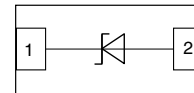
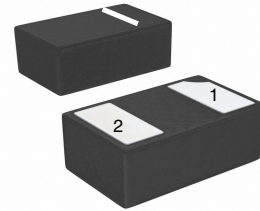


ESD/Surge Protection Diode in DFN1610

Features

- 1500 Watts peak pulse power ($T_P = 8/20\mu s$)
- DFN1610 package
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Normal capacitance ($C_j=70pF$)
- 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) 52A (8/20 μs)



Mechanical Data

- **Case:** DFN1610 (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

- Charger Protection
- Parallel & Serial Port Protection
- Personal Digital Assistant (PDA)
- Microcontroller Input Protection
- Cellular Phones
- I²C Bus Protection

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

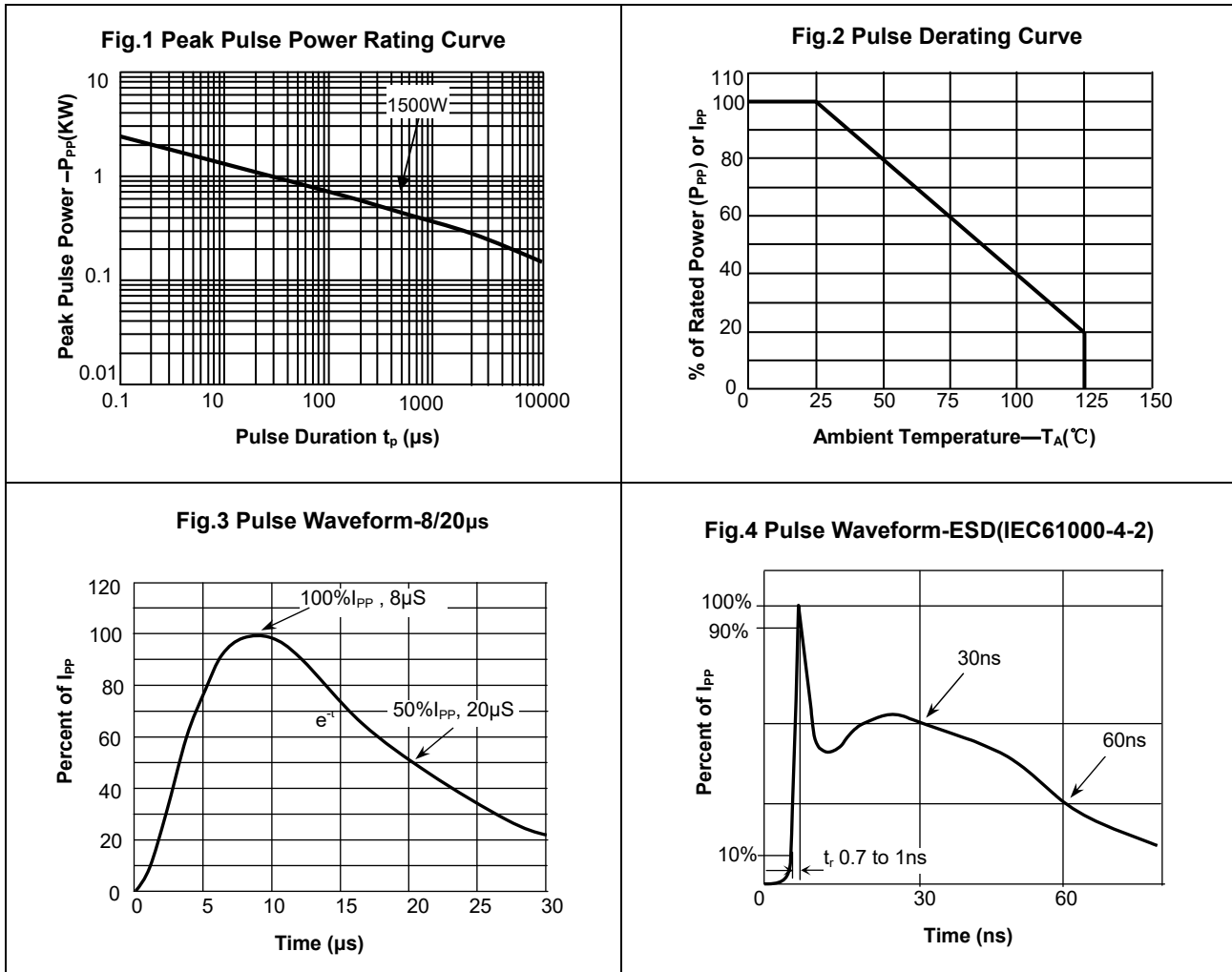
Parameter	Symbol	Value	Unit
Peak Pulse Power ($T_P=8/20\mu s$)	P_{PP}	1500	W
ESD contact/air discharge (IEC-61000-4-2)	V_{ESD}	30/30	kV
Peak Pulse Current ($T_P = 8/20\mu s$)	I_{PP}	52	A
Junction Temperature	T_J	-55 to +150	°C
Storage temperature	T_{STG}	-55 to +150	°C

