BORN SEMICONDUCTOR

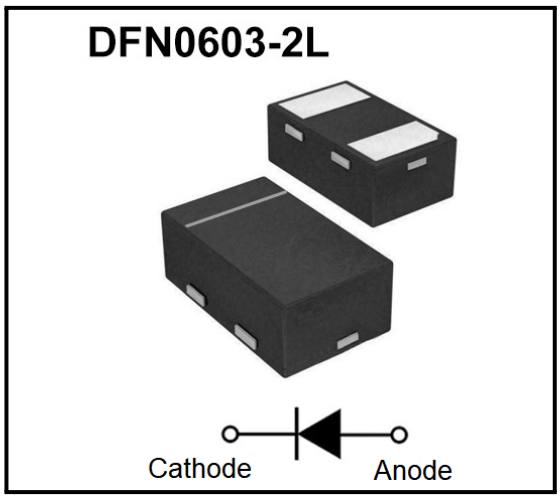
1N4148WN

Fast Switching Diode

Features

- Fast Switching Device(T_{RR}<4.0 nS)
- Power Dissipation of 100mW
- High Stability and High Reliability
- Low Reverse Leakage

Package



General Description

- DFN0603 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Mounting Position: Any

Marking

W2

Ordering information

Order code	Package	Package	Baseqty	Delivery mode
1N4148WN	DFN0603-2L	W2	10K	Tape and reel

Maximum Ratings@T_A=25°C unless otherwise noted

Symbol	Parameter	Limit	Unit
V_R	Maximum Recurrent Peak Reverse Voltage	75	V
V_{RM}	Maximum RMS Voltage	100	V
P_d	Power Dissipation	100	mW
I_O	Average Rectified Current	70	mA
I_{FM}	Non-repetitive Peak Forward Current	150	mA
I_{FSM}	Peak Forward Surge Current @ t_p=1uS;T_A=25°C	1	A
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	1250	°C/W
T_J	Operation Junction Temperature	150	°C
T_{STG}	Storage Temperature Range	-55 to +150	°C

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1N4148WN

Fast Switching Diode

Electrical Characteristics @T_A=25°C unless otherwise noted

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
V_B	Breakdown Voltage	I_R=100uA	100	–	–	V
		I_R=5uA	75	–	–	V
I_R	Reverse Leakage Current	V_R=20V	–	–	25	nA
		V_R=75V	–	–	2	uA
V_F	Forward Voltage	I_F=1mA	–	–	0.72	V
		I_F=10mA	–	–	0.86	
		I_F=50mA	–	–	1.00	
		I_F=150mA	–	–	1.25	
T_{rr}	Reverse Recovery Time	I_F=I_R=10mA ,I_{rr}=0.1×IR,R_L=100Ω	–	–	4	nS
C_D	Diode Capacitance	V_R=0V,f=1MHz	–	–	2	pF

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Fast Switching Diode

Typical Performance Characteristics (T_A=25 °C, unless otherwise noted)

