



### Discription

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006-2L(SOD-882) leadless ultra small Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients.

### Features

- ★ Bidirectional ESD protection of one line
- ★ Low operating voltage: 3.3 V
- ★ Low clamping voltage VC = 12V @7A
- ★ Response time is typically<1ns
- ★ Ultra Low Leakage:nAlevel
- ★ IEC 61000-4-2: level 4 (ESD)
- ★ IEC 61000-4-5 (surge): IPPMQ8 A

### Applications

- ★ Portable electronics
- ★ Computers and peripherals
- ★ Audio and video equipment
- ★ Cellular handsets and accessories
- ★ Communication systems
- ★ Power supplies

### Ordering Information

Product ID	Pack	Qty(PCS)
HESD9B3.3ST5G	DFN1006-2L	10000



DFN1006-2L



Circuit Diagram



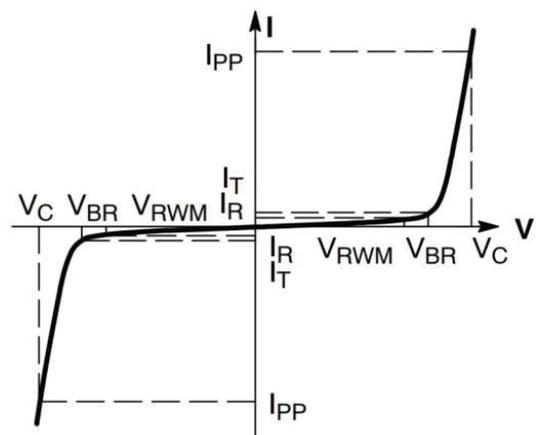
**Absolute Ratings(Tamb = 25°C)**

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20µs)	P <sub>PPM</sub>	84	W
Maximum lead temperature for soldering during 10s	T <sub>L</sub>	260	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C
Operating Temperature Range	T <sub>OP</sub>	-55 to +150	°C
Maximum junction temperature	T <sub>j</sub>	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	V <sub>ESD</sub>	15	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V <sub>ESD</sub>	8	kV

