

ESDULC5V0D8B

Features

- Ultra small package: 1.0x0.6x0.5mm
- Ultra low capacitance: 0.5pF typical
- Ultra low leakage
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 15\text{kV}$
 - Contact discharge: $\pm 8\text{kV}$
- Marking code: N
- RoHS Compliant

Description

The ESDULC5V0D8B is a bi-directional TVS diode, utilizing leading monolithic silicon technology to provide fast response time and low ESD clamping voltage, making this device an ideal solution for protecting voltage sensitive high-speed data lines.

Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Maximum Reverse Peak Pulse Current	I_{PP}	1	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 15	KV
ESD per IEC 61000-4-2 (Contact)		± 8	
Storage Temperature Range	T_{STJ}	-55 to +150	°C
Operating Temperature Range	T_J	-55 to +125	°C

Electrical Characteristics

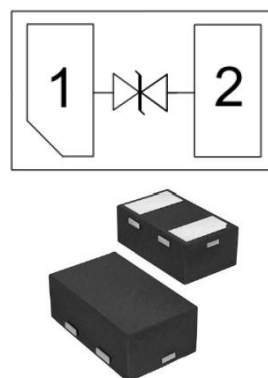
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage	-			5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	6.0	7.5	9	V
I_R	Reverse Current	$V_{RWM} = 5\text{V}$			0.1	μA
V_C	Clamping Voltage	$I_{PP}=1\text{A}$, $t_P = 8/20\mu\text{s}$			15	V
C_D	Diode Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$		0.5	0.9	pF

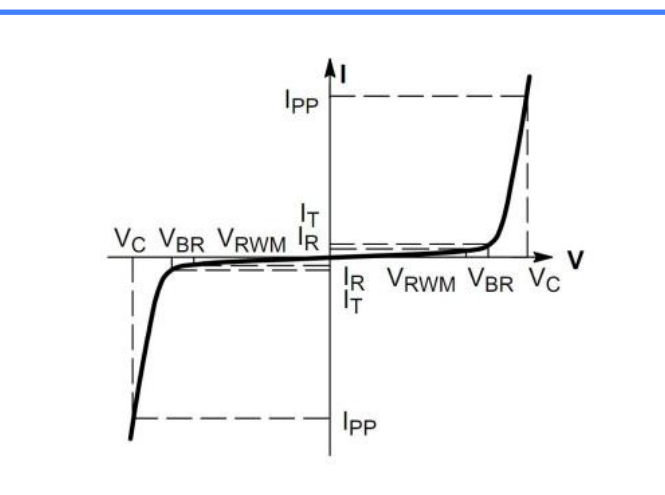
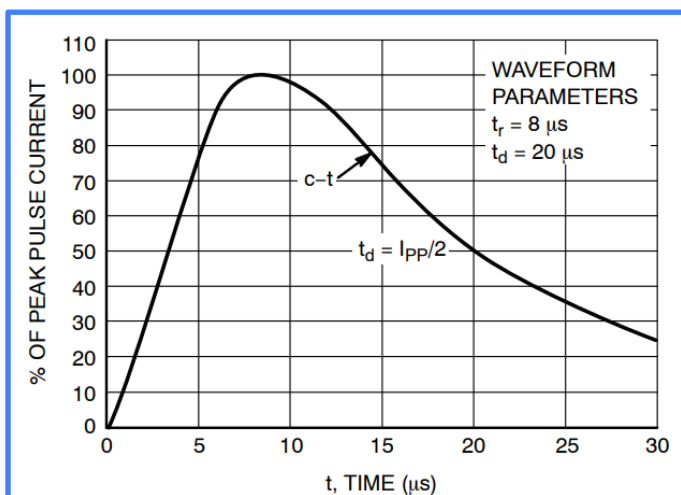
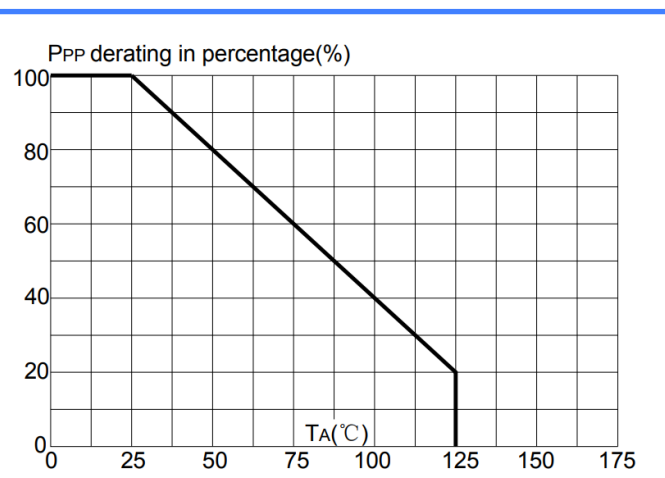
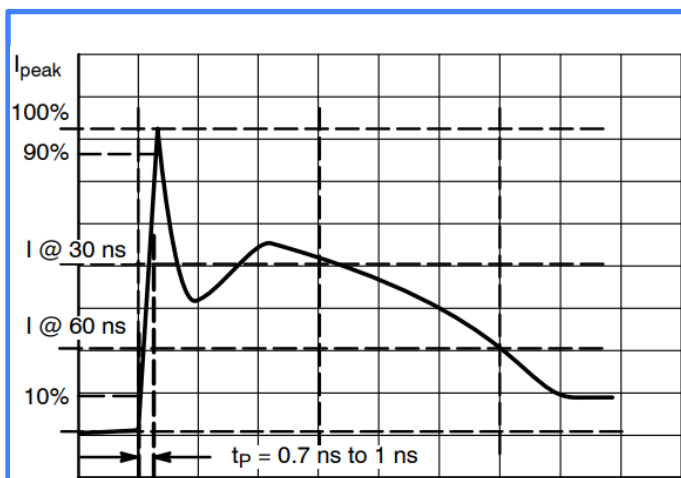
Applications

- Smart phones
- MDDI Ports
- USB Ports
- DATA Line

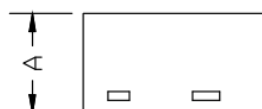
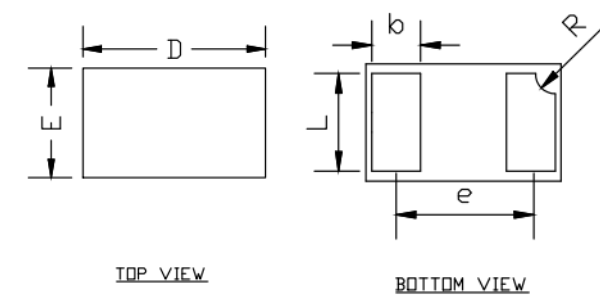
Circuit Diagram



Characteristic Curves



DFN1006-2 Package Outline & Dimensions



SIDE VIEW

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.