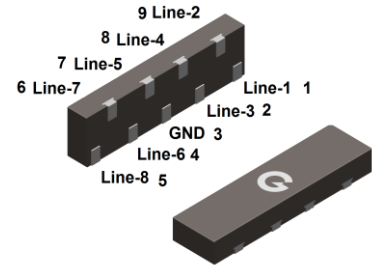
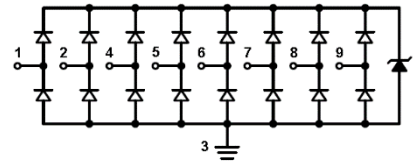


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): $\pm 20\text{ kV}$ (air), $\pm 15\text{ kV}$ (contact)
- Low reverse stand-off voltage: 3.3 V
- Very low leakage current
- Low diode capacitance
- RoHS compliant with Halogen-free
- Qualified to AEC-Q101 Standards

HF



DFN3810-9L

Mechanical Data

- Case: DFN3810-9L
- 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
TGESD3V3L8X1DP9	DFN3810-9L	3000 pcs / Tape & Reel	3V3L8X1

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air) * ¹	$V_{\text{ESD-A}}$	± 20	kV
IEC 61000-4-2; ESD (Contact) * ¹	$V_{\text{ESD-C}}$	± 15	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$) * ²	P_{PP}	60	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$) * ²	I_{PP}	4	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Junction Temperature	T_J	$-55 \sim +125$	$^\circ\text{C}$
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}		-	-	3.3	V
Reverse Breakdown Voltage	$V_{(BR)}$	$I_T = 1\text{mA}$ Pin-1, -2, -4, -5, -6, -7, -8, -9 to pin-3	4.2	-	-	V
Reverse Leakage Current	I_R	$V_{\text{Pin-1, -2, -4, -5, -6, -7, -8, -9}} = 3.3\text{V}$ $V_{\text{pin-3}} = 0\text{V}$	-	-	1	μA
Clamping Voltage ^{*2}	V_C	$I_{PP} = 1\text{A}$, ($t_p = 8/20\mu\text{s}$, I/O pin to GND) $I_{PP} = 4\text{A}$, ($t_p = 8/20\mu\text{s}$, I/O pin to GND)	-	-	10 15	V
Junction Capacitance	C_J	$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O pin to GND)	-	0.6	1.0	pF
		$V_R = 0\text{V}$, $f = 1\text{MHz}$ (I/O pin to I/O)	-	0.3	0.5	pF

Notes:

- Device stressed with ten non-repetitive ESD pulses, measured from pin 1 to pin 2
- Non-repetitive current pulse 8/20 μs exponential decay waveform according to IEC61000-4-5