**Electrical Characteristics**

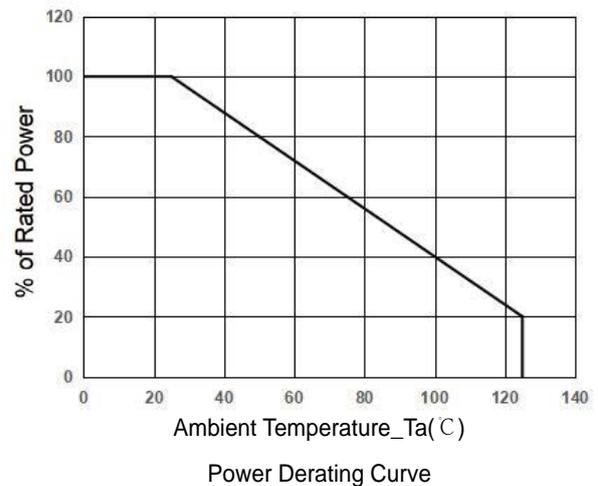
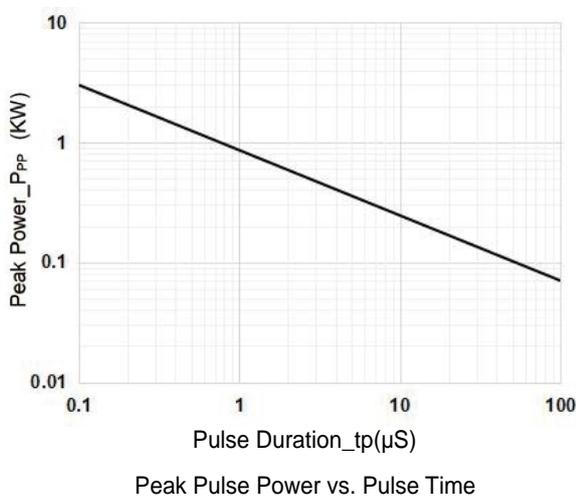
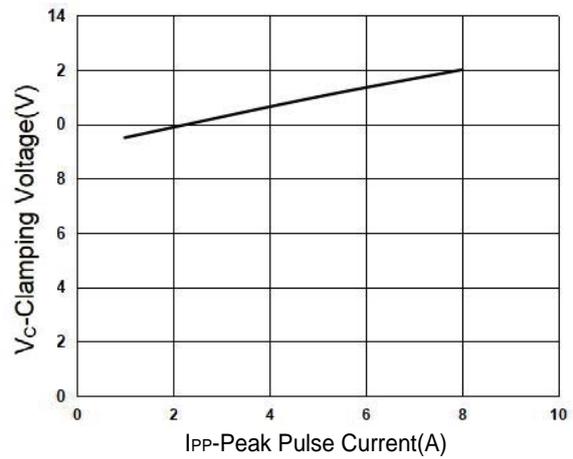
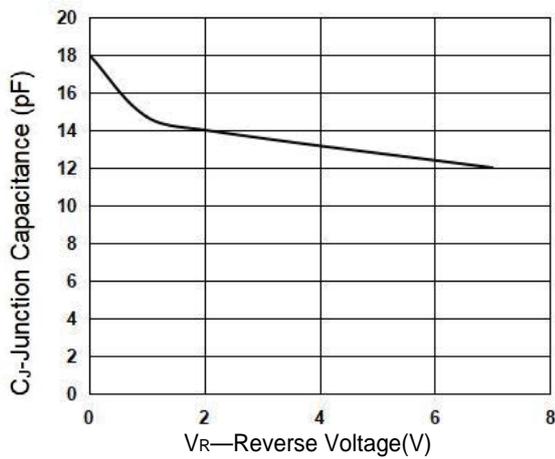
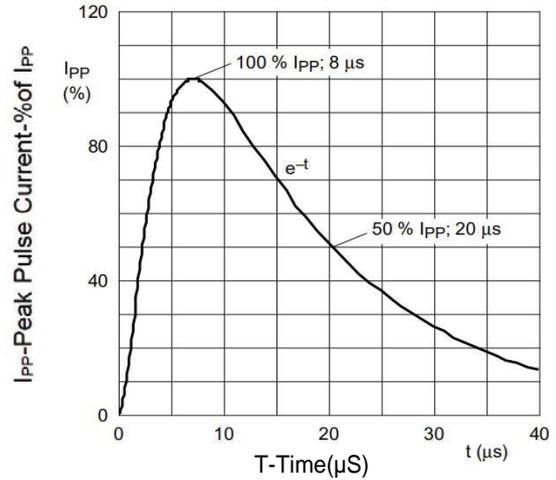
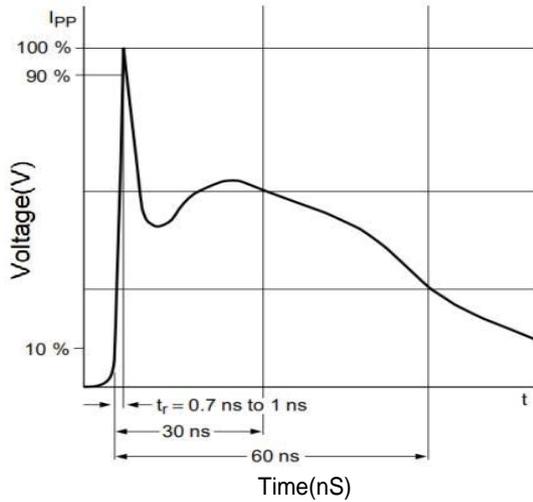
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V <sub>RWM</sub>	--	--	3.3	V	
Breakdown Voltage	V <sub>BR</sub>	3.6			V	I <sub>T</sub> =1mA
Leakage Current I <sub>Leak</sub>	I <sub>R</sub>	--	--	1.0	uA	V <sub>RWM</sub> =7.0V
Clamping Voltage	V <sub>C</sub>	--		8.0	V	I <sub>PP</sub> =1A, Tp=8/20µs
Clamping Voltage	V <sub>C</sub>	--		12.0	V	I <sub>PP</sub> =7A, Tp=8/20µs
Junction Capacitance	C <sub>J</sub>	--	10.0	15.0	pF	V <sub>R</sub> =0V, f=1MHz

