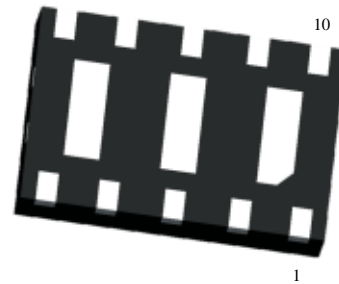


Low Capacitance ESD TVS Array in DFN3020

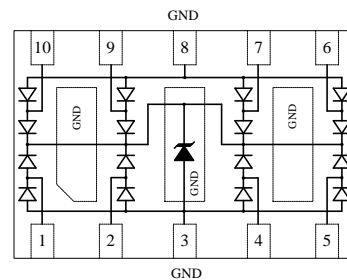
Features

- 1000Watts peak pulse power ($t_p = 8/20\mu s$)
- DFN3020 package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance (1.7pF typical I/O to I/O)
- 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) 40A (8/20 μs)



Mechanical Data

- **Case:** DFN3020 (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

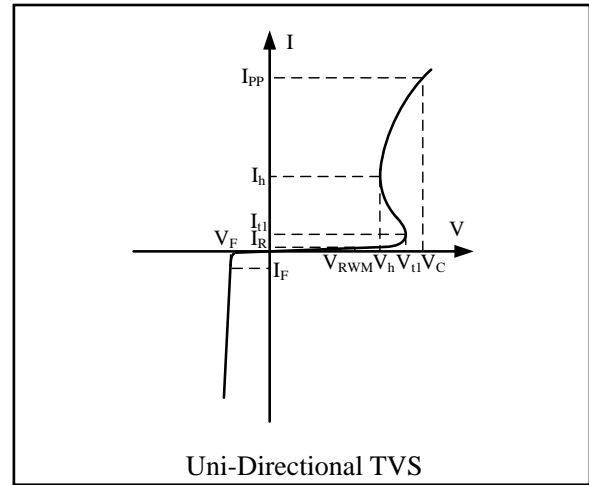
- 10/100/1000M Ethernet Ports
- WAN/LAN Equipment
- Desktops, Servers and Notebooks
- Cellular Phones
- Switching Systems
- Audio/Video Inputs

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}	1000	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}	40	A
Junction Temperature	T_J	-55 to +125	°C
Storage temperature	T_{STG}	-55 to +150	°C

Symbol	Parameter
V_{RWM}	Nominal Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{t1}	Trigger Voltage
I_{t1}	Trigger Current @ V_{t1}
V_h	Holding Voltage
I_h	Holding Current @ V_h
V_C	Clamping Voltage @ I_{PP}
I_{PP}	Maximum Peak Pulse Current
C_{ESD}	Parasitic Capacitance

