

Descriptions

This is working voltage 5V ESD protection diode in a DFN0603-2L package.

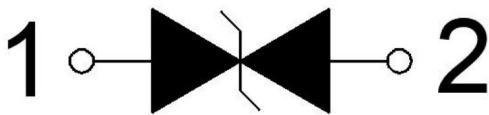
Features

- 2-pin lead-less package
- Low junction capacitance (Max value: 0.45pF)
- Peak Pulse Current (8/20 μ s) MAX: 4A
- IEC61000-4-2 (ESD) $\pm$ 25kV (air), $\pm$ 22kV (contact)
- Low clamping voltage
- Low leakage current
- Working voltages: 5V
- RoHS Compliant

Applications

- High Speed Line :USB1.0/2.0/3.0, VGA, DVI,SDI
- High Definition Multi-Media Interface(HDMI1.3/1.4/2.0)
- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Peripherals
- Cellular handsets and accessories
- Portable instrumentation

Equivalent Circuit & Pinning



Bi-directional



DFN0603-2L

Absolute Maximum Ratings(Ta=25°C)

Parameters	Symbol	Value	Unit
Peak Pulse Power (tp=8/20μs waveform)	P _{PP}	100	W
Peak Pulse Current (8/20μs)	I _{PP}	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V _{ESD}	±25 ±22	KV
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

Electrical Characteristics(Ta=25°C)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	V _{RWM}				5	V
Reverse Breakdown Voltage	V _{BR}	I _R = 1mA	6		9	V
Reverse Leakage Current	I _R	V _R = 5V			0.2	uA
Clamping voltage	V _C	I _{PP} = 1A, T _P =8/20us			12	V
Clamping voltage	V _C	I _{PP} = 4A, T _P =8/20us			25	V
Junction capacitance	C _J	V _R = 0V, f = 1MHz		0.2	0.45	pF

