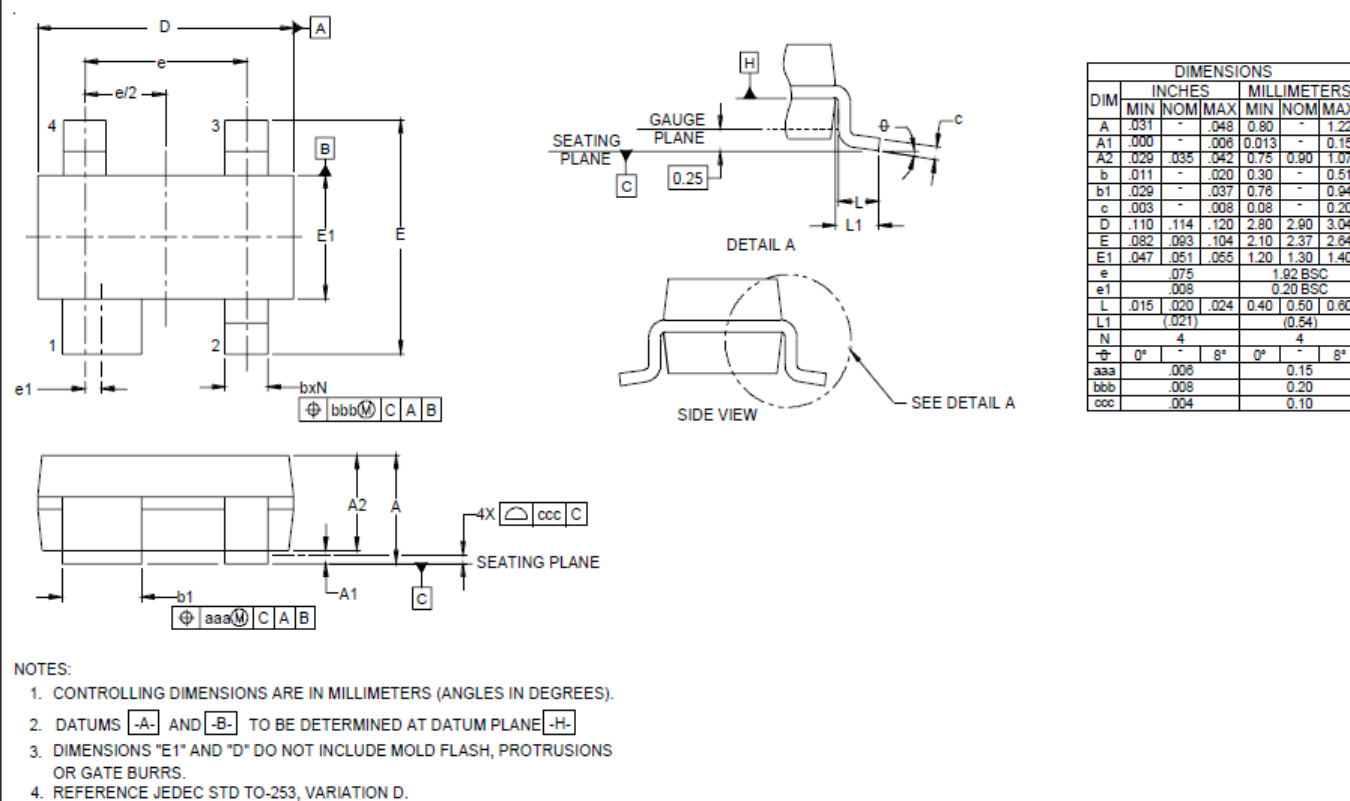


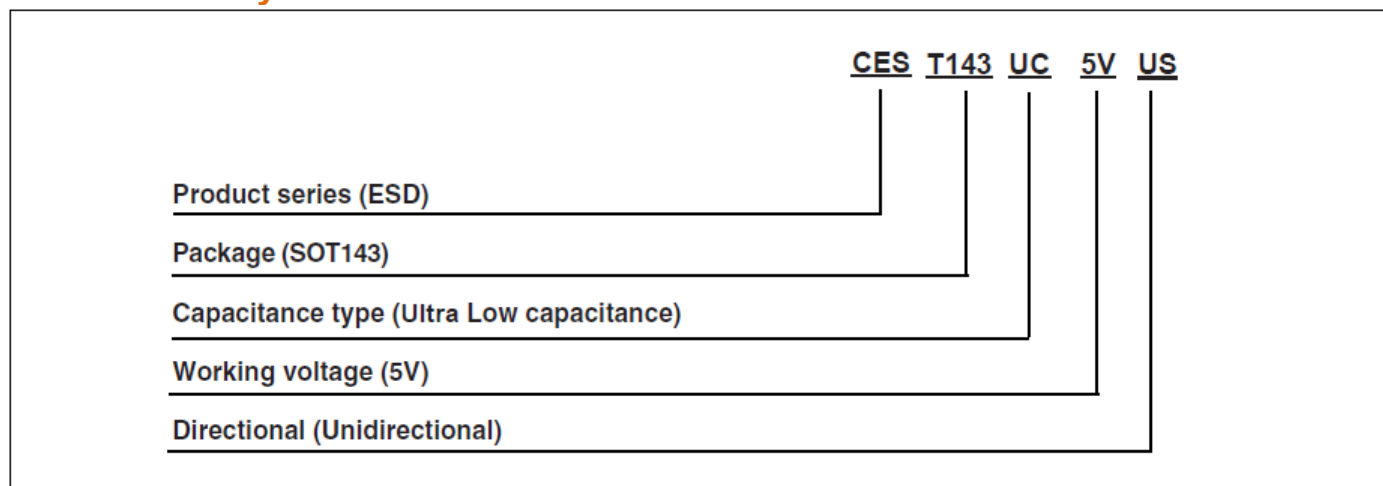
Fig.4 Pulse Waveform-ESD(IEC61000-4-2)



Package Dimensions



Part number system



Ordering Information

Order code	Package	Marking	Packaging option	Base quantity	Packaging specification
CEST143UC5VUS	SOT-143	E5R	Tape and reel	3000pcs / reel	EIA STD RS-481