

Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- Working voltage: $V_{RWM} = 5V$
- Very Low Leakage current
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

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
TGESD5V0BL	DFN1006-2	10000 pcs / Tape & Reel	ZZ

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
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	135	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	9	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.25	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead	$R_{\theta JL}$	255	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	240	$^\circ\text{C/W}$
Junction Temperature	T_J	$-55 \sim +150$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

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}		-	-	5	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$	6	-	8	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$	-	-	1	μA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	-	10	V
		$I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$	-	-	13	V
		$I_{PP} = 9\text{A}, t_p = 8/20\mu\text{s}$	-	-	15	V
Dynamic Resistance	R_{dyn}	$I_R = 10\text{A}, t_p = 100\text{ns}$	-	0.2	-	Ω
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	22	pF

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

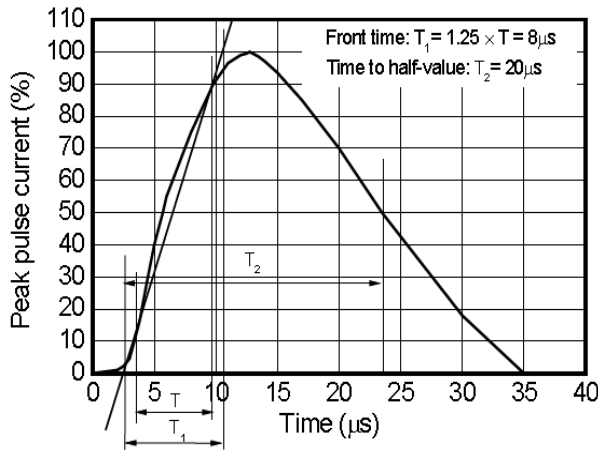


Fig 1 8/20 μs waveform per IEC61000-4-5

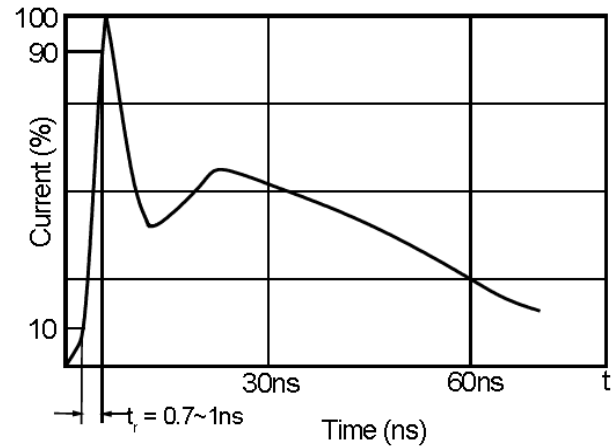


Fig 2 ESD pulse waveform according to IEC61000-4-2

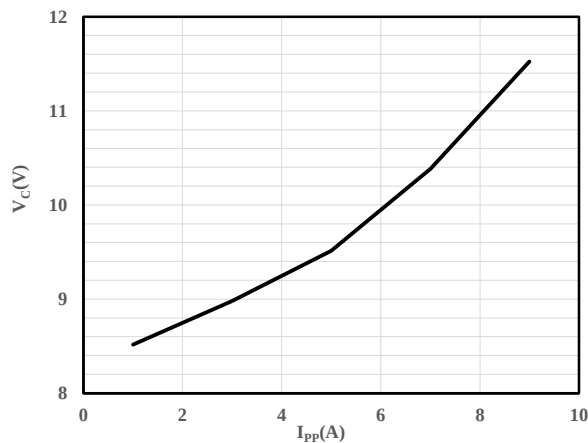


Fig 3 Clamping Voltage vs. Peak Pulse Current

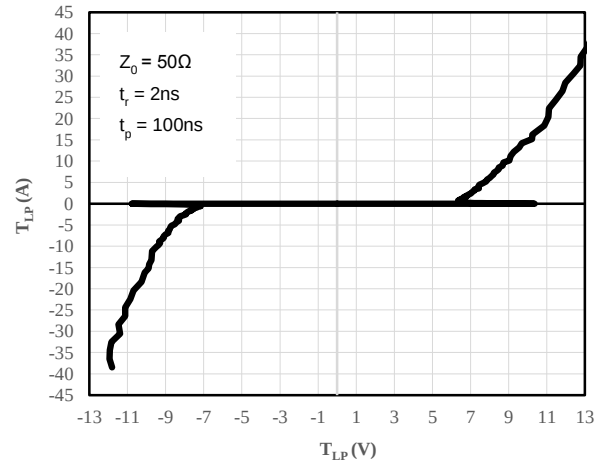
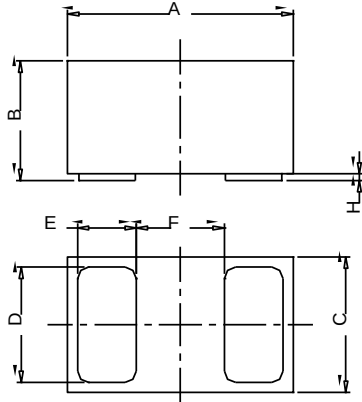


Fig 4 TLP Measurement

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)

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