Electrical Characteristic Curve

FIG1: Power rating derating curve

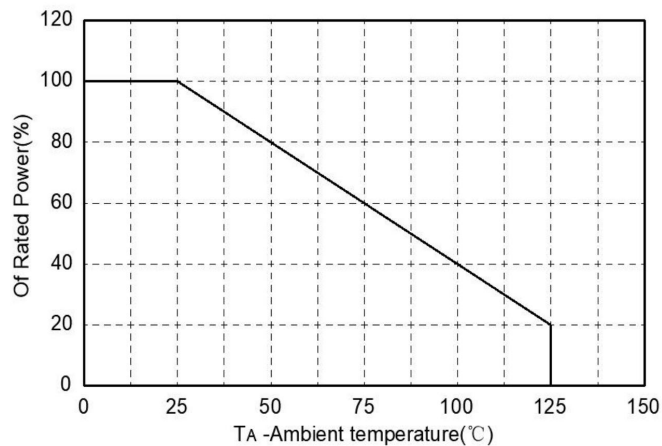


FIG2: pulse Waveform

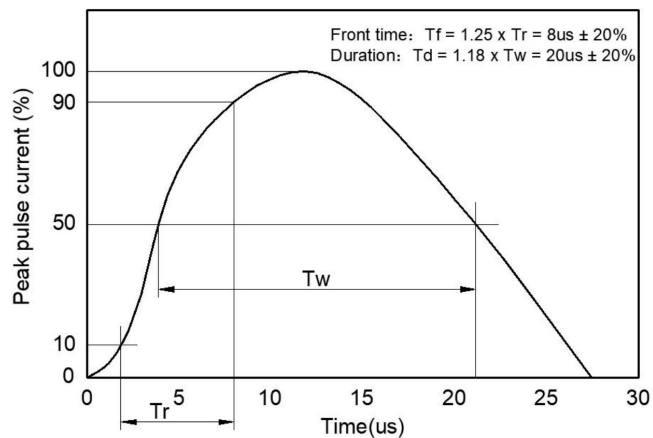


FIG3: Capacitance between terminals characteristics

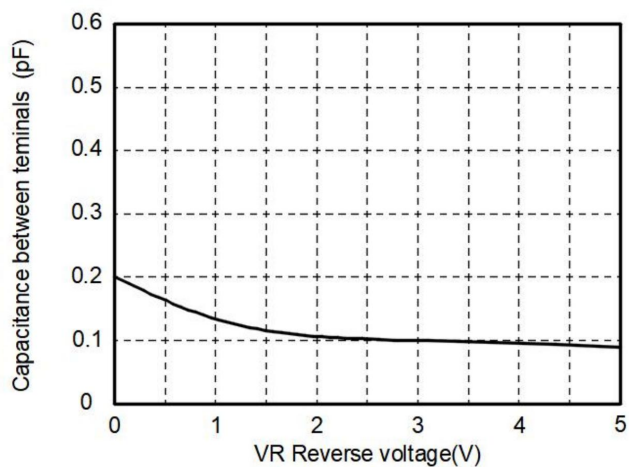
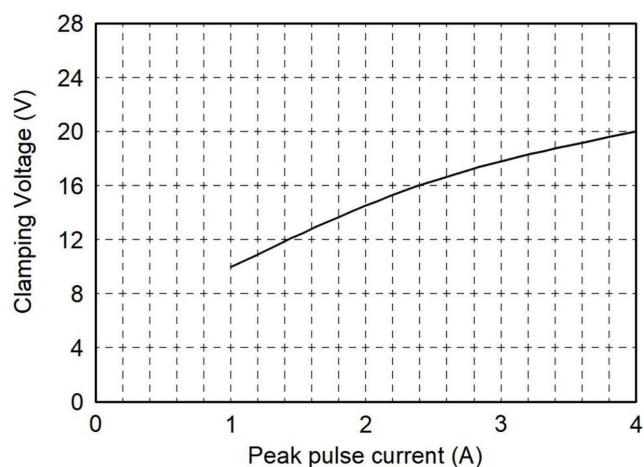
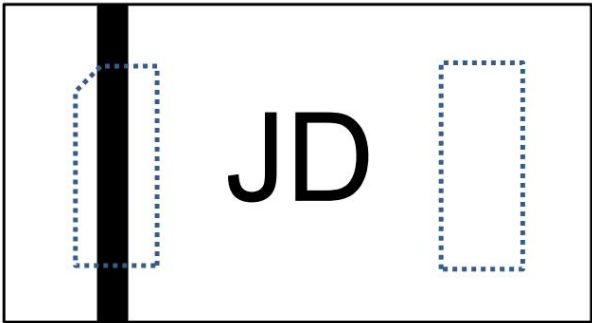


FIG4: Clamping Voltage vs. Peak Pulse Current



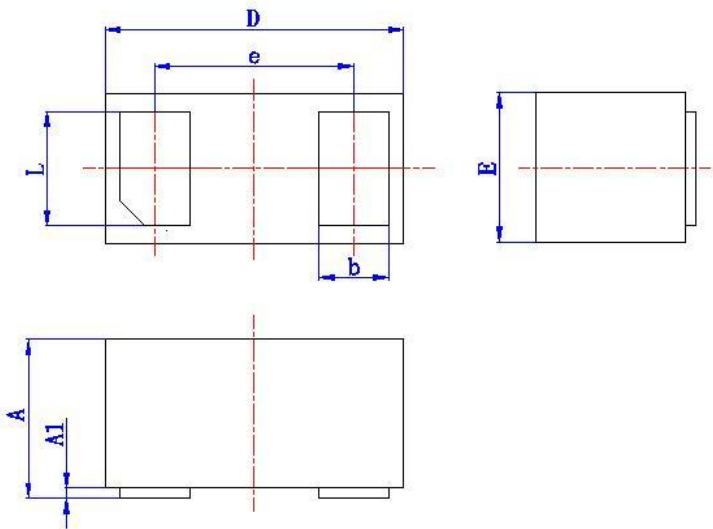
Marking Instructions



JD = Marking Code

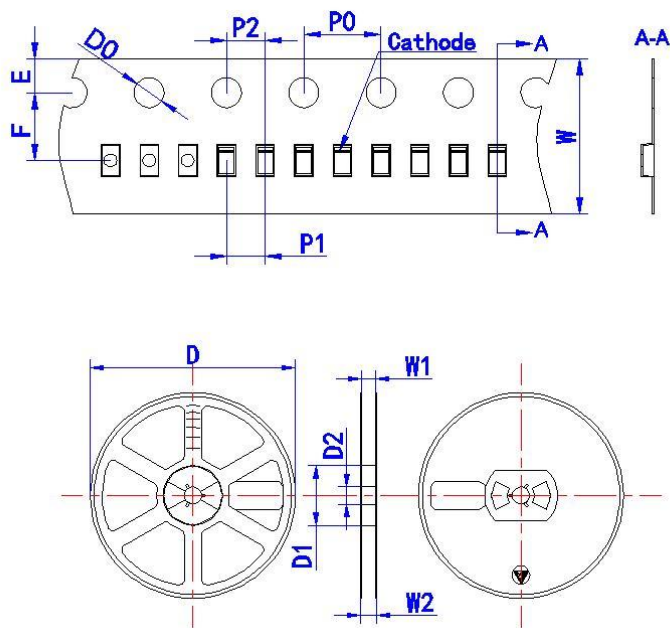
Package mechanical data

DFN0603-2L



Symbol	Dimension in Millimeters	
	min	max
A	0.27	0.37
A1	0	0.05
D	0.55	0.65
E	0.25	0.36
e	(0.4)	
b	0.09	0.2
L	0.17	0.25

Tape & reel specification - DFN0603-2L



Symbol	Dimension in Millimeters
Tape	
D0	1.50+0.10/-0.00
E	1.75±0.10
F	3.50±0.10
P0	4.00±0.10
P1	2.00±0.10
P2	2.00±0.10
W	8.00+0.3/-0.1
Reel	
D	178.0±2.00
D1	54.40±1.00
D2	13.00±1.00
W1	9.50±1.00
W2	12.30±1.00