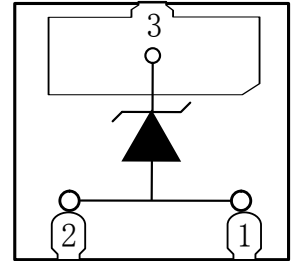


EOS/ESD Protection Diode in DFN-2020-3L

Features

- 5000 Watts peak pulse power ($t_p = 8/20\mu s$)
- DFN-2020-3L package
- Unidirectional configurations
- Low clamping voltage
- Low leakage current
- Medium capacitance ($C_j=950pF$ typ.)
- Protection one data/power line to:
 - IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
 - IEC 61000-4-4 (EFT) 40A (5/50ns)
 - IEC 61000-4-5 (Lightning) 180A (8/20 μs)



Mechanical Data

- **Case:** DFN-2020-3L (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

- Power lines
- USB Vbus Industrial Electronics
- Industrial Electronics
- Microcontroller Input Protection
- Computer & Consumer Electronics
- Automotive and Telecommunication

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

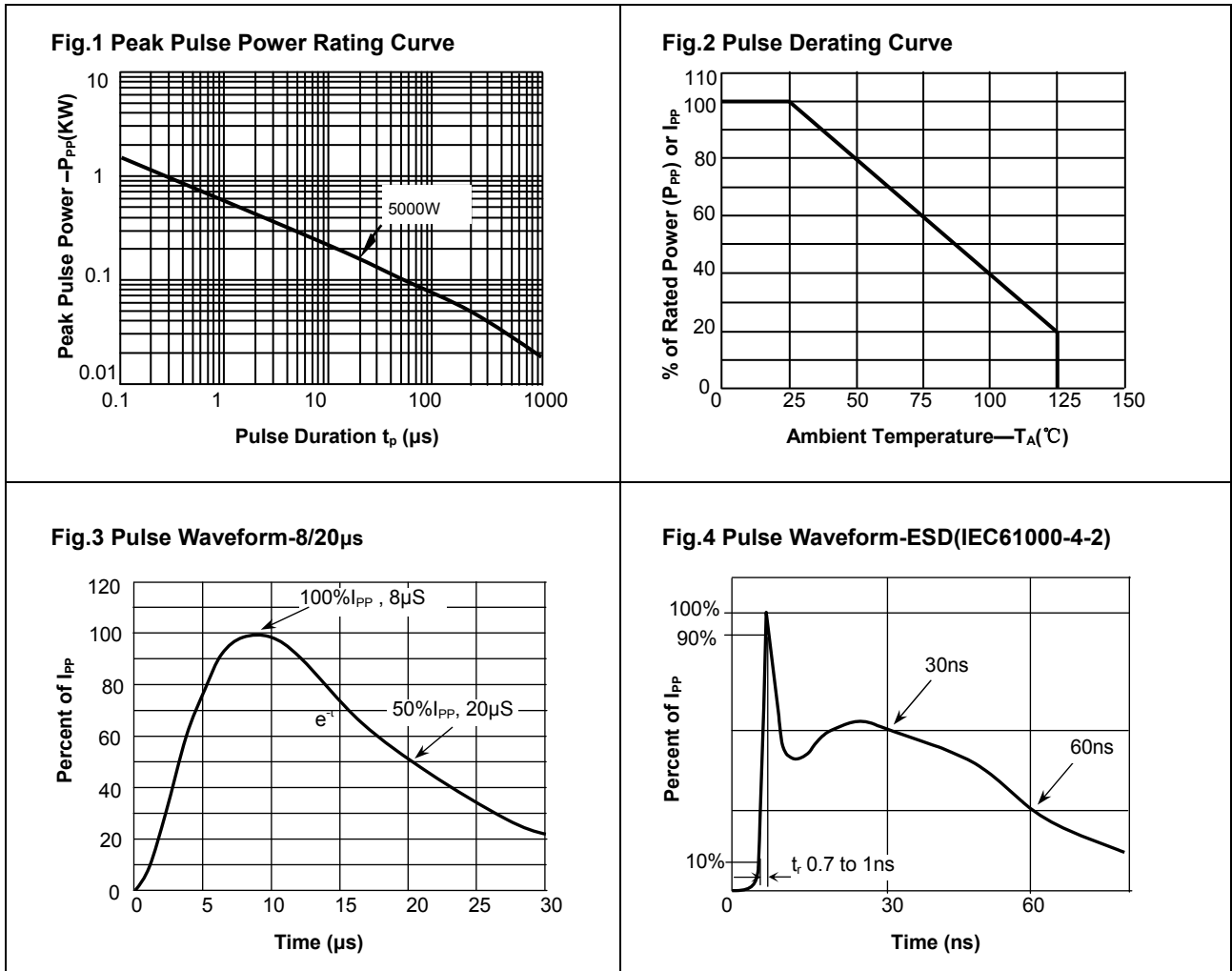
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_p=8/20\mu s$)	P_{PP}	5000	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current ($t_p = 8/20\mu s$)	I_{PP}	180	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

