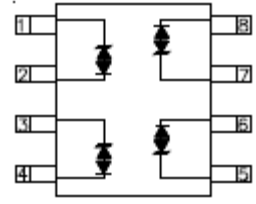


Features

- ESD / transient protection of high speed data lines
 - IEC 61000-4-2 (ESD): ± 30 kV (air), ± 30 kV (contact)
- Flow-through design simplifies layout
- Protects two line pairs
- Low reverse current
- Low variation in capacitance

HF



Mechanical Data

- Case: SOP-8
- 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
BL2804-S8	SOP-8	4000 pcs / Tape & Reel	2804-S8

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

Parameter	Symbol	Value	Unit
IEC 61000-4-2; ESD (Air)	$V_{\text{ESD-A}}$	± 30	kV
IEC 61000-4-2; ESD (Contact)	$V_{\text{ESD-C}}$	± 30	kV
Peak Pulse Power ($t_p = 8/20\mu\text{s}$)	P_{PP}	150	W
Peak Pulse Current ($t_p = 8/20\mu\text{s}$)	I_{PP}	12	A
Junction Temperature Range	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}		-	-	2.8	V
Punch-Through Voltage	V_{PT}	$I_{\text{PT}} = 2\mu\text{A}$	3.5	-	-	V
Snap-Back Voltage	V_{SB}	$I_{\text{SB}} = 50\text{mA}$	2.8	-	-	V
Reverse Leakage Current	I_{R}	$V_{\text{RWM}} = 2.8\text{V}$	-	-	50	nA
Clamping Voltage	V_{C}	$I_{\text{PP}} = 1\text{A}$, $t_p = 8/20\mu\text{s}$	-	-	5.5	V
		$I_{\text{PP}} = 12\text{A}$, $t_p = 8/20\mu\text{s}$	-	-	12.5	V
Junction Capacitance	C_J	$V_{\text{R}} = 2.8\text{V}$, $f = 1\text{MHz}$ Pins 1, 8 to 2, 7 and pins 3, 6 to 4, 5	-	1	3	pF

