

ESD Protection Diode in DFN1006

Features

- 80Watts peak pulse power ($t_p = 8/20\mu s$)
- DFN1006 package
- Bidirectional configurations
- Low clamping voltage
- Low leakage current
- Solid-state silicon-avalanche technology
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 15kV$ contact $\pm 25kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 10A (8/20 μs)



Mechanical Data

- **Case:** DFN1006 (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

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

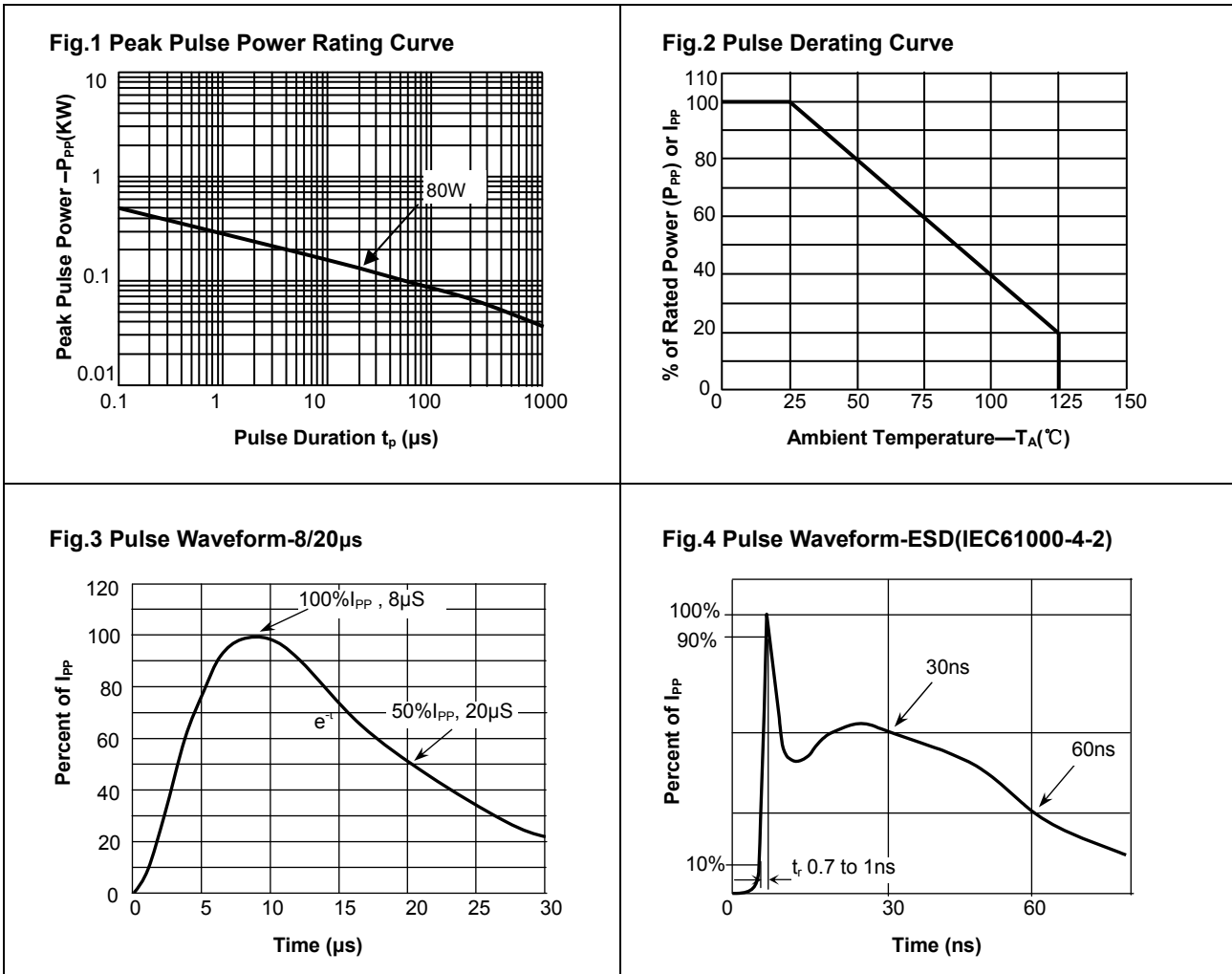
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu s$)	P_{PP}	80	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	15/25	kV
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	10	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +125	°C

