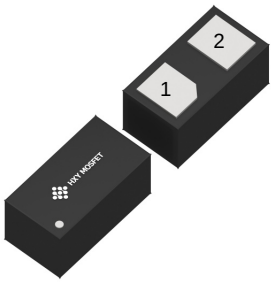
AOZ8251BDI-05
ESD PROTECTION DIODE

Discription

Femtofarad bidirectional ElectroStatic Discharge (ESD) protection diode in a leadless ultra small DFN0603-2L Surface-Mounted Device (SMD) plastic package designed to protect one signal line from the damage caused by ESD and other transients. The combination of extremely low capacitance, high ESD maximum rating and ultra small package makes the device ideal for high-speed data line protection and antenna protection applications.



DFN0603-2L
(DFN-2(0.3x0.6))

Features

- ★ Ultra small SMD package
- ★ Bidirectional ESD protection of one line
- ★ Femtofarad capacitance: CJ = 3pF (Max)
- ★ Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  Air discharge: ±20KV, Contact discharge: ±20KV
- ★ RoHS Compliant



Circuit Diagram

Applications

- ★ ultra high-speed datalines
- ★ very sensitive interface lines
- ★ generic interface lines
  in portable electronics,communication,consumer and computing devices.

Ordering Information

Product ID	Pack	Qty(PCS)
AOZ8251BDI-05	DFN0603-2L(DFN-2(0.3x0.6))	15000

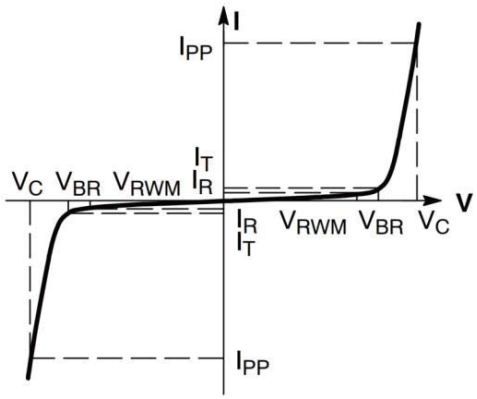
Absolute Ratings(Tamb = 25°C)

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp = 8/20μs)	P_{PK}	30	W
Maximum lead temperature for soldering during 10s	T_L	260	°C
Storage Temperature Range	T_{stg}	-55 to +150	°C
Operating Temperature Range	T_{OP}	-40 to +125	°C
ESD voltage IEC 61000-4-2 (air discharge)	V_{ESD}	20	kV
ESD voltage IEC 61000-4-2 (contact discharge)	V_{ESD}	20	kV

Electrical Characteristics

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.0	--		V	I_T=1mA
Leakage Current ILeak	I_R	--	--	1.0	uA	V_{RWM}=5V
Clamping Voltage	V_C	--	8	--		I_{PP}=1A,Tp=8/20μs
Clamping Voltage	V_C	--	--	12	V	I_{PP}=4.5A,Tp=8/20μs
Junction Capacitance	C_J	--	--	3	pF	V_R=0V, f=1MHz

Symbol	Parameter
I_{PPM}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}
V_{RWM}	Working Peak Reverse Voltage
I_R	Reverse Leakage Current @ V_{RWM}
I_T	Test Current
V_{BR}	Breakdown Voltage @ I_T



