

NRESDLLC24VD8B

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 10\text{kV}$
 - Contact discharge: $\pm 10\text{kV}$
 - IEC61000-4-5 (Lightning) 1A (8/20 μs)
- RoHS Compliant

Description

The NRESDLLC24VD8B are ultralow capacitance devices designed to protect sensitive electronics from damage or latch-up due to ESD, EFT, and EOS. They are designed for use on highspeed ports in applications such as cell phones, notebook computers, and other portable electronics. These devices offer desirable characteristics for board level protection including fast response time, low operating and clamping voltage, and no device degradation.

Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum Reverse Peak Pulse Current (8/20 μs)	I _{PP}	1	A
ESD per IEC 61000-4-2 (Air)	V _{ESD}	± 10	KV
ESD per IEC 61000-4-2 (Contact)		± 10	
Storage Temperature Range	T _{STJ}	-55 to +150	°C
Operating Temperature Range	T _J	-55 to +150	°C

Electrical Characteristics

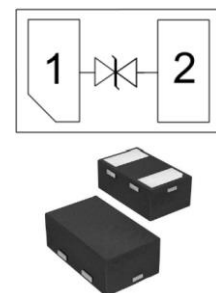
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V _{RWM}	Reverse Working Peak Voltage	-			24	V
V _{BR}	Reverse Breakdown Voltage	I _T = 1mA	24.5		31.5	V
I _R	Reverse Current	V _{RWM} = 5V			30	nA
V _C	Clamping Voltage	I _{PP} =1A, t _P =8/20 μs			17	V
C _D	Diode Capacitance	V _R = 0V, f = 1MHz		0.3	0.45	pF

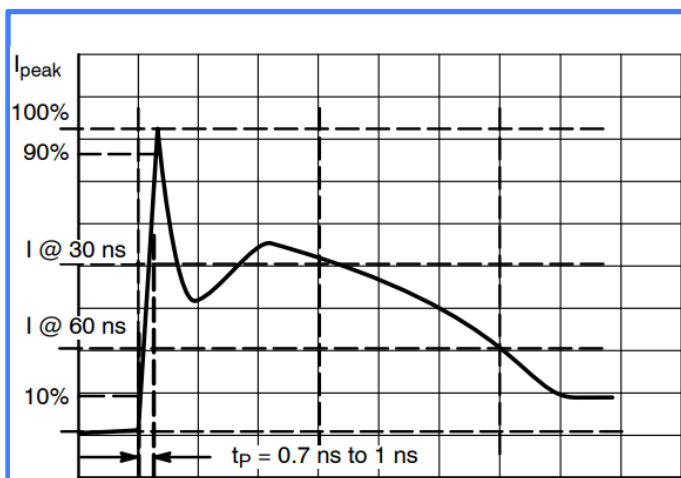
Applications

- Near Field Communication (NFC) lines
- RF signal lines
- FM Antenna

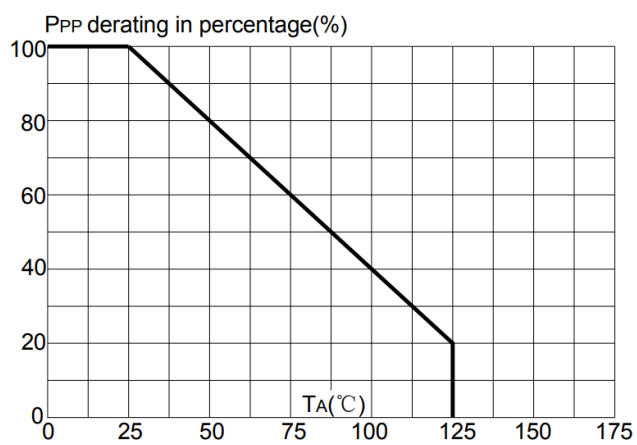
Circuit Diagram



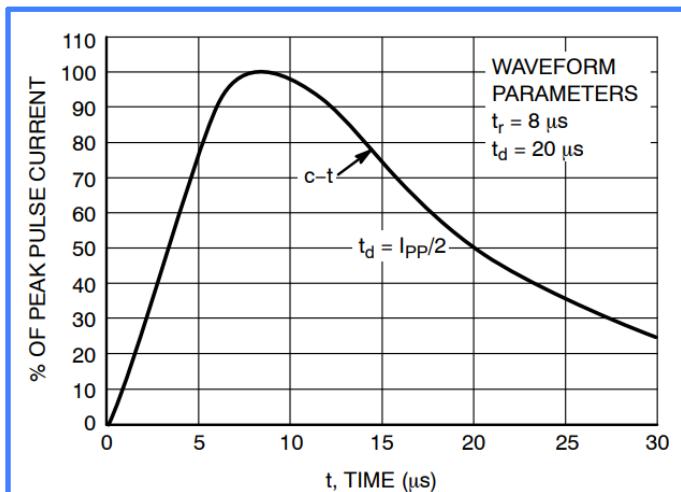
Characteristic Curves



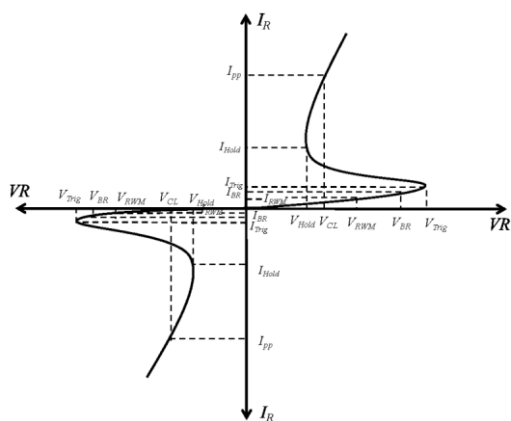
IEC61000-4-2 Pulse Waveform



Power Derating Curve

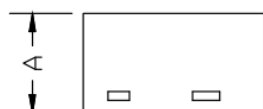
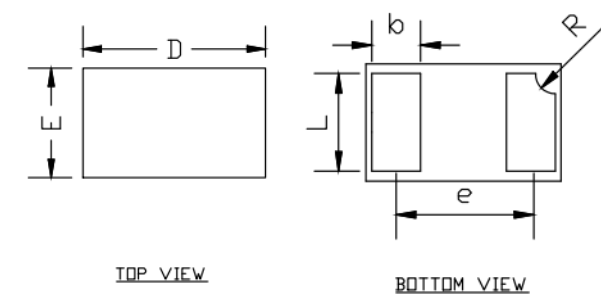


8/20μs Pulse Waveform



V-I Characteristics for Bidirectional Diode

DFN1006-2 Package Outline & Dimensions



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.40	-	0.50
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
L	0.45	0.50	0.55
e	0.675		
R	0.07	0.10	0.13

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.