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

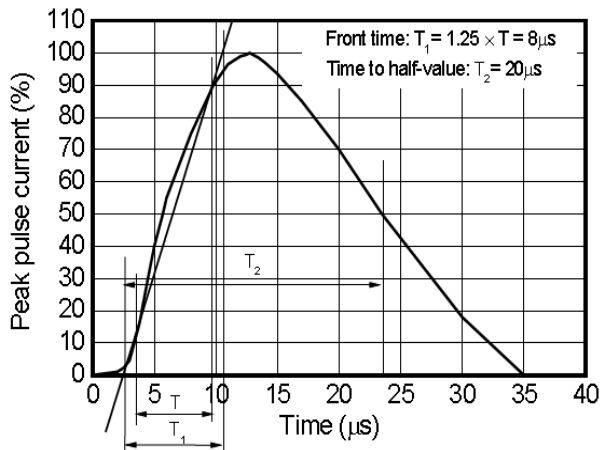


Fig 1 8/2 0 μs waveform per IEC61000-4-5

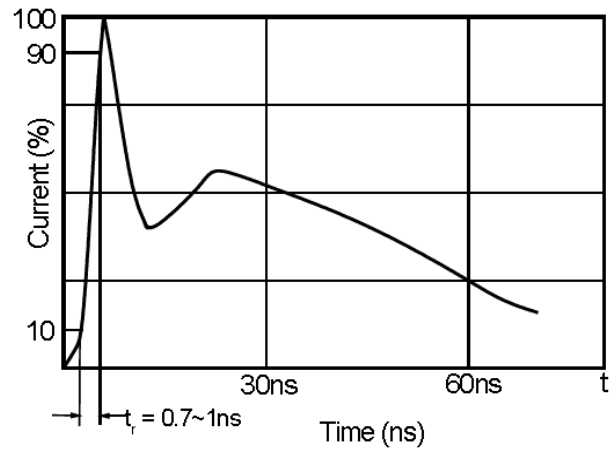


Fig 2 ESD pulse waveform according to IEC61000-4-2

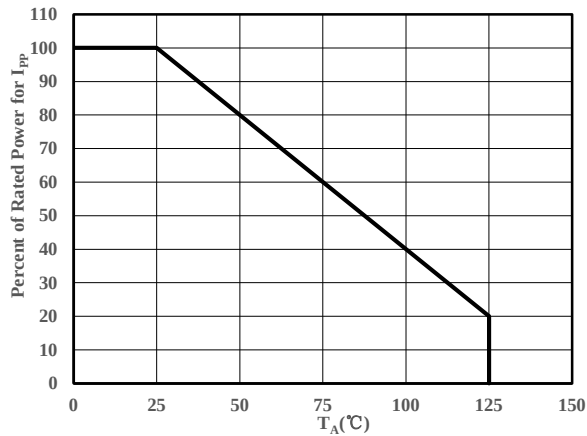


Fig 3 Power Derating Curve

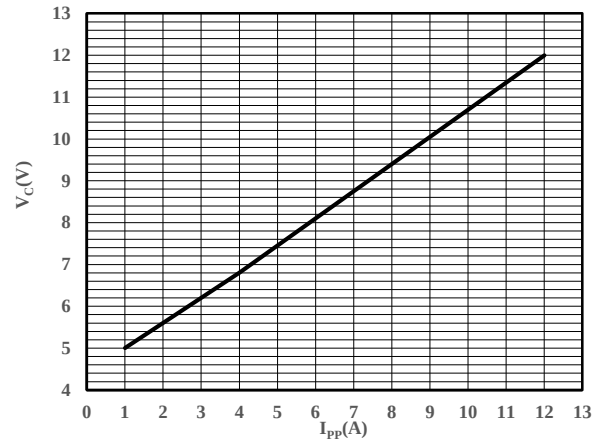


Fig 4 Clamping Voltage vs. Peak Pulse Current

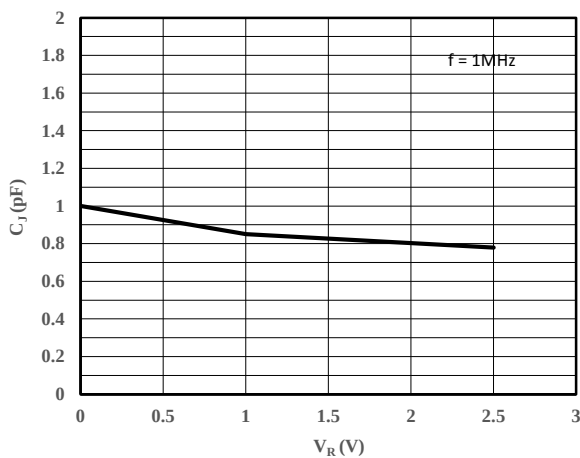
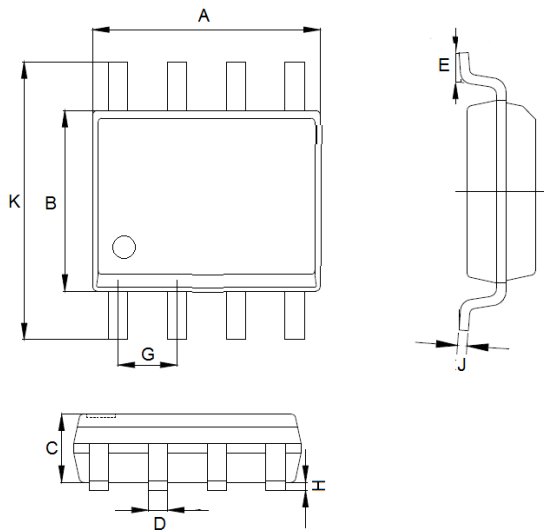


Fig 5 Junction Capacitance vs. Reverse Voltage

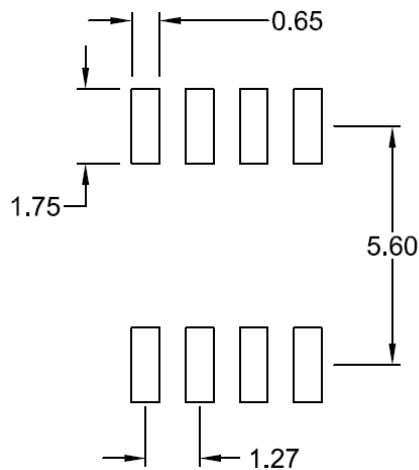
Package Outline Dimensions (Unit: mm)



SOP-8		
Dimension	Min.	Max.
A	4.80	5.20
B	3.65	4.05
C	1.30	1.50
D	0.37	0.47
E	0.45	0.65
G	1.17	1.37
H	0.10	0.22
J	0.10	0.30
K	5.80	6.20

Mounting Pad Layout (Unit: mm)

SOP-8



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