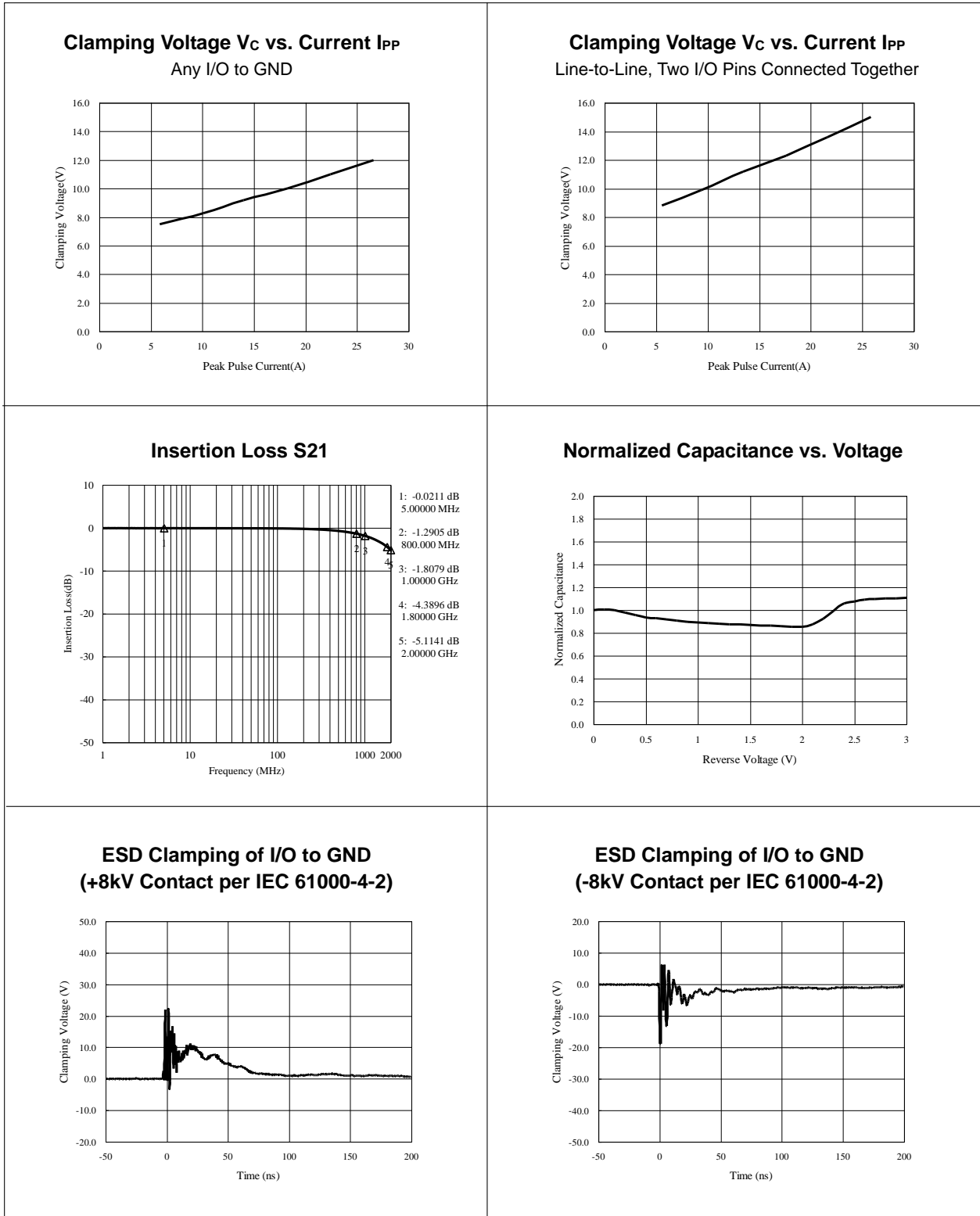


Electrical Characteristics

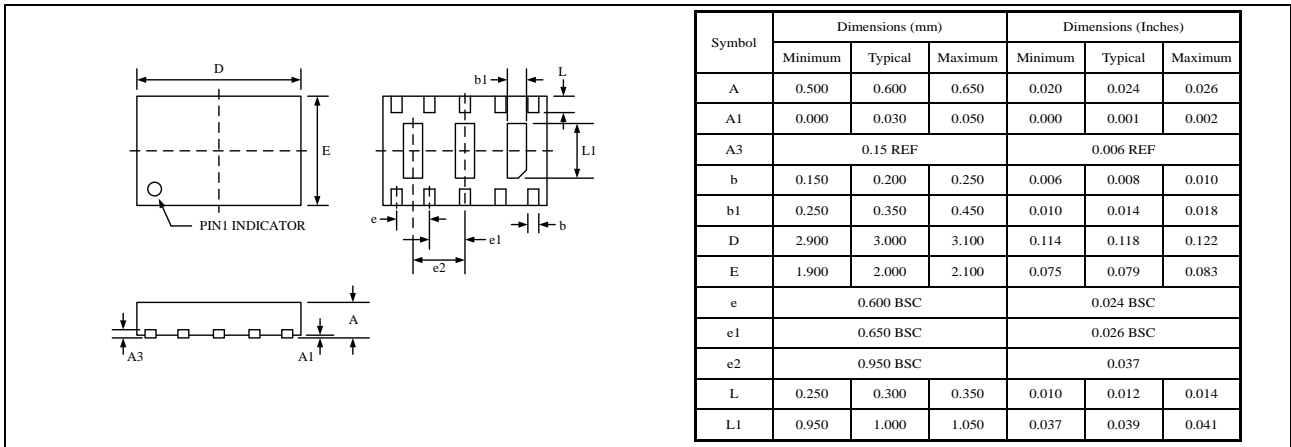
($T_A = 25^\circ\text{C}$ unless otherwise specified)