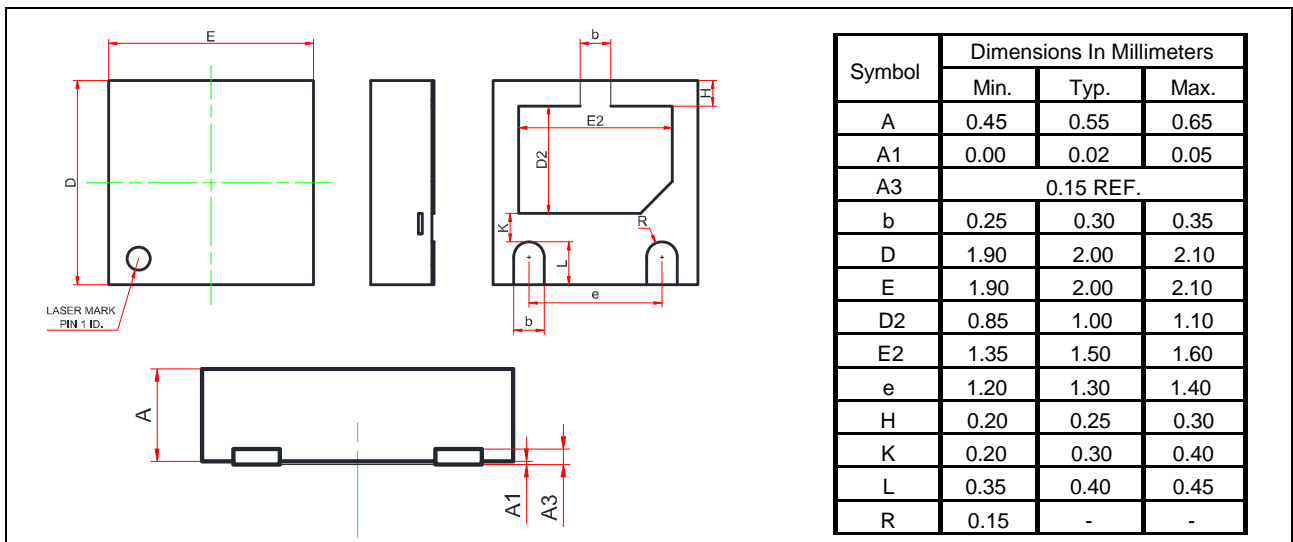
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				12	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	13.5	14.5		V
Reverse Leakage Current	I_R	$V_R=12V$			1	μA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=50A$			20	V
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=100A$			23	V
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=150A$			29	V
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		950		pF

