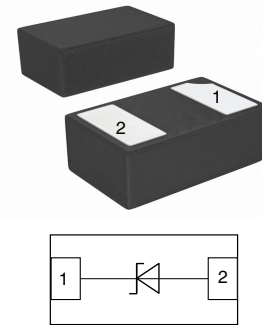


## ESD/Surge Protection Diode in DFN1610

### Features

- 1950 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 ( $C_j=420pF$ )
- 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) 76A (8/20 $\mu s$ )



### 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
- I<sup>2</sup>C Bus Protection

### Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

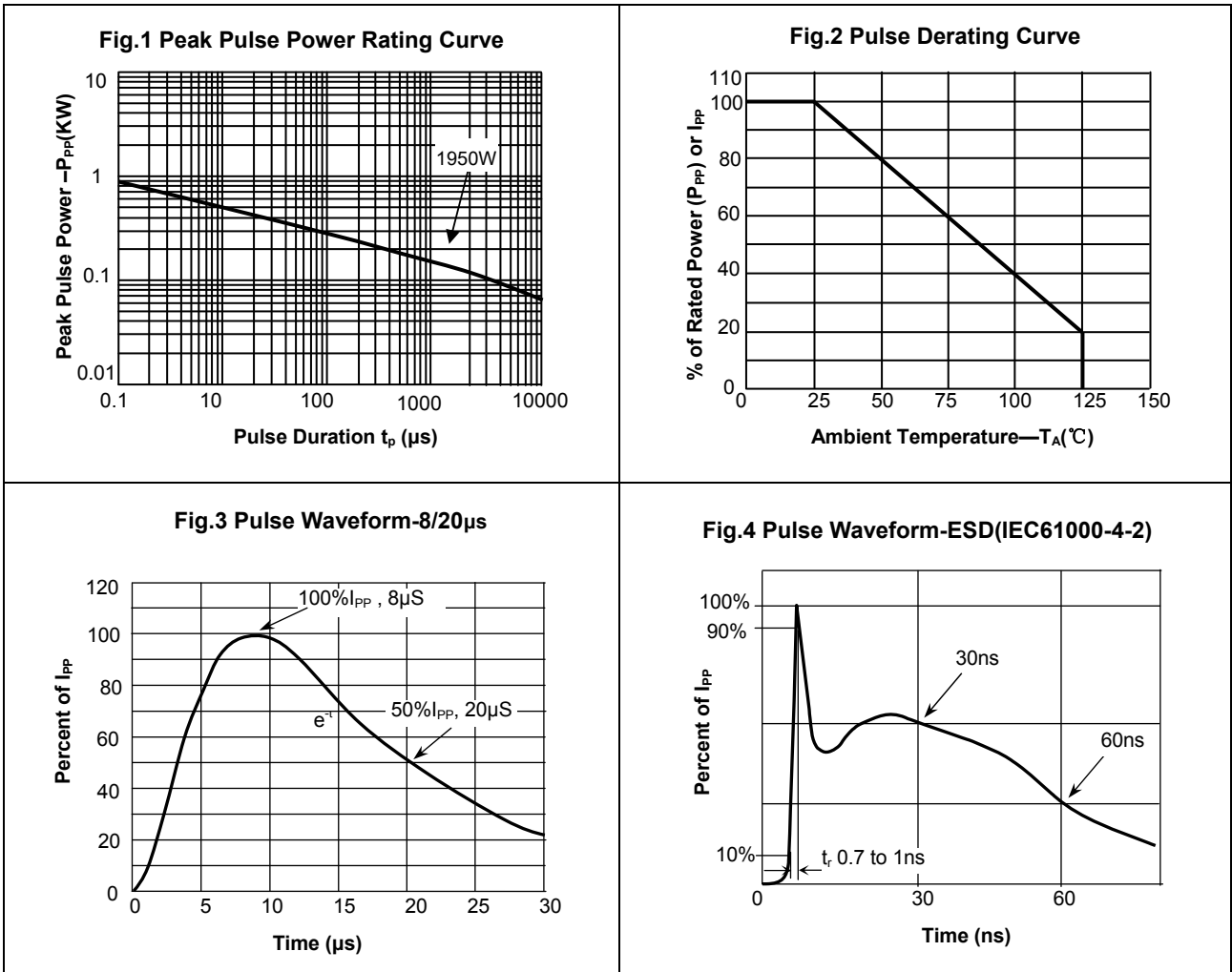
Parameter	Symbol	Value	Unit
Peak Pulse Power ( $T_p=8/20\mu s$ )	$P_{PP}$	1950	W
ESD contact/air discharge (IEC-61000-4-2)	$V_{ESD}$	30/30	kV
Peak Pulse Current ( $t_p = 8/20\mu s$ )	$I_{PP}$	76	A
Junction Temperature	$T_J$	-40 to +125	°C
Storage temperature	$T_{STG}$	-55 to +150	°C