Figure 1: Typical Forward Characteristics

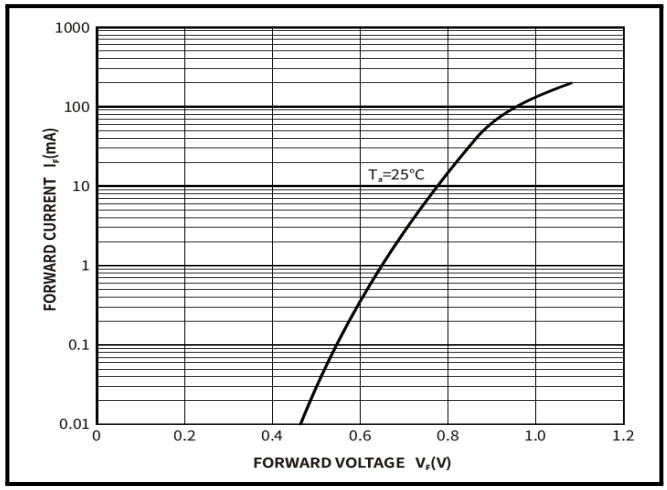


Figure 2: Reverse Current vs. Reverse Voltage

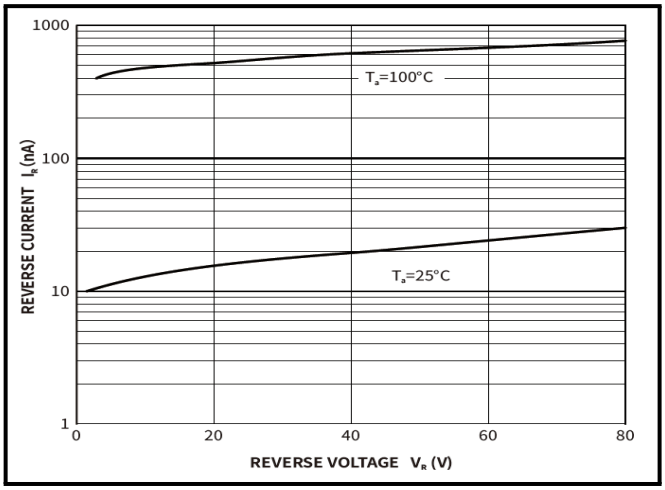


Figure 3: Admissible Power Dissipation Curve

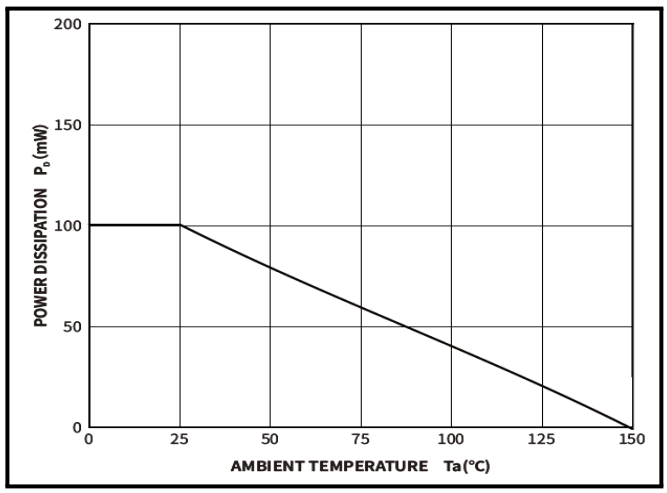
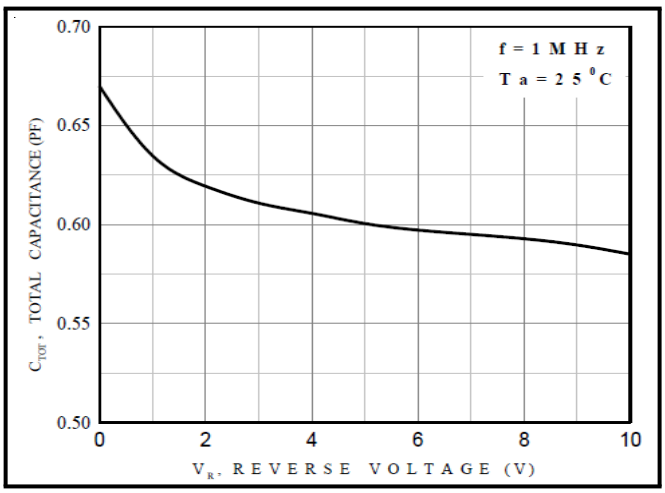