Typical Characteristics

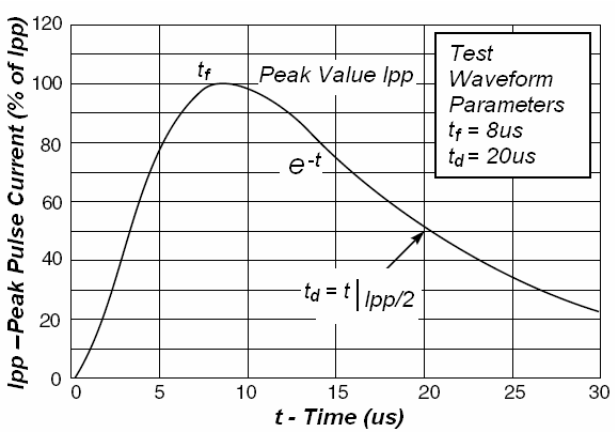


Fig1. Pulse Waveform

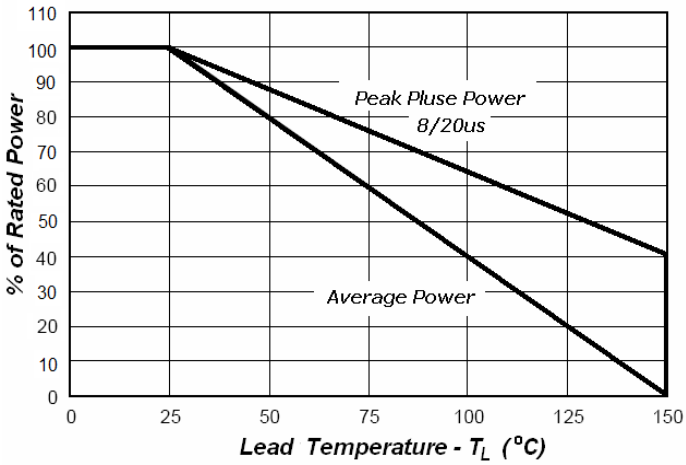


Fig2.Power Derating Curve

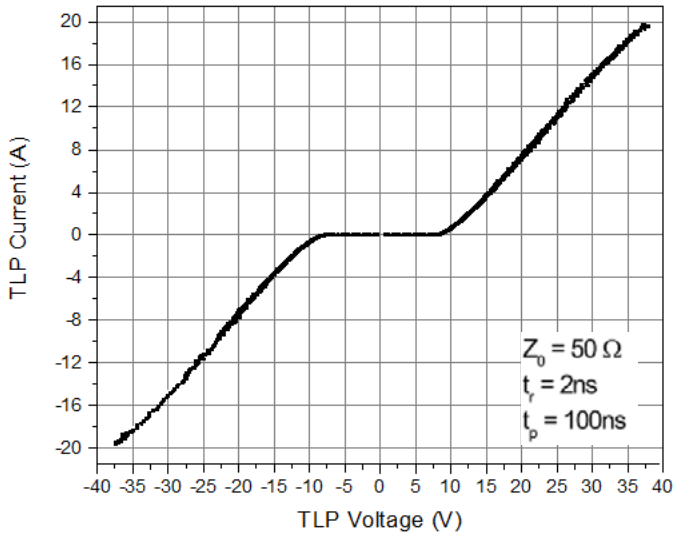
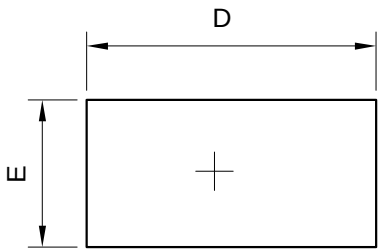
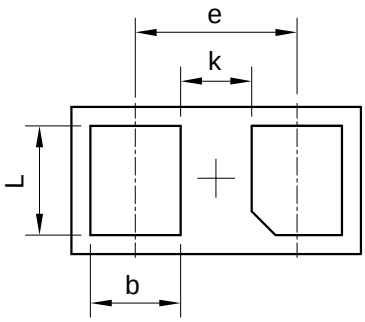


Fig3.TLP Measurement

Outline And Dimensions



TOP VIEW



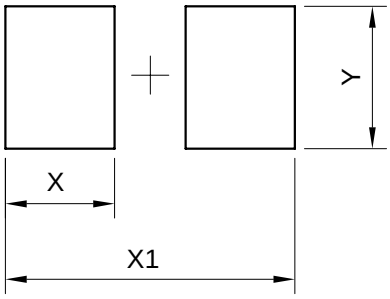
BOTTOM VVIEW

DFN0603-2L(DFN-2(0.3x0.6))			
Dim	Min	Typ.	Max
D	0.58	0.61	0.64
E	0.28	0.31	0.34
e	-	0.34	-
L	0.20	0.23	0.26
b	0.16	0.19	0.22
A	0.25	0.28	0.31
k	0.12	0.15	0.18
All Dimensions in mm			



SSIDE VIEW

Soledering Footprint



DFN0603-2L	
DIM	(mm)
X	0.23
X1	0.61
Y	0.30

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