

ESD Protection Diode in DFN1006

Features

- 40Watts peak pulse power ($t_p = 8/20\mu s$)
- DFN1006 package
- Unidirectional configurations
- Low clamping voltage
- Low leakage current
- Ultra Low capacitance ($C_j=0.5pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 25kV$ contact $\pm 25kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 3A (8/20 μs)



Mechanical Data

- **Case:** DFN1006 (plastic package).
Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Applications

- Audio Line, Speaker, Headset, Microphone Protection
- Human Interface Devices (Keyboard, Touchpad, Buttons)

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

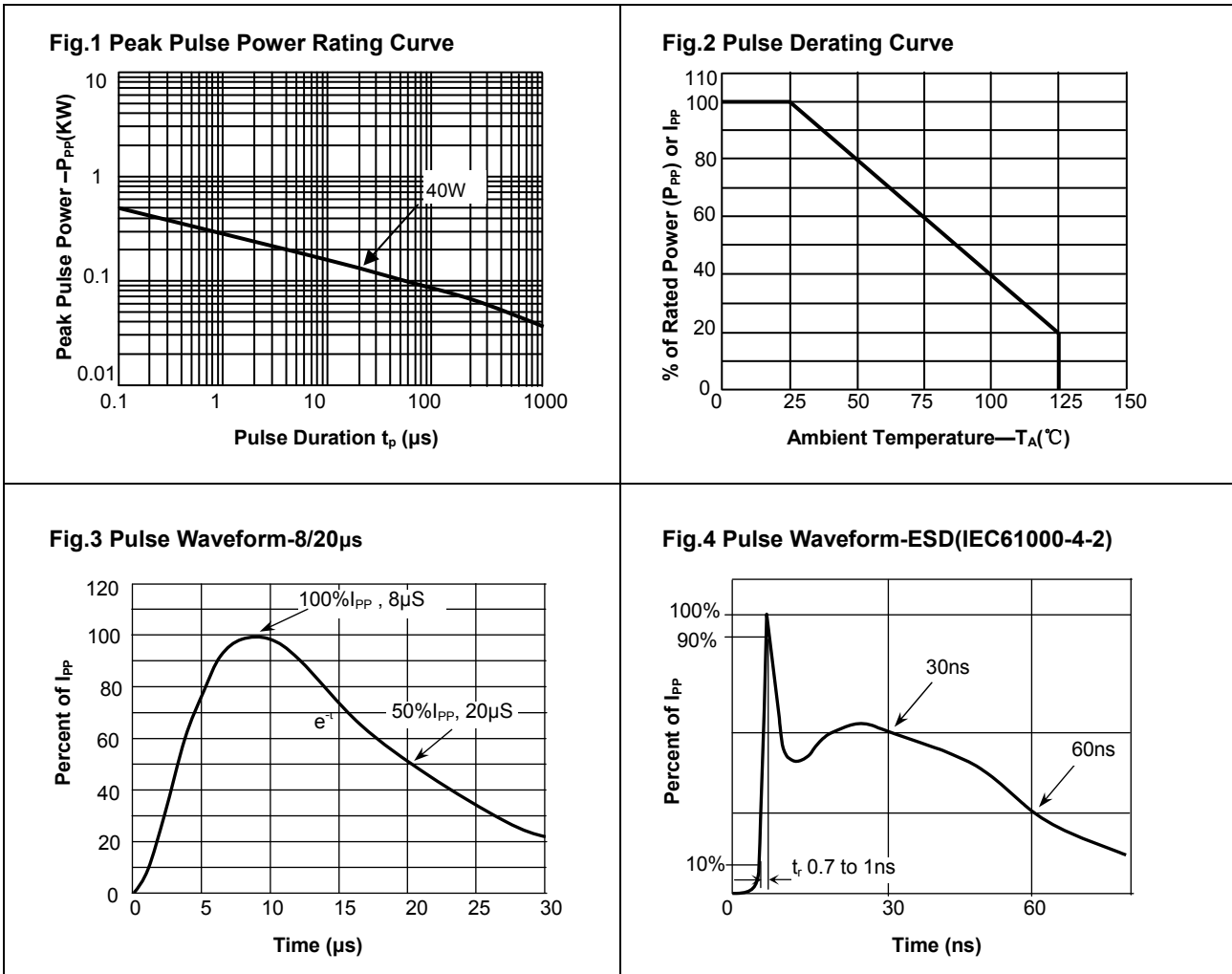
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu S$)	P_{PP}	40	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	25/25	kV
Peak Pulse Current ($t_P = 8/20\mu S$)	I_{PP}	3	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