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

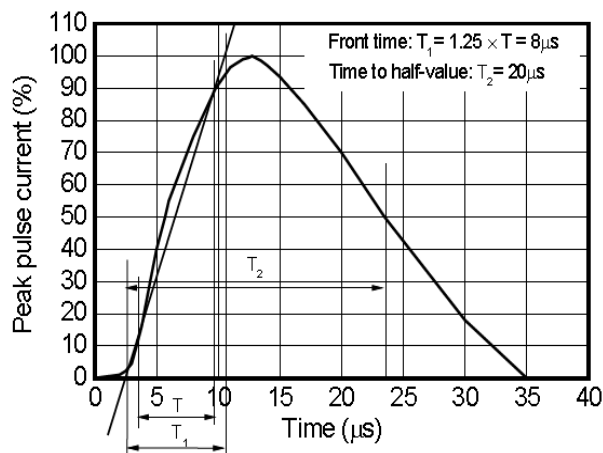


Fig 1 8/20 μs waveform per IEC61000-4-5

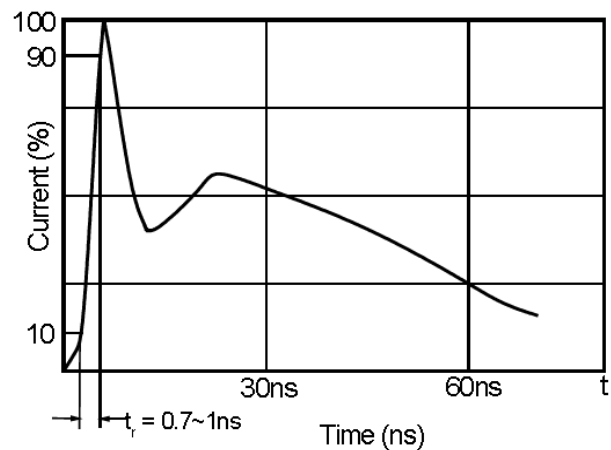


Fig 2 ESD pulse waveform according to IEC61000-4-2

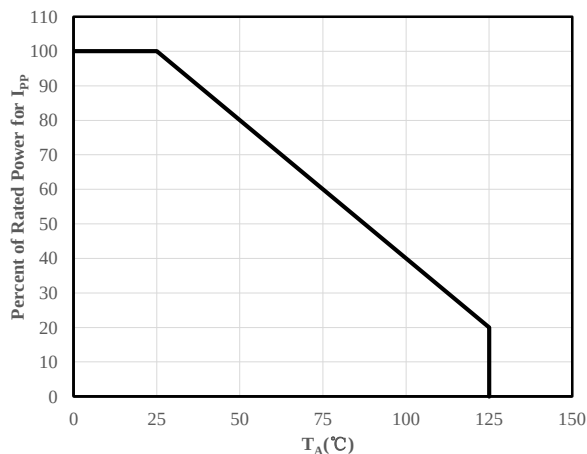


Fig 3 Power Derating Curve

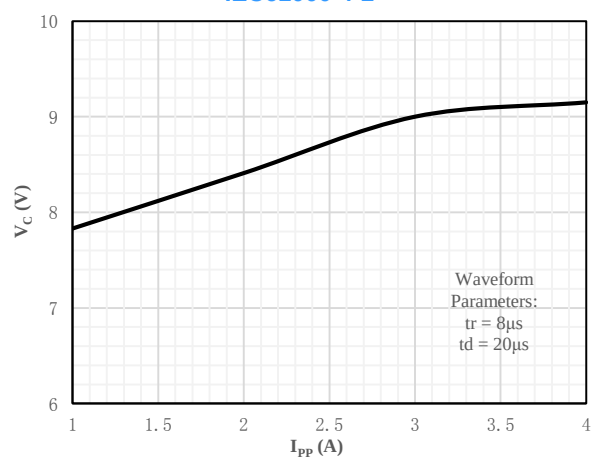
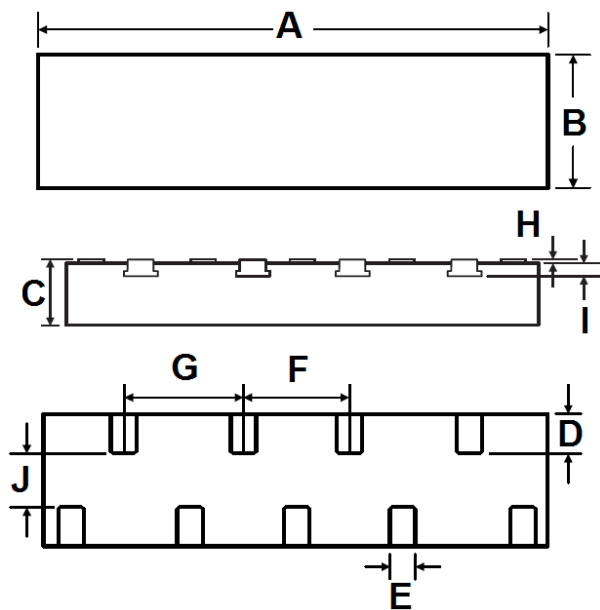


Fig 4 Clamping Voltage vs. Peak Pulse Current

Package Outline Dimensions (Unit: mm)



DFN3810-9L		
Dimension	Min.	Max.
A	3.70	3.90
B	0.90	1.10
C	0.45	0.65
D	0.25	0.35
E	0.15	0.25
F	0.70	0.90
G	0.80	1.00
H	0.00	0.05
I	0.10	0.20
J	0.30	0.50

Mounting Pad Layout (Unit: mm)

DFN3810-9L

