

Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- Low leakage current
- Working voltage: $V_{RWM} = 7V$
- RoHS compliant with Halogen-free

HF



Typical Applications

- Designed to protect voltage sensitive components from ESD

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



DFN1006-2

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
GESD7V0BL	DFN1006-2	10000 pcs / Tape & Reel	Z

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	± 30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	± 30	kV
Reverse Stand-off Voltage	V_{RWM}	± 7	V
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	200	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	± 8.8	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.25	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	500	$^{\circ}C/W$
Thermal Resistance Junction-to-Lead	$R_{\theta JL}$	255	$^{\circ}C/W$
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	300	$^{\circ}C/W$
Operating Temperature	T_J	-55 ~ +150	$^{\circ}C$
Storage Temperature	T_{STG}	-55 ~ +150	$^{\circ}C$

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

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V_{BR}	$I_R = 1mA$	7.5	-	10.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 7V$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1A, (t_p = 8/20\mu s)$	-	-	10	V
		$I_{PP} = 5A, (t_p = 8/20\mu s)$	-	-	13.5	V
		$I_{PP} = 8.8A, (t_p = 8/20\mu s)$	-	-	23	V
Diode Capacitance	C_J	$V_R = 0V, f = 1MHz$	-	-	20	pF

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

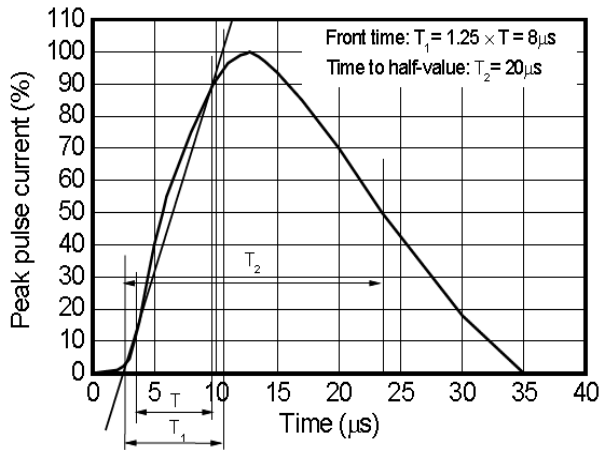


Fig 1 8/20 μs waveform per IEC61000-4-5

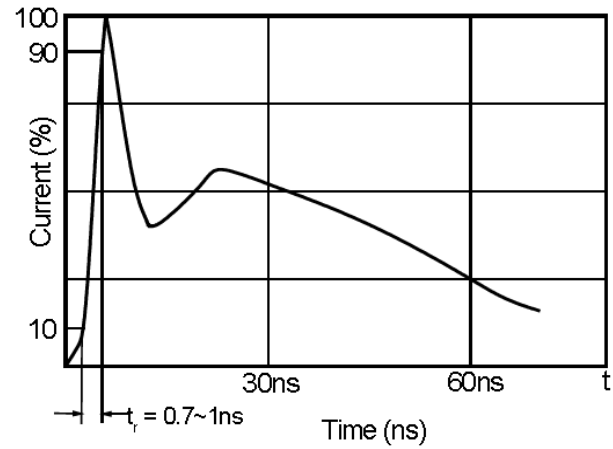


Fig 2 ESD pulse waveform according to IEC61000-4-2

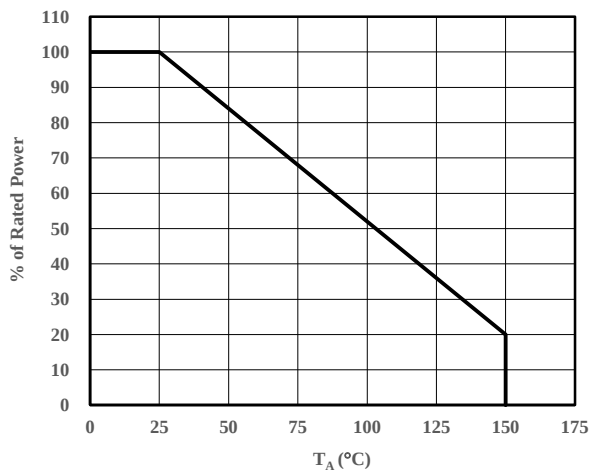


Fig 3 Power Derating Curve

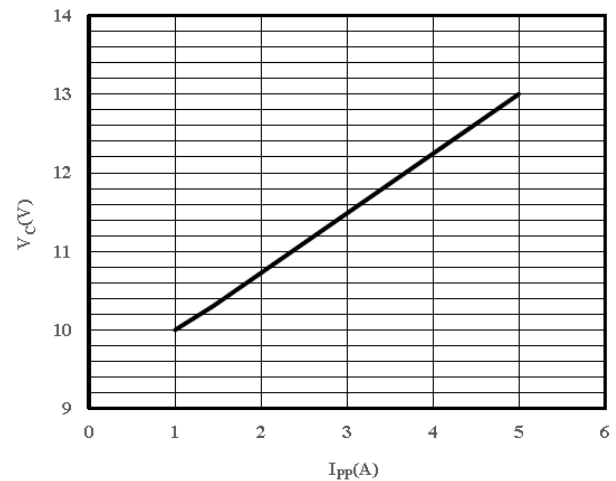


Fig 4 Clamping Voltage vs. Peak Pulse Current

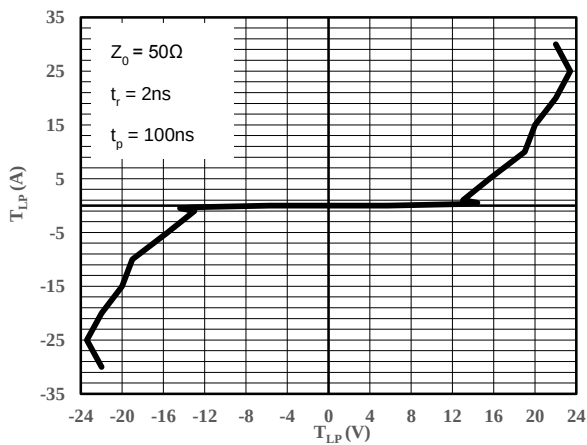
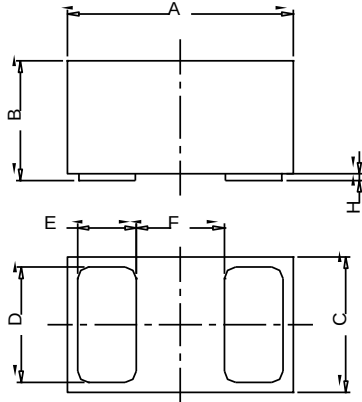


Fig 5 TLP Measurement

Package Outline Dimensions (Unit: mm)



DFN1006-2			
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

Package Outline Dimensions (Unit: mm)

DFN1006-2

