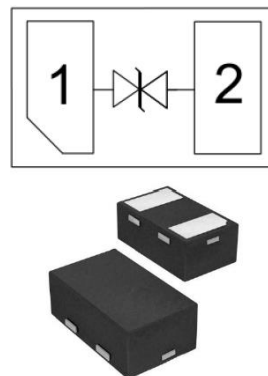


ESD12VD06B

Features

- 1-Channel Bi-directional ESD diode
- Ultra small package: 0.6x0.3x0.3mm
- Ultra low leakage: nA level
- Low operating voltage: 12V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
 - Air discharge: $\pm 30\text{kV}$
 - Contact discharge: $\pm 30\text{kV}$
- RoHS Compliant
- Response time is typically $< 1\text{ ns}$



Absolute Maximum Ratings

$T_{\text{amb}}=25^{\circ}\text{C}$ unless otherwise specified

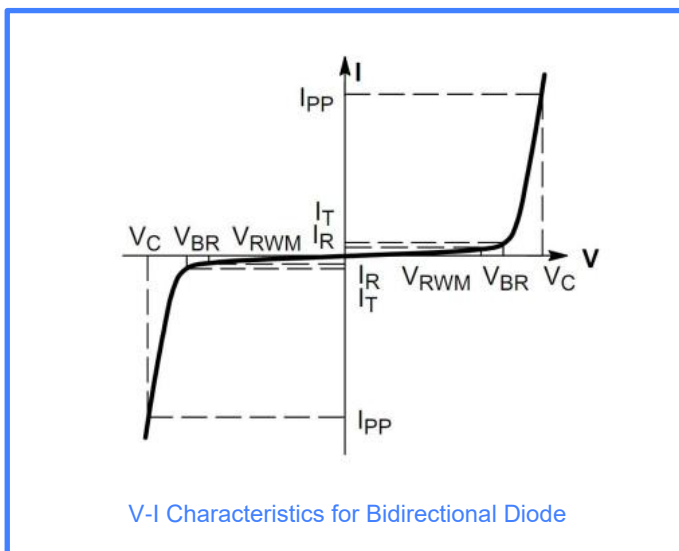
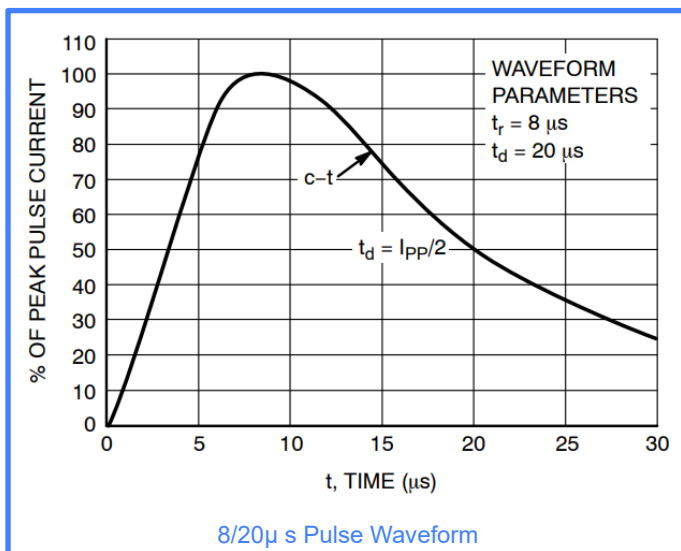
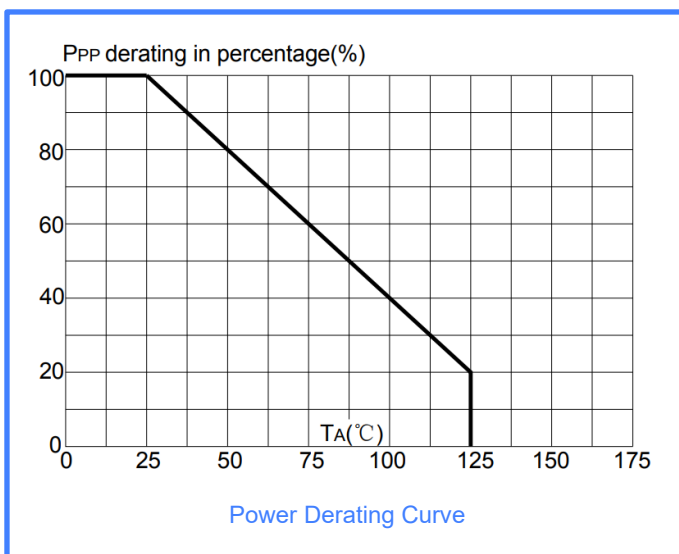
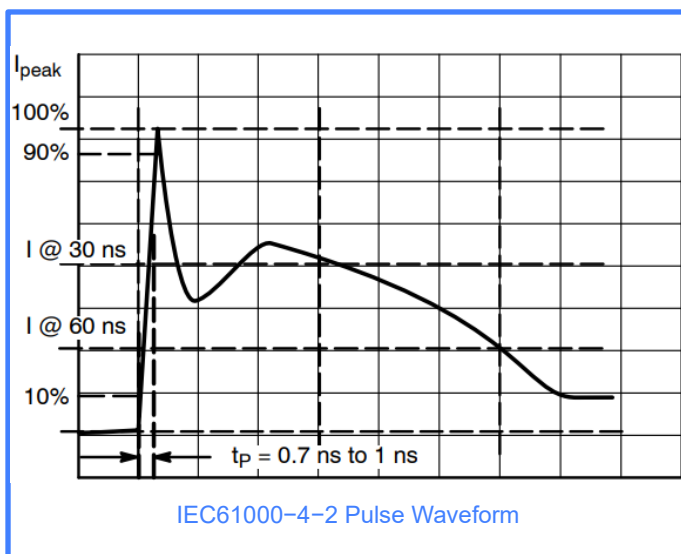
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 μs)	P_{pp}	120	W
Maximum Reverse Peak Pulse Current	I_{PP}^{*1}	7	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	KV
ESD per IEC 61000-4-2 (Contact)		± 30	
Storage Temperature Range	T_{STJ}	-55 to +150	$^{\circ}\text{C}$
Operating Temperature Range	T_{J}	-55 to +125	$^{\circ}\text{C}$

