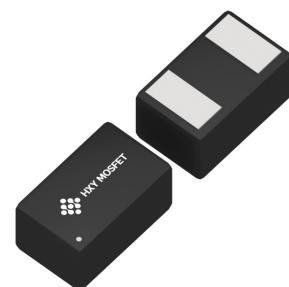




## Description

Low capacitance bidirectional ElectroStatic Discharge (ESD) protection diode in a DFN1006(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.



DFN1006-2L

## Features

- ★ Bidirectional ESD protection of one line
- ★ Low operating voltage: 7.0V
- ★ Low clamping voltage  $VC = 13V @8A$
- ★ Response time is typically <1ns
- ★ Ultra Low Leakage: nA Level
- ★ IEC 61000-4-2: level 4 (ESD)
- ★ IEC 61000-4-5 (surge): IPPMQ 8A



## Applications

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

Circuit Diagram

## Ordering information

Product ID	Pack	Qty(PCS)
AOZ8S507BDS-07	DFN1006-2L	10000



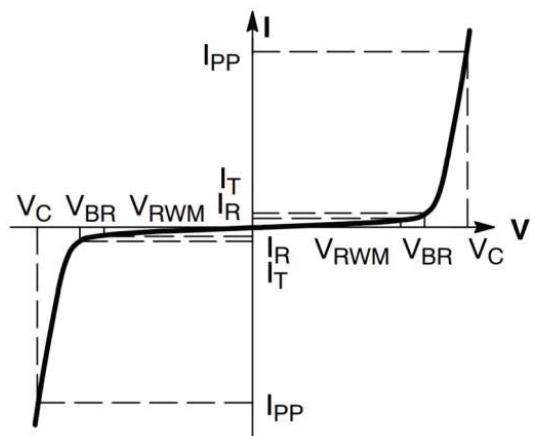
### Absolute Ratings(Tamb = 25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P <sub>PPM</sub>	104	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>	-40 to +125	°C
Maximum junction temperature	T <sub>j</sub>	150	°C
ESD voltage IEC 61000-4-2 (air discharge)	V <sub>ESD</sub>	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V <sub>ESD</sub>	15	kV

### Electrical Characteristics

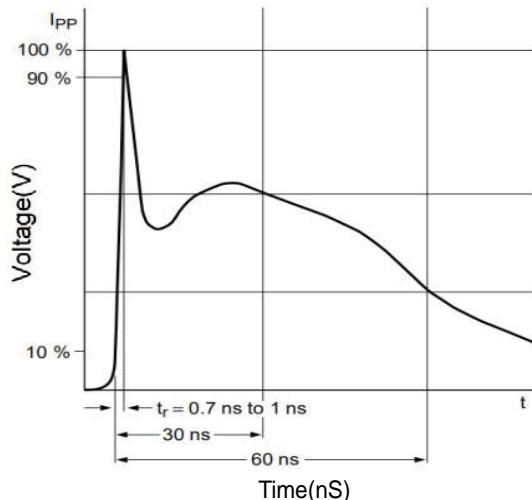
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V <sub>RWM</sub>	--	--	7.0	V	
Breakdown Voltage	V <sub>BR</sub>	7.6	8.2	9.0	V	I <sub>T</sub> =1mA
Leakage Current I <sub>Leak</sub>	I <sub>R</sub>	--	--	0.1	nA	V <sub>RWM</sub> =7.0V
Clamping Voltage	V <sub>c</sub>	--	10.0	12.0	V	I <sub>PP</sub> =5A, T <sub>p</sub> =8/20μs
Clamping Voltage	V <sub>c</sub>	--	11.5	13.0	V	I <sub>PP</sub> =8A, T <sub>p</sub> =8/20μs
Junction Capacitance	C <sub>J</sub>	--	18.0	--	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>

