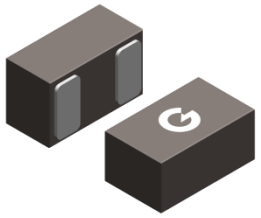
Ultra Low Capacitance Bi-directional TVS Diode

GESD15VX1BL

Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD): ±20kV (air), ±15 kV (contact)
- Low reverse stand−off voltage: 15V
- Ultra low leakage
- Ultra low capacitance
- RoHS compliant with Halogen-free

HF



DFN1006-2

Mechanical Data

- Case: DFN1006-2
- 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
GESD15VX1BL	DFN1006-2	10000 pcs / Tape & Reel	R15

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air) *1	V_{ESD-A}	±20	kV
IEC 61000-4-2; ESD (Contact) *1	V_{ESD-C}	±15	kV
Peak Pulse Power (t_p = 8/20μs) *2	P_{PP}	90	W
Peak Pulse Current (t_p = 8/20μs) *2	I_{PP}	2.5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	T_J	-55 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +150	°C

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Stand-off Voltage	V_{RWM}		-	-	15	V
Reverse Breakdown Voltage	$V_{(BR)}$	I_T = 1mA	16.7	-	-	V
Reverse Leakage Current	I_R	V_{RWM} = 15V	-	-	0.2	μA
Clamping Voltage *2	V_C	I_{PP} = 1A, tp = 8/20μs I_{PP} = 2.5A, tp = 8/20μs	- -	- -	26 35	V V
Junction Capacitance	C_J	V_R = 0V, f = 1MHZ	-	0.3	0.5	pF

Ratings and Characteristic Curves (@ T_A = 25°C unless otherwise specified)