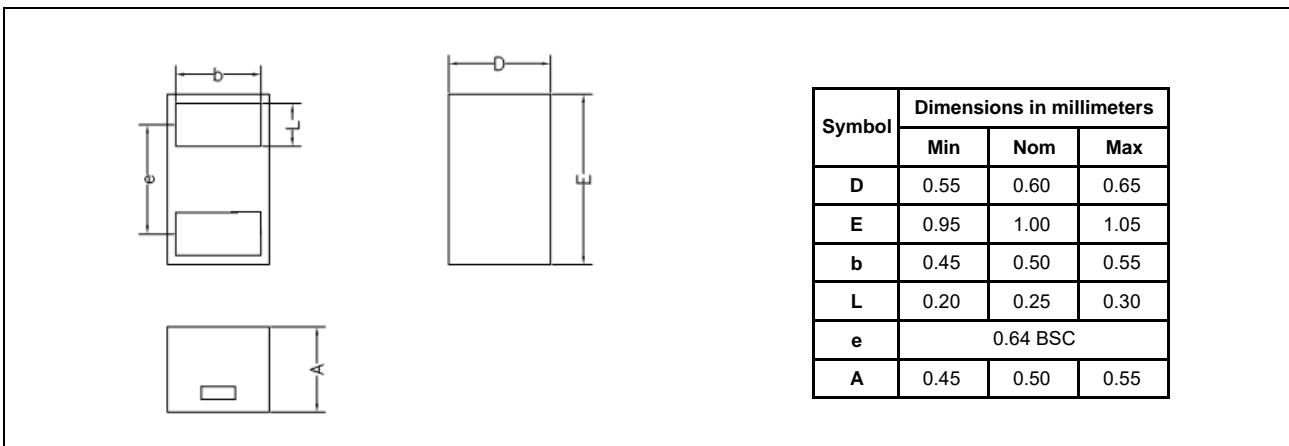
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0	7.5		V
Reverse Leakage Current	I_R	$V_R=5V, T=25\text{ °C}$		0.1	0.5	uA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=3A, T_P=8/20\mu S$			13	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		0.5		pF

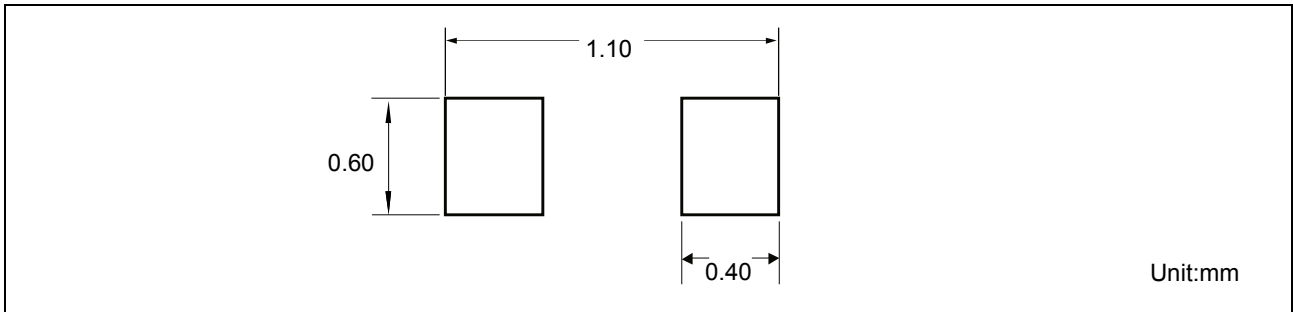
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



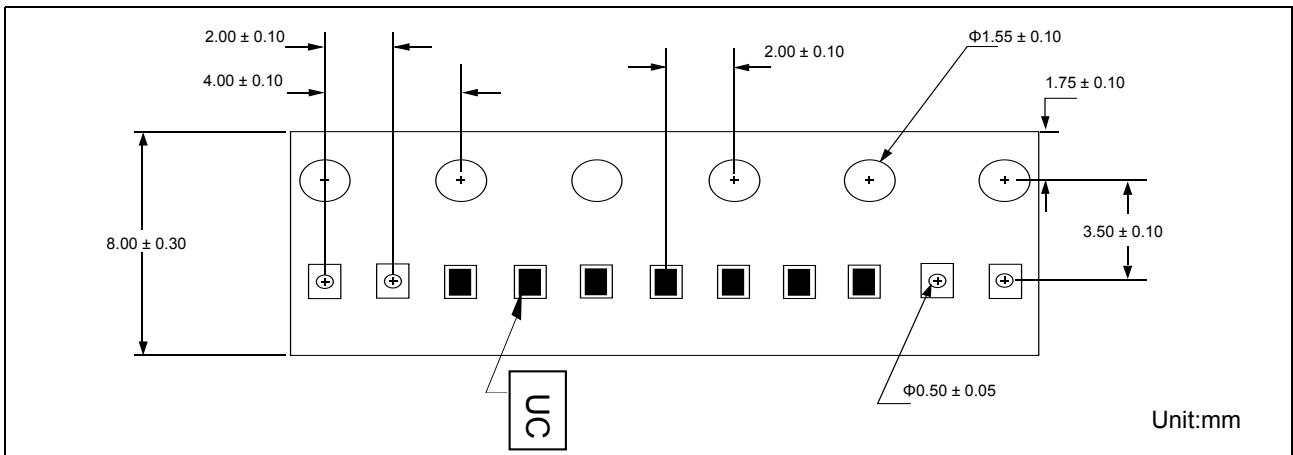
Package Dimensions



Pad Dimensions



Tape and Reel Specification



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESD1006UC5VU	DFN1006	Tape and reel	10000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2012	1.0	Initial release
18-Jan.-2018	2.0	Update

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