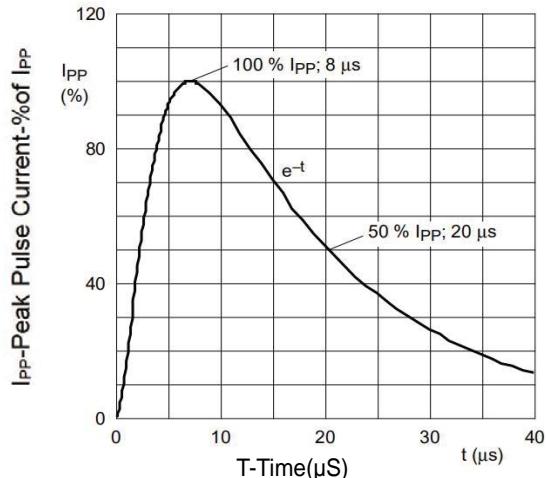




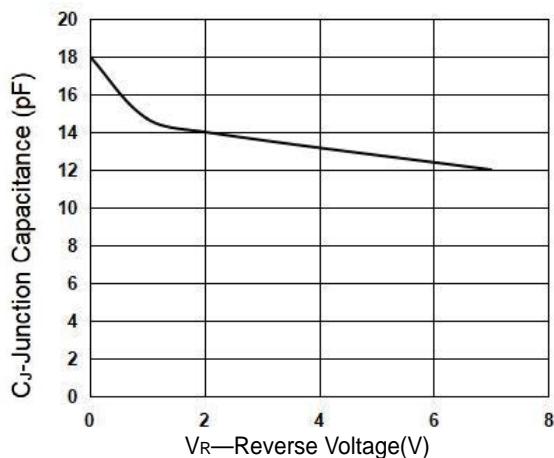
## Typical Characteristics



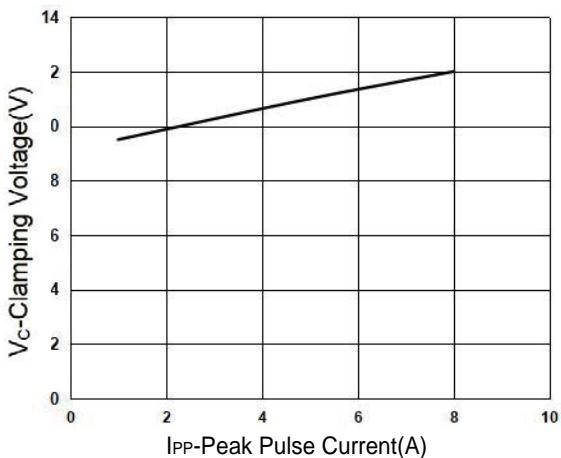
IEC61000-4-2 Pulse Waveform



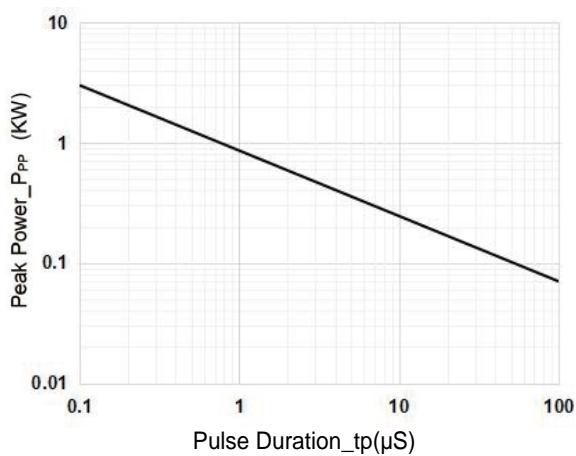
IEC61000-4-5 8X20μs Pulse Waveform



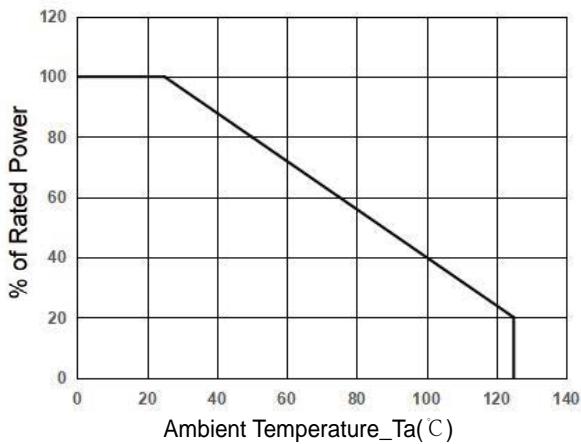
Junction Capacitance vs. Reverse Voltage



Clamping Voltage vs. Peak Pulse Current



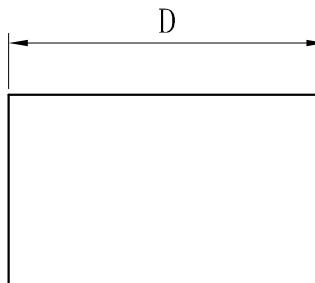
Peak Pulse Power vs. Pulse Time



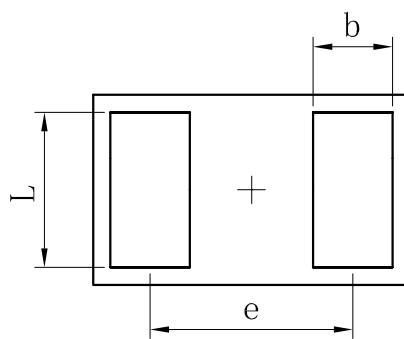
Power Derating Curve



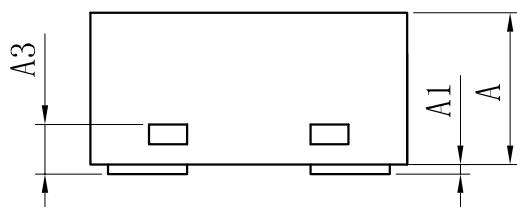
### Outline And Dimensions



TOP VIEW



BOTTOM VIEW

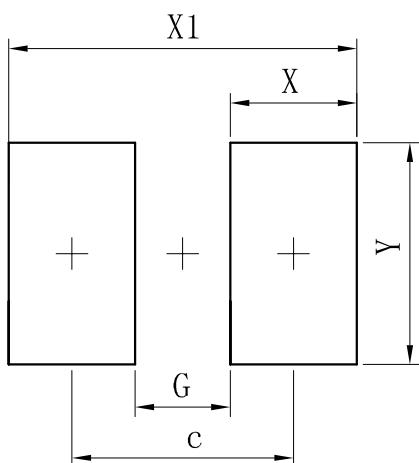


SIDE VIEW

DFN1006-2L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	-	0.64	-
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	-	0.05
A3	0.127REF.		

All Dimensions in mm

### Soldering Footprint



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70



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