### Electrical Characteristics

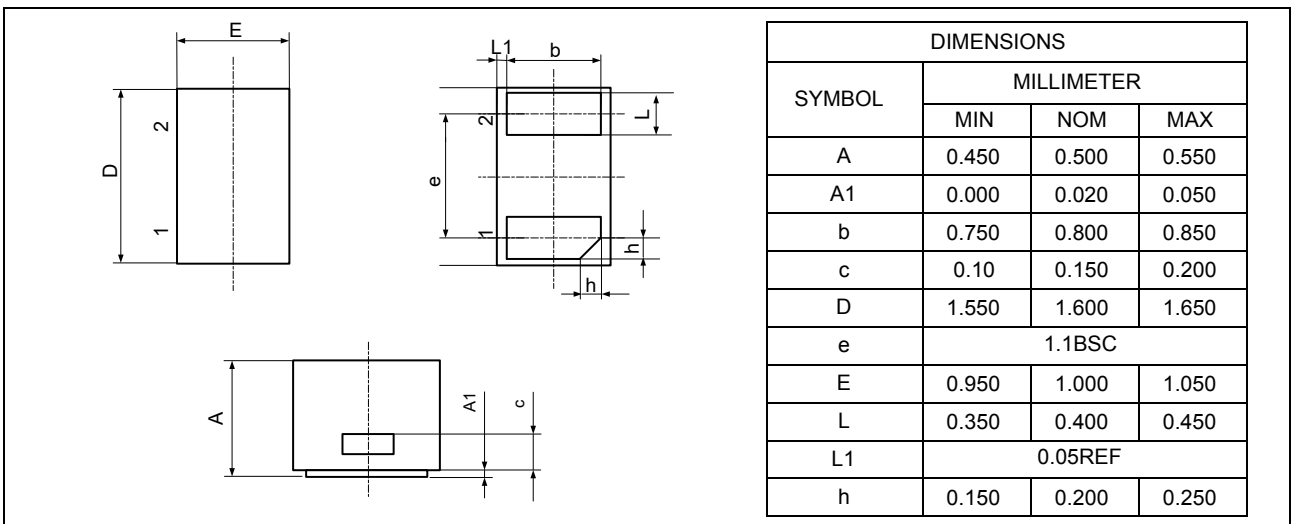
( $T_A = 25\text{ °C}$  unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Reverse stand-off Voltage	$V_{RWM}$				12	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.3			V
Reverse Leakage Current	$I_R$	$V_R=12V$			1	$\mu A$
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=1A$			15	V
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=50A$		22		V
Clamping Voltage (IEC 61000-4-5)	$V_C$	$I_{PP}=76A$		26		V
Junction Capacitance	$C_J$	$V_R=0V, f=1MHz$		420		pF