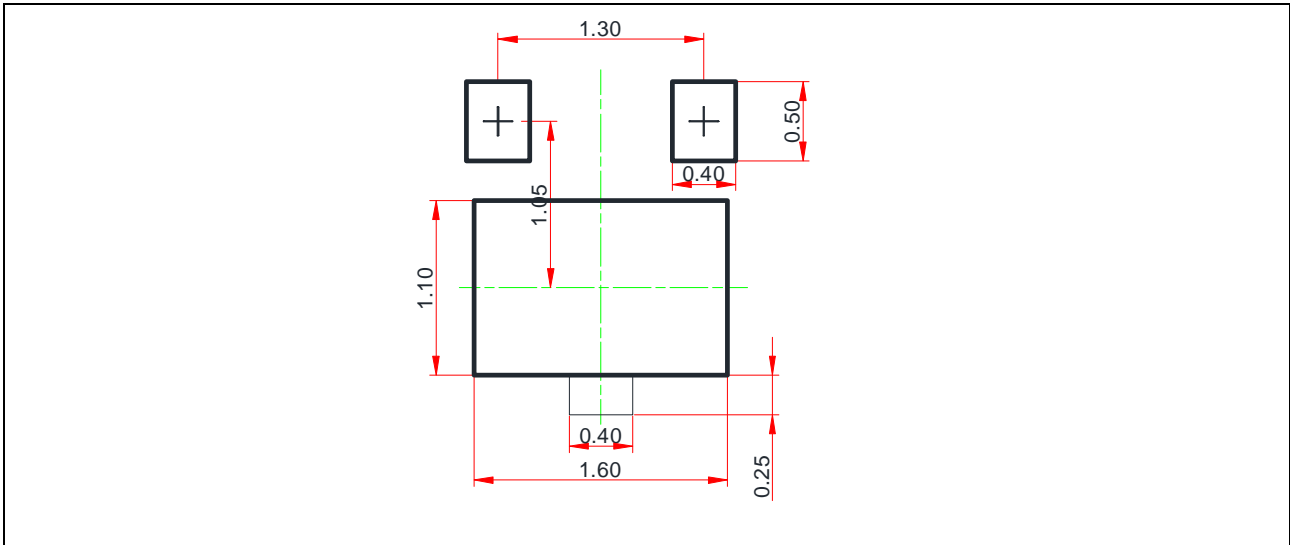
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



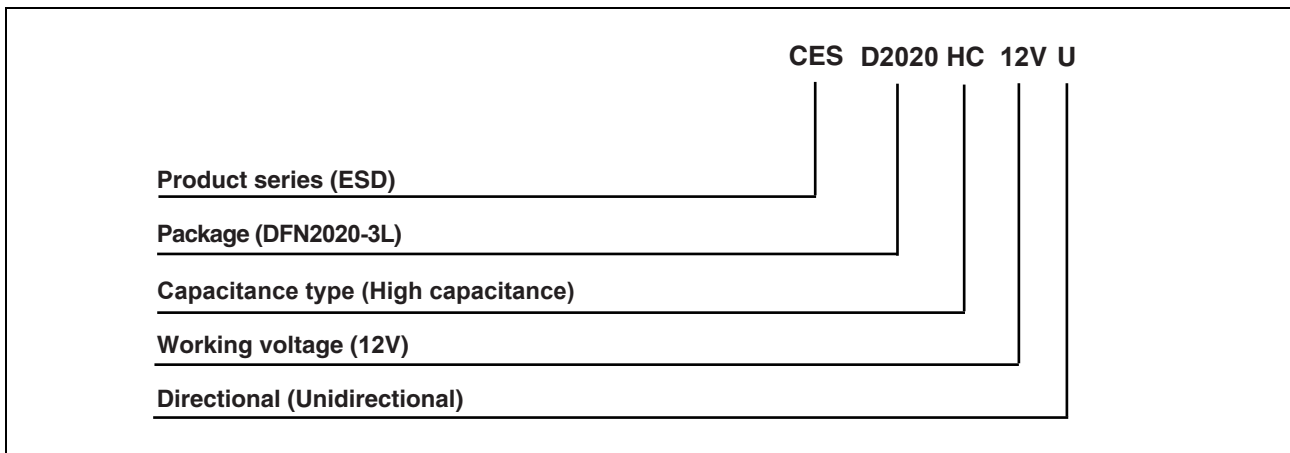
Package Dimensions



PAD Dimensions



Part number system



Ordering information

Order code	Marking	Package	Packaging option	Base quantity	Packaging specification
CESD2020HC12VU	T12	DFN2020-3L	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2016	1.0	Initial release
9-Jun.-2018	2.0	Update

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