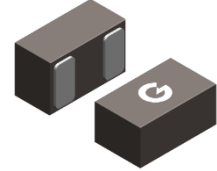


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- Working voltage: $V_{RWM} = 5\text{V}$
- Very Low Leakage current
- Very low load capacitance
- 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
TESDSSB5V0X1BL	DFN1006-2	10000 pcs / Tape & Reel	SBB

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

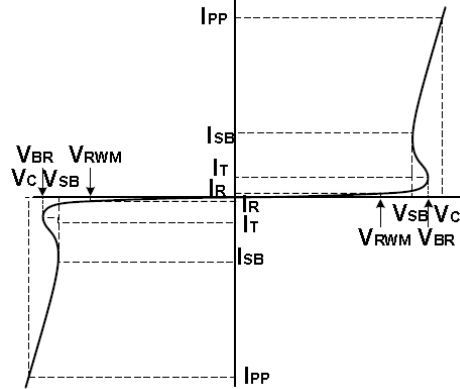
Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	V_{ESD-A}	± 30	kV
IEC 61000-4-2; ESD (Contact)	V_{ESD-C}	± 30	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	60	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	5	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	0.25	W
Thermal Resistance Junction-to-Air	$R_{\theta JA}$	400	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Lead	$R_{\theta JL}$	204	$^\circ\text{C/W}$
Thermal Resistance Junction-to-Case	$R_{\theta JC}$	240	$^\circ\text{C/W}$
Junction Temperature	T_J	$-55 \sim +125$	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	$-55 \sim +150$	$^\circ\text{C}$

Electrical Parameters

Symbol	Parameter	
I_{PP}	Reverse Peak Pulse Current	
V_C	Clamping Voltage @ I_{PP}	
V_{RWM}	Reverse Stand-off Voltage	
I_R	Reverse Leakage Current @ V_{RWM}	
$V_{(BR)}$	Reverse Breakdown Voltage @ I_T	
I_T	Test Current	
V_{SB}	Snap-Back Voltage @ I_{SB}	
I_{SB}	Snap-Back Current	



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	$V_{(BR)}$	$I_T = 1\text{mA}$	5.8	-	9.5	V
Reverse Leakage Current	I_R	$V_{RWM} = 5\text{V}$	-	-	200	nA
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$	-	6	8	V
		$I_{PP} = 5\text{A}, t_p = 8/20\mu\text{s}$	-	8.5	12	V
		$I_{PP} = 16\text{A}, t_p = 100\text{ns}$	-	11	-	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$	-	0.3	0.4	pF

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

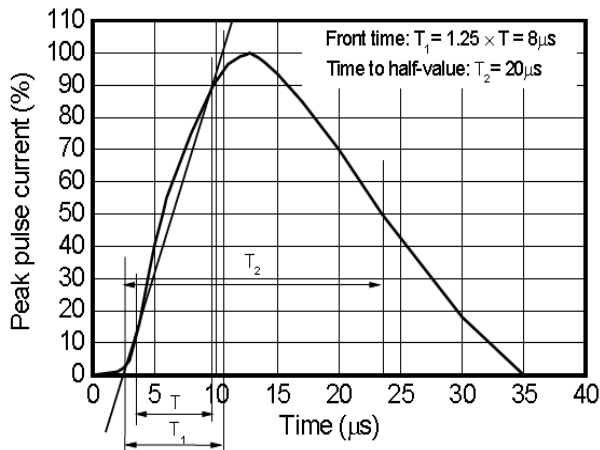


Fig 1 8/20 μs waveform per IEC61000-4-5

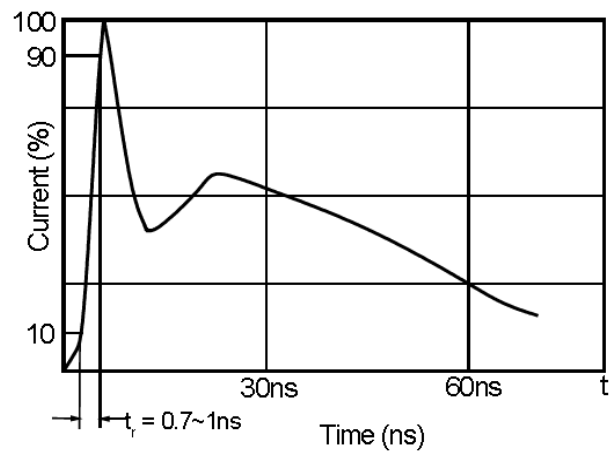


Fig 2 ESD pulse waveform according to IEC61000-4-2

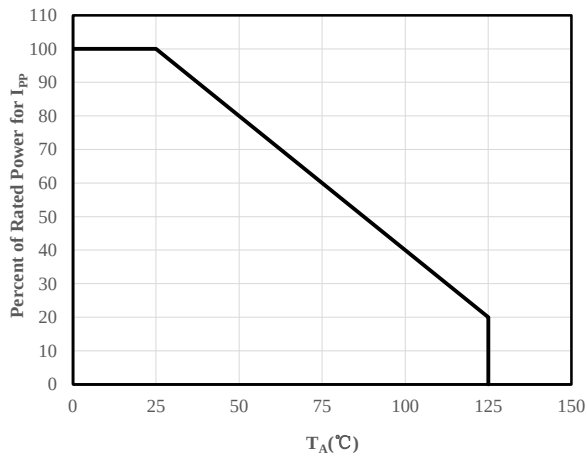


Fig 3 Power Derating Curve

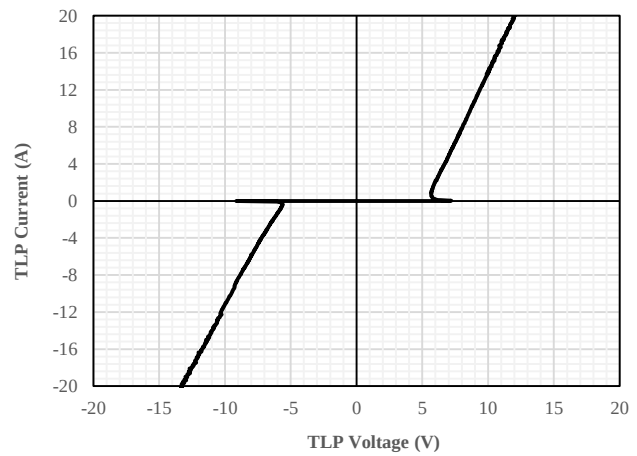
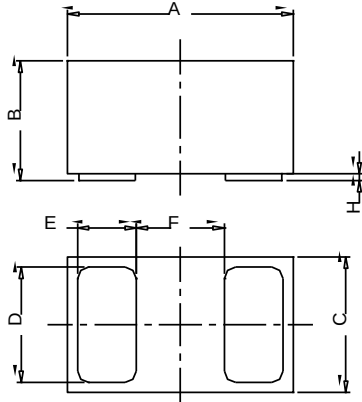


Fig 4 TLP Measurement

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