Figure 4: Typical Junction Capacitance



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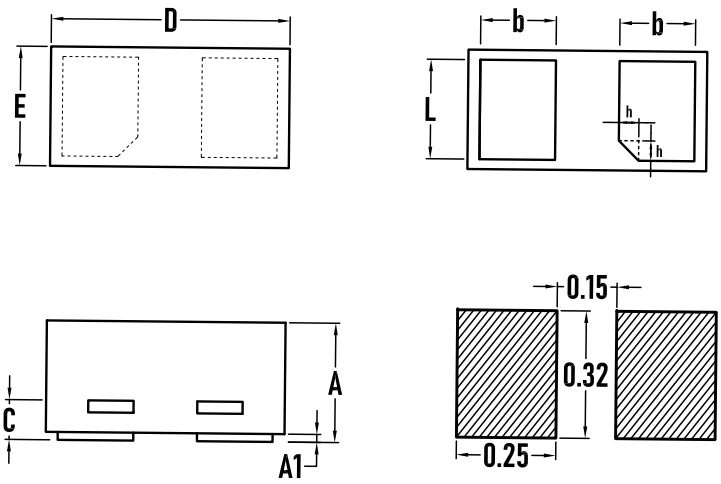
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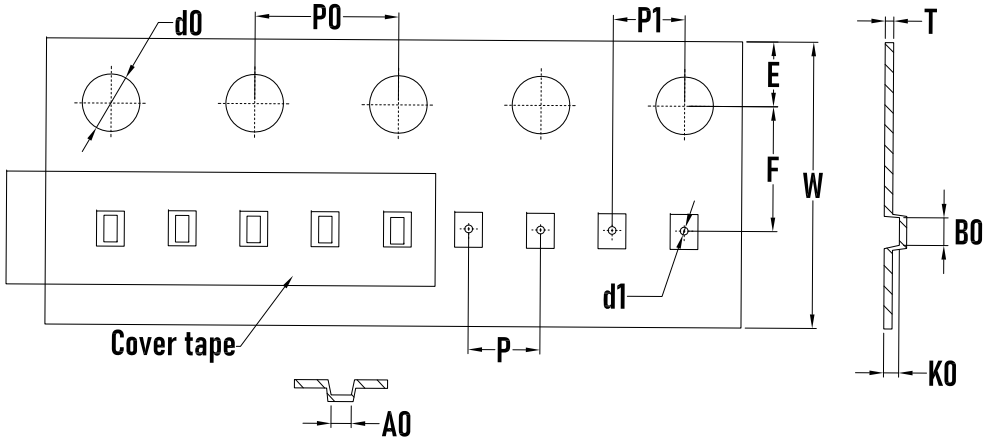
Fast Switching Diode

Outline Drawing – DFN0603-2L



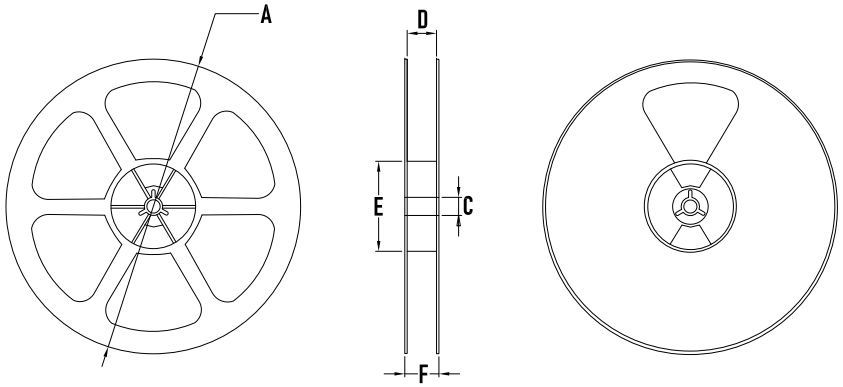
SYMBOL	MILLIMETER		
	MIN.	Typ.	MAX.
A	0.28	0.30	0.32
A1	0.00	0.02	0.05
C	0.05	0.10	0.15
D	0.55	0.60	0.65
E	0.25	0.30	0.35
b	0.14	0.19	0.24
L	0.20	0.25	0.30
h	–	0.05	0.10

Packaging Tape – DFN0603-2L



SYMBOL	MILLIMETER
A0	0.39±0.03
B0	0.70±0.03
d0	1.55±0.05
d1	0.20±0.05
E	1.75±0.10
F	3.50±0.04
K0	$0.37^{+0.03}_{-0.02}$
P	2.00±0.10
P0	4.00±0.10
P1	2.00±0.05
W	8.00±0.10
T	0.18±0.03

Packaging Reel



SYMBOL	MILLIMETER
A	178±2
C	$13.0^{+0.5}_{-0.2}$
D	9.5
E	55±5
F	14.4 max.
Quantity	10000PCS

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