Electrical Characteristics

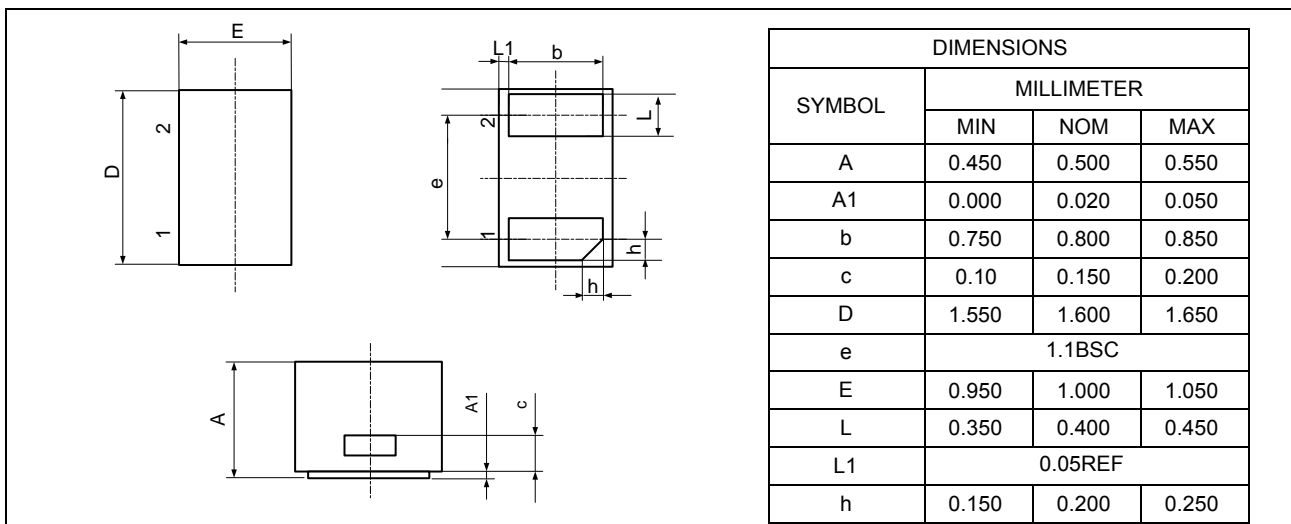
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	V_{RWM}				20	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	22			V
Reverse Leakage Current	I_R	$V_R=20V$			0.5	μA
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=10A, T_P=8/20\mu s$		20		V
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=30A, T_P=8/20\mu s$		25		V
Clamping Voltage (IEC 61000-4-5)	V_C	$I_{PP}=52A, T_P=8/20\mu s$		29		V
Clamping Voltage (TLP)	V_C	$I_{TLP}=30A, T_P=100ns$		25		V
Dynamic Resistance	R_{DNY}	$T_P=100ns$		0.1		Ω
Junction Capacitance	C_J	$V_R=0V, f=1MHz$		70		pF