Electrical Characteristics

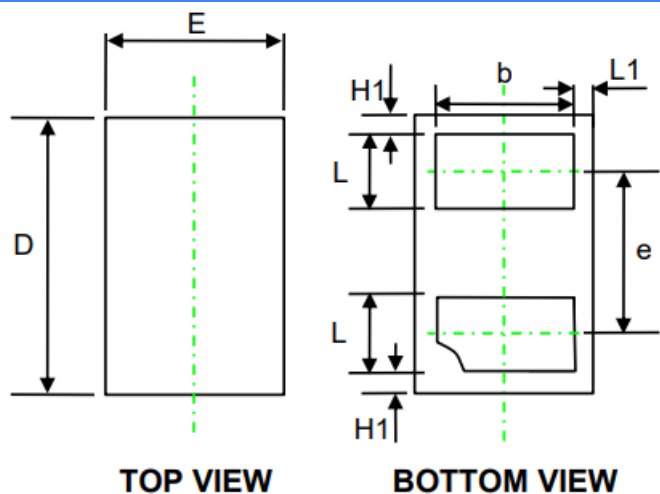
$T_{\text{A}}=25^{\circ}\text{C}$ unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage	-			12	V
V_{BR}	Reverse Breakdown Voltage	$I_{\text{T}} = 1\text{mA}$	13	14	17	V
I_{R}	Reverse Current	$V_{\text{RWM}} = 5\text{V}$			0.5	μA
V_{C}	Clamping Voltage	$I_{\text{PP}}=1\text{A}$, $t_{\text{P}}=8/20\mu\text{s}$		15		V
V_{C}	Clamping Voltage	$I_{\text{PP}}=7\text{A}$, $t_{\text{P}}=8/20\mu\text{s}$		20		V
C_{D}	Diode Capacitance	$V_{\text{R}} = 0\text{V}$, $f = 1\text{MHz}$			15	pF

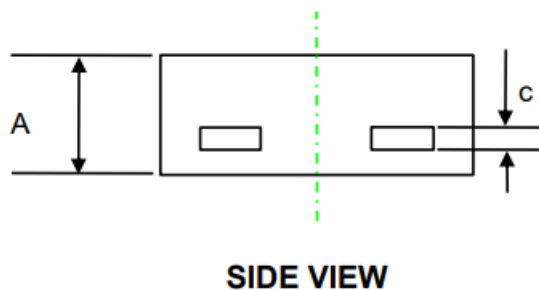
Characteristic Curves



DFN0603 Package Outline & Dimensions



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.27	0.30	0.34
E	0.25	0.30	0.35
D	0.55	0.60	0.65
b	0.20	0.25	0.30
c	0.050 REF.		
e		0.35	
L	0.13	0.18	0.23
L1	0.03 REF.		
H1	0.045 REF.		



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.