Symbol	Test Condition	Minimum	Typical	Maximum	Units
V_{RWM}				3.3	V
I_R	$V_{RWM} = 3.3\text{V}, T = 25^\circ\text{C}$		0.1	1.0	μA
V_{t1}	$I_{t1} = 1\mu\text{A}$	3.8	4.5	5.5	V
V_h	$I_h = 1\text{mA}$	3.5		5.5	V
V_C	Any I/O to Ground $I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			5.5	V
V_C	Any I/O to Ground $I_{PP} = 10\text{A}, t_p = 8/20\mu\text{s}$			10.5	V
V_C	Any I/O to Ground $I_{PP} = 25\text{A}, t_p = 8/20\mu\text{s}$			18.0	V
V_C	Line-to-Line / Line-to-GND, two I/O Pins connected together on each line $I_{PP} = 40\text{A}, t_p = 8/20\mu\text{s}$			25.0	V
C_{ESD}	Between I/O Pins and Ground $V_R = 0\text{V}, f = 1\text{MHz}$		3.8	5.0	pF
C_{ESD}	Between I/O Pins $V_R = 0\text{V}, f = 1\text{MHz}$		1.7	2.5	pF

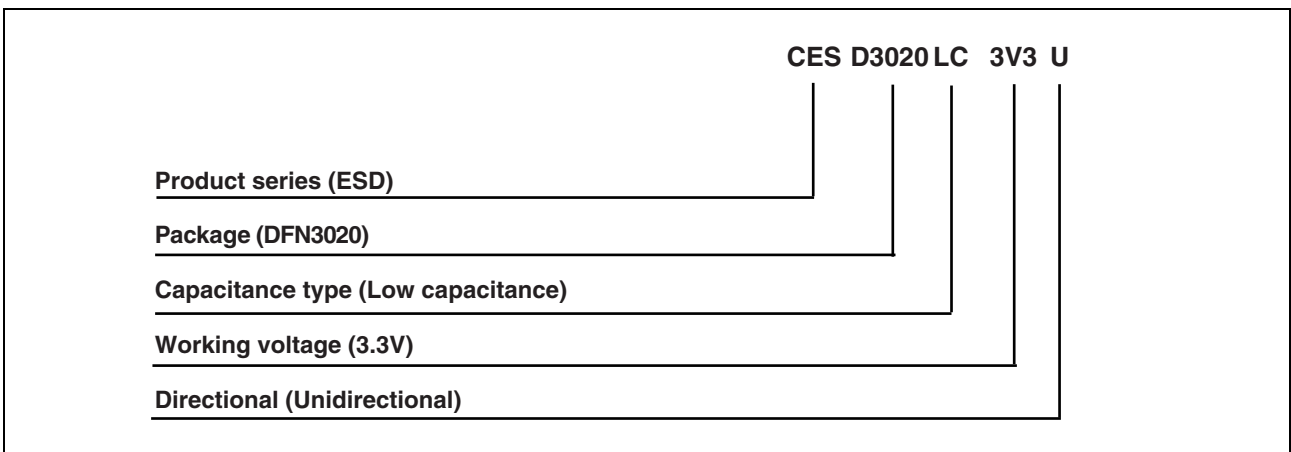
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



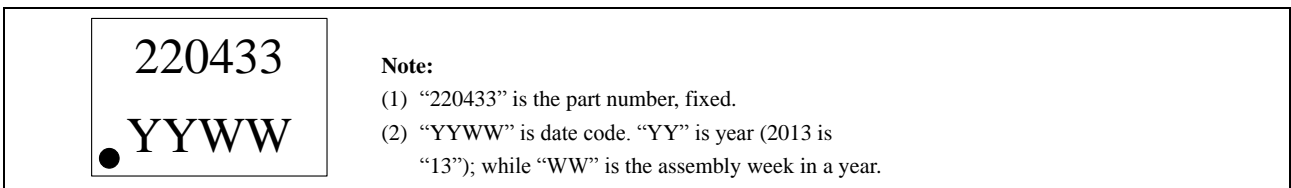
Package Dimensions



Part number system



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
CESD3020LC3V3U	DFN3020	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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