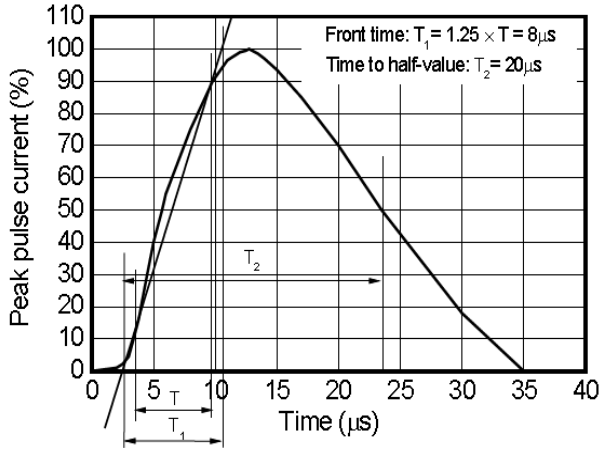


Fig 1 8/2 0μs waveform per IEC61000-4-5

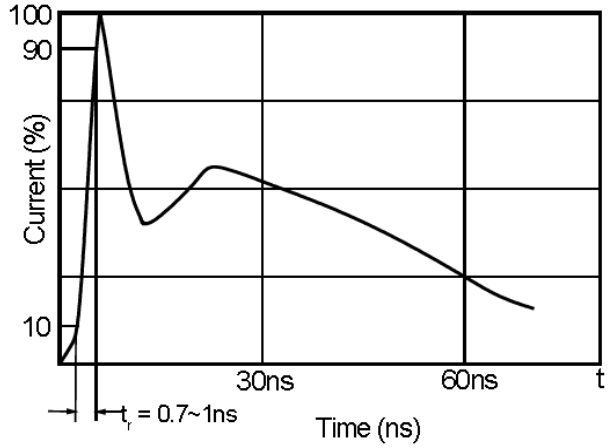


Fig 2 ESD pulse waveform according to IEC61000-4-2

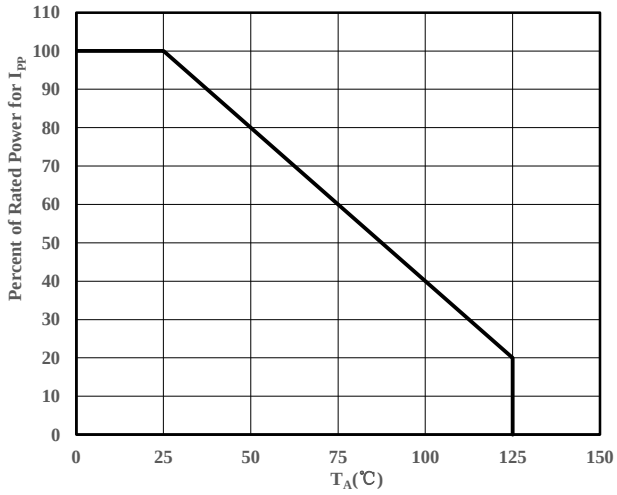


Fig 3 Power Derating Curve

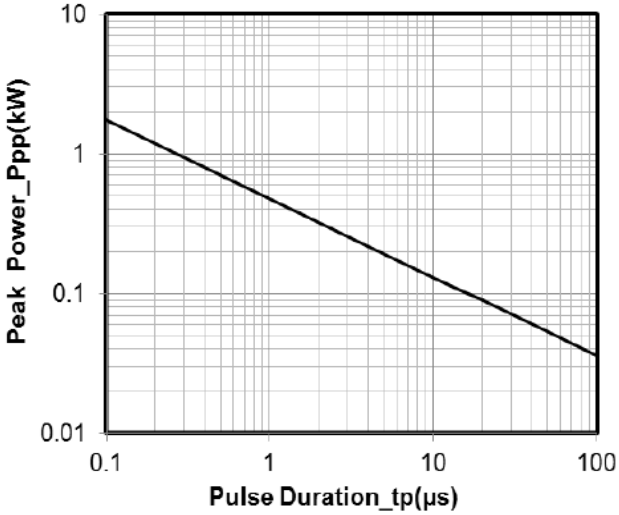


Fig 4 Peak Pulse Power vs. Pulse Time

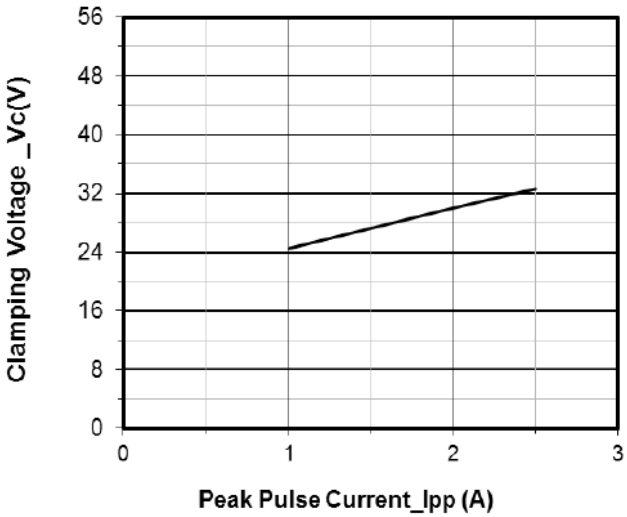


Fig 5 Clamping Voltage vs. Peak Pulse Current

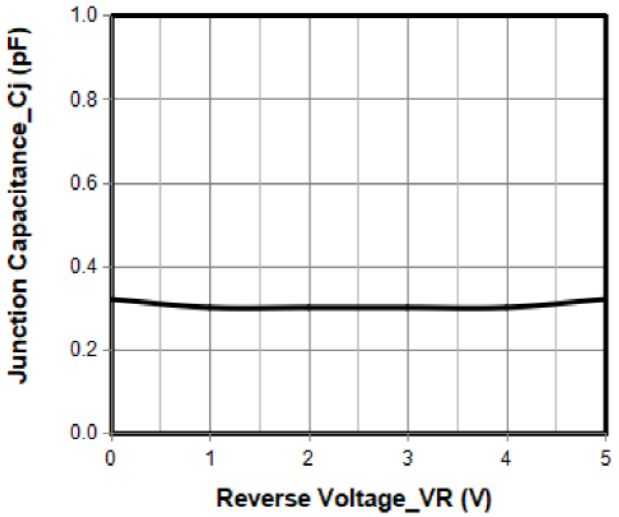
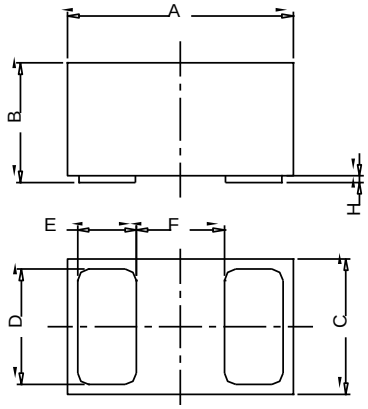


Fig 6 Junction Capacitance vs. Reverse Voltage

Package Outline Dimensions (Unit: mm)



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Dimension	**Min.**	**Typ.**	**Max.**
A	0.95	1.00	1.075
B	0.45	0.50	0.55
C	0.55	0.60	0.675
D	0.45	0.50	0.55
E	0.20	0.25	0.30
F	-	0.40	-
H	0	0.03	0.05

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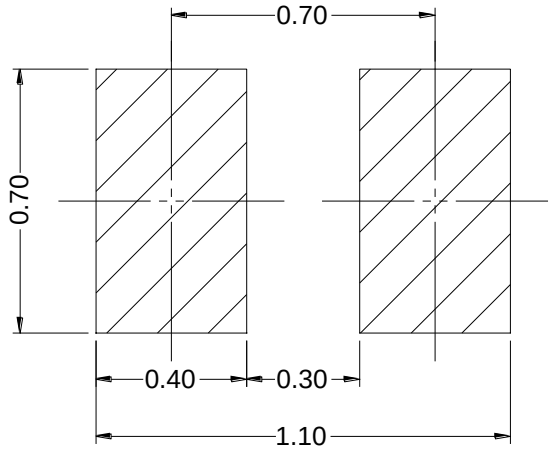
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