Electrical Characteristics

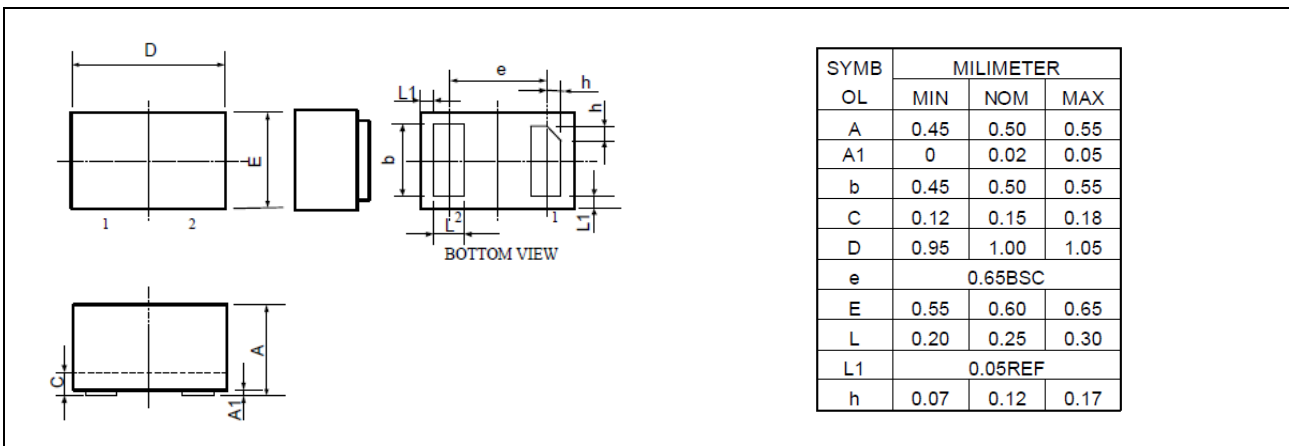
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	4.1			V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25\text{ °C}$		0.1	0.2	μA
Clamping Voltage ¹⁾	V_{CL}	$I_{PP}=16A, t_p=100ns$		8		V
Clamping Voltage ²⁾	V_C	$I_{PP}=5A, t_p=8/20\mu s$			6	V
Clamping Voltage ²⁾		$I_{PP}=10A, t_p=8/20\mu s$			8	V
Dynamic resistance ¹⁾	R_{DYN}			0.2		Ω
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		15		pF

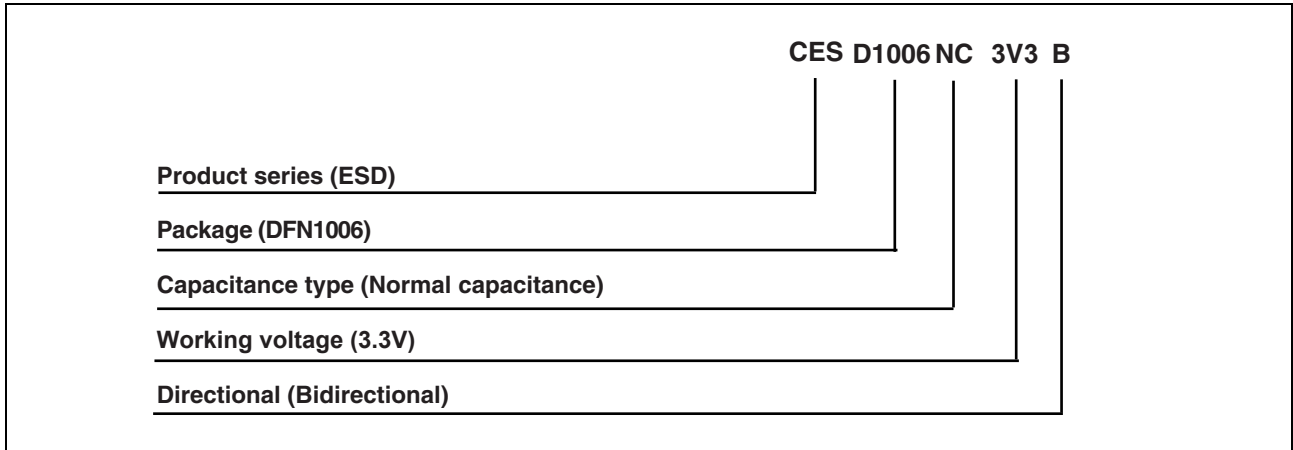
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



Package Dimensions



Part number system



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESD1006NC3V3B	DFN1006	Tape and reel	10000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2016	1.0	Initial release

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