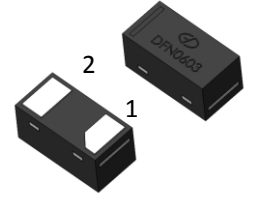


Features

- Ultra low forward voltage drop
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10s
- Ultra-small X3-DFN0603-2 with footprint of 0.18mm²



Schematic Diagram



DFN0603

Typical Applications

- Low voltage rectification, Switch Mode Power Supply (SMPS), LCD and Key PAD Backlighting
- Free-wheeling application, Reverse polarity protection, Clamping Protection

Absolute Maximum Ratings (T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Maximum RMS Voltage	V _{RMS}	21	V
Maximum DC Blocking Voltage	V _{DC}	30	V
Maximum Average Forward Rectified Current	I _{F(AV)} ¹⁾	0.1	A
Peak Forward Surge current (8.3 ms single half sine-wave superimposed on rated load) (non-repetitive)	I _{FSM}	2	A
Operating Junction Temperature Range	T _J	-55 to +150	°C
Storage Temperature Range	T _{STG}	-55 to +150	

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Conditions	Symbol	Value	Unit
Minimum Breakdown Voltage	T _A =25°C, I _R =500uA	V _{BR}	30	V
Maximum Instantaneous Forward Voltage	I _F =10mA, T _A =25°C	V _F	0.30	
	I _F =100mA, T _A =25°C		0.42	
	I _F =200mA, T _A =25°C		0.50	
	I _F =100mA, T _A =125°C		0.35	
Maximum Reverse Current	V _R =10V, T _A =25°C	I _R	7	uA
	V _R =30V, T _A =25°C		15	mA
	V _R =30V, T _A =125°C		5	
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	8	pF
Typical Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	2	nS

Note1) Mounted on FR-4 PCB with 2oz copper pad for each terminal

Typical Electrical and Characteristics Curves

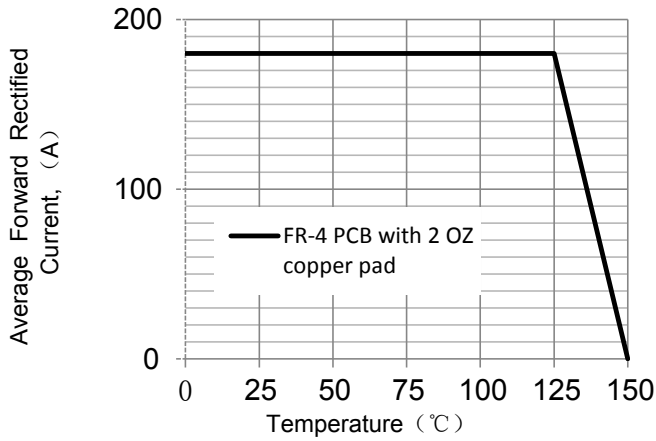


Fig 1. Forward Current Derating Curve

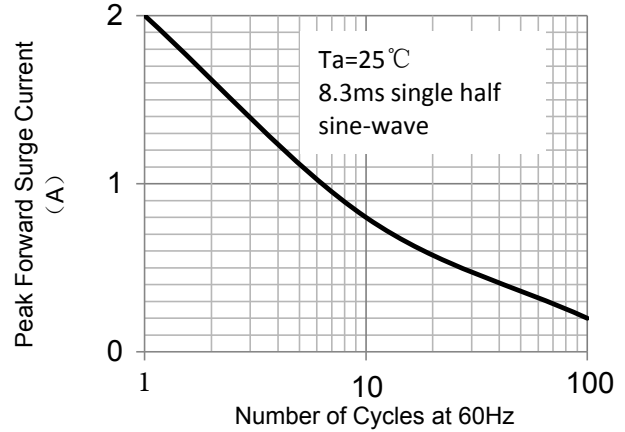


Fig 2. Maximum Non-Repetitive Peak Forward Surge Current

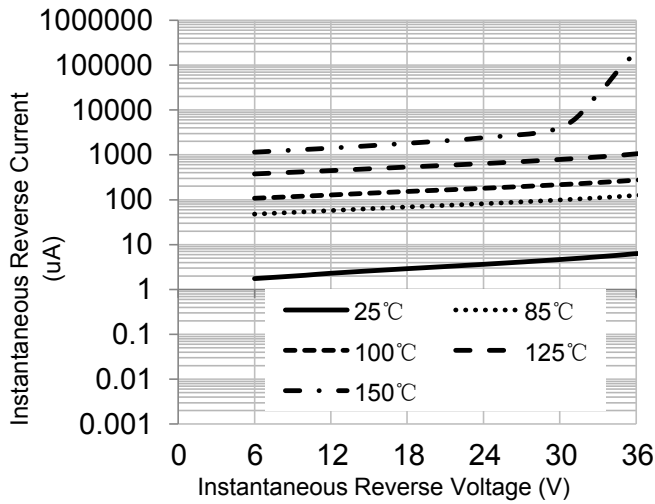


Fig 3. Typical Reverse Characteristics

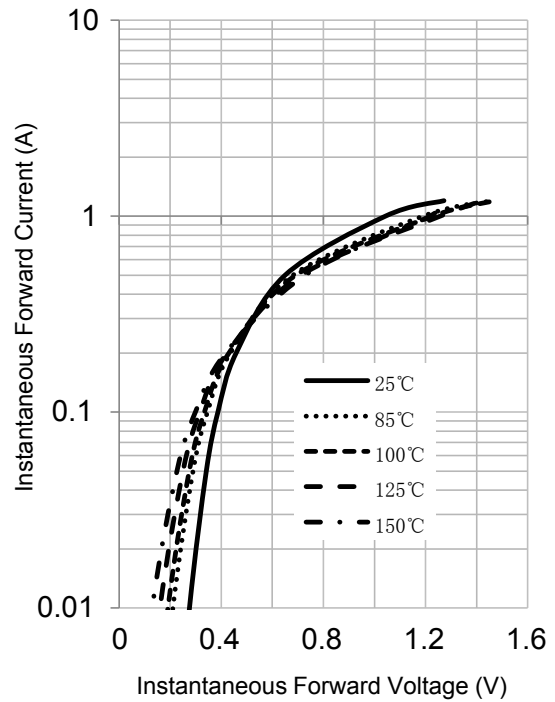


Fig 4. Typical Instantaneous Forward Characteristics

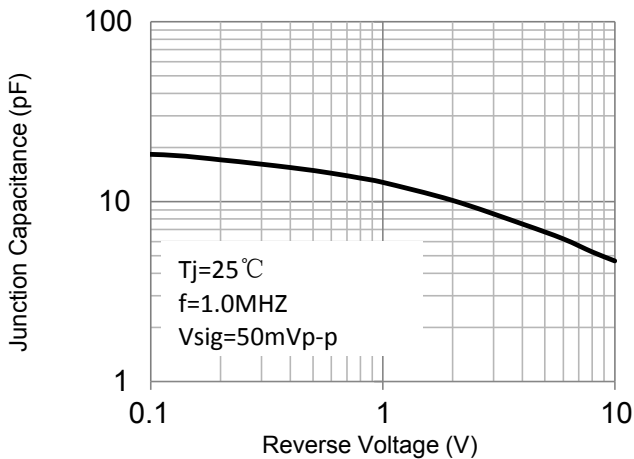