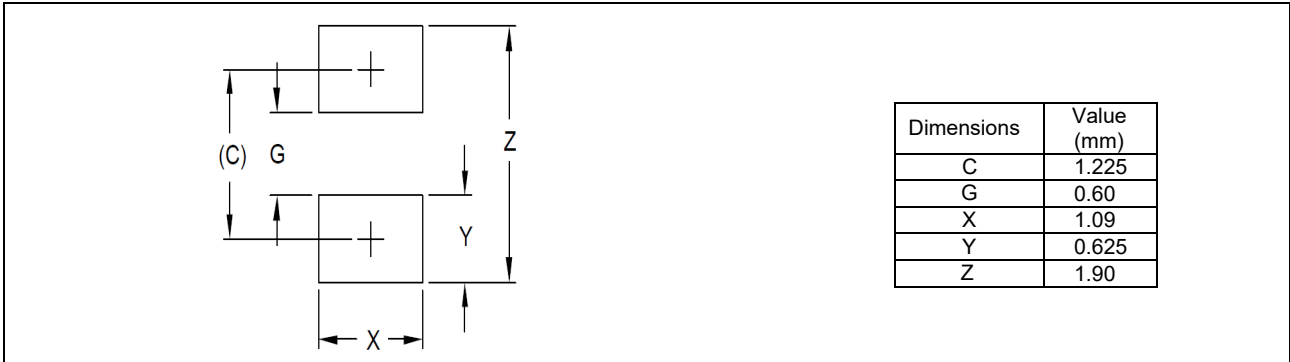
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



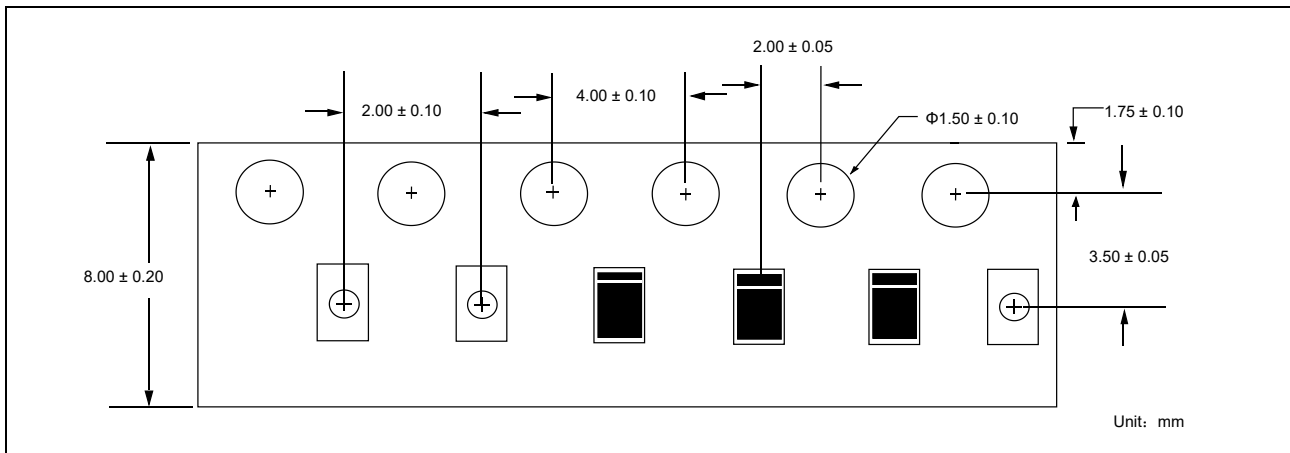
Package Dimensions



Pad Dimensions



Package Information



Marking



Ordering information

Order code	Package	Packaging option	Base quantity	Weight	Packaging specification
TESD1610NC20VUH	DFN1610	Tape and reel	10000pcs / reel	3.5mg	EIA STD RS-481