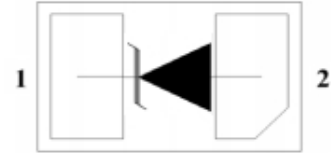


### Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD):  $\pm 30\text{kV}$  (air),  $\pm 30\text{ kV}$  (contact)
  - IEC 61000-4-5 (Lightning): 30A (8/20 $\mu\text{s}$ )
- Low reverse stand-off voltage:  $V_{RWM} = 22\text{V}$
- Protects one I/O or power line
- Low clamping voltage
- Low leakage current
- RoHS compliant with Halogen-free

HF



DFN1610-2L

### Mechanical Data

- Case: DFN1610-2L
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin-Plated Leads, Solderability-per MIL-STD-202, Method 208

### Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
ESD22VDH	DFN1610-2L	10000 pcs / Tape & Reel	22VD

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{ESD-A}$	$\pm 30$	kV
IEC 61000-4-2; ESD (Contact)	$V_{ESD-C}$	$\pm 30$	kV
Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )	$P_{PP}$	1500	W
Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ )	$I_{PP}$	30	A

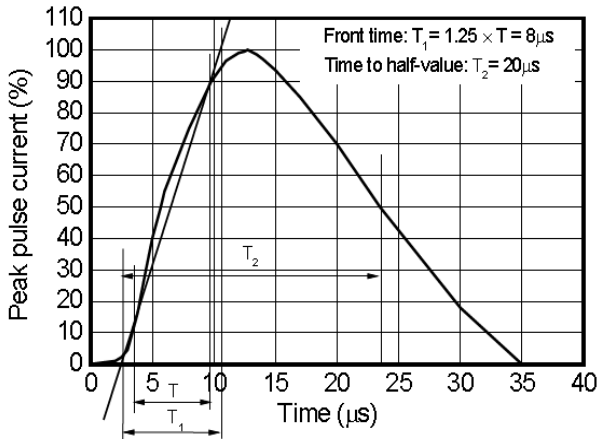
### Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	$T_J$	-55 ~ +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

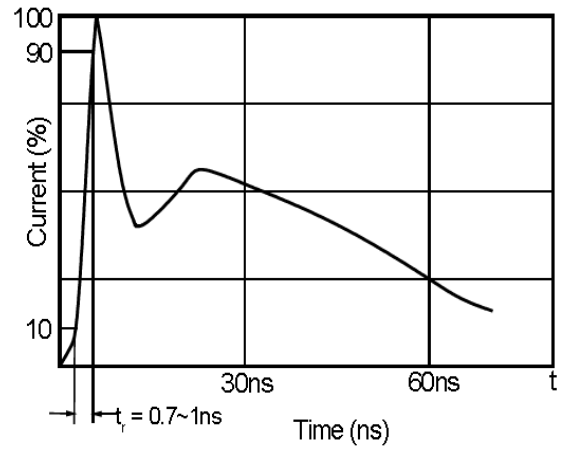
### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	$V_{RWM}$		-	-	22	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	26	-	30	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 22\text{V}$	-	-	100	nA
Clamping Voltage	$V_C$	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	28	V
		$I_{PP} = 30\text{A}, t_p = 8/20\mu\text{s}$	-	-	50	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	200	-	pF

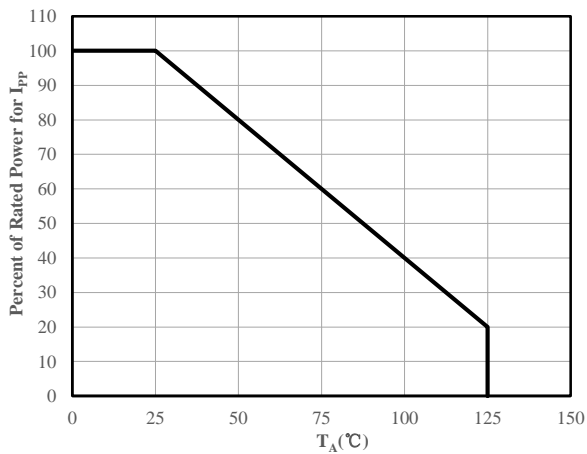
**Ratings and Characteristic Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)



**Fig 1** 8/20  $\mu\text{s}$  waveform per IEC61000-4-5

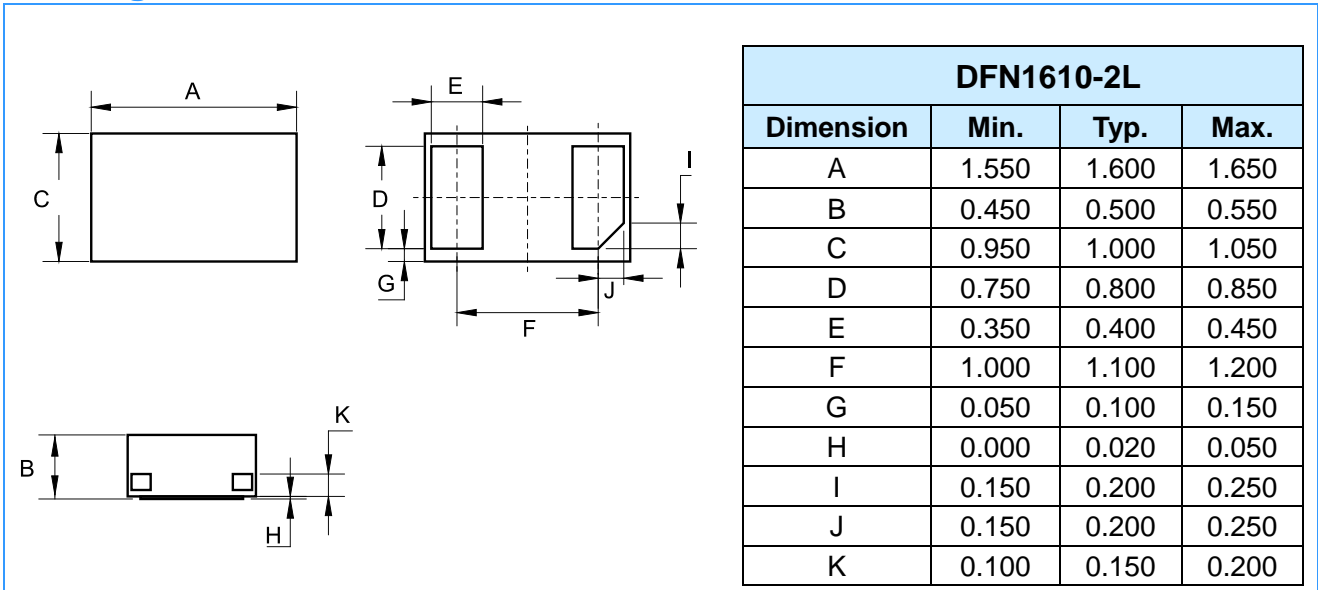


**Fig 2** ESD pulse waveform according to IEC61000-4-2



**Fig 3** Power Derating Curve

### Package Outline Dimensions (Unit: mm)



### Package Outline Dimensions (Unit: mm)