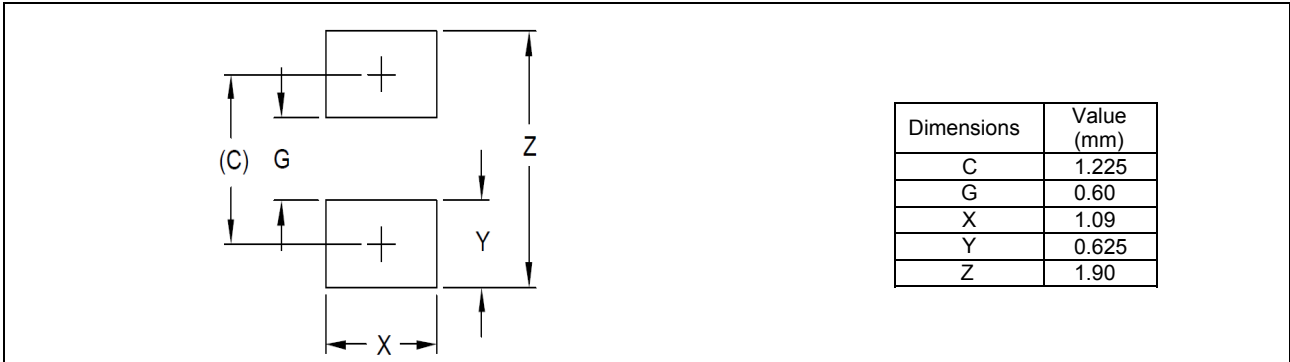
**Typical Characteristics** ( $T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise specified)



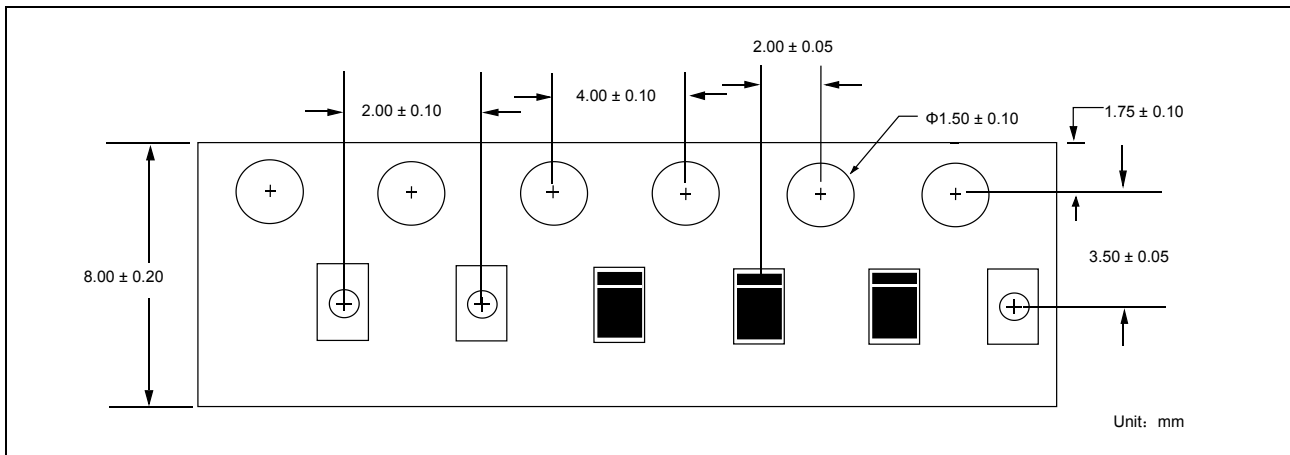
**Package Dimensions**



**Pad Dimensions**



**Package Information**



**Marking**



**Ordering information**

Order code	Package	Packaging option	Base quantity	Weight	Packaging specification
CESD1610HC12VUH	DFN1610	Tape and reel	10000pcs / reel	3.5mg	EIA STD RS-481

**Revision history**

Date	Revision	Changes
23-May-2020	1.0	Initial release

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