Symbol	Parameter
I <sub>PPM</sub>	Maximum Reverse Peak Pulse Current
V <sub>C</sub>	Clamping Voltage @ I <sub>PP</sub>
V <sub>RWM</sub>	Working Peak Reverse Voltage
I <sub>R</sub>	Reverse Leakage Current @ V <sub>RWM</sub>
I <sub>T</sub>	Test Current
V <sub>BR</sub>	Breakdown Voltage @ I <sub>T</sub>



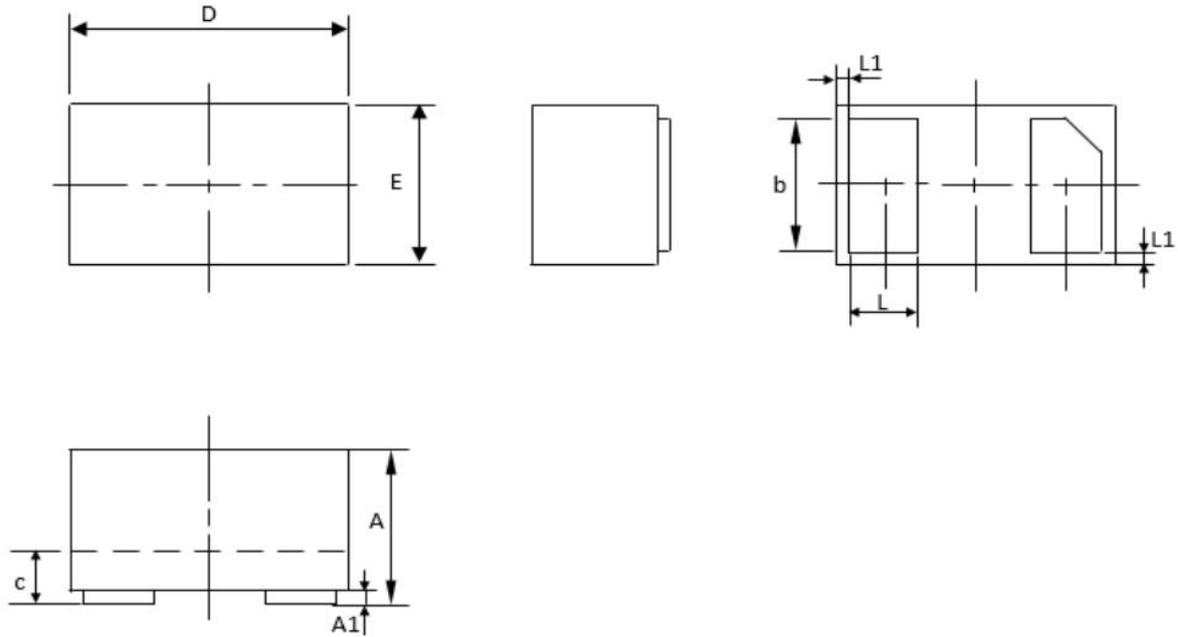


### Typical Characteristics





### Outline And Dimensions



DFN1006-2L			
Dim	Min	Typ.	Max
A	0.46	0.48	0.50
A1	0	0.02	0.05
b	0.45	0.5	0.55
c	0.1	0.12	0.14
D	0.95	1.00	1.05
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.035	0.05	0.065
h	0.07	0.12	0.17

All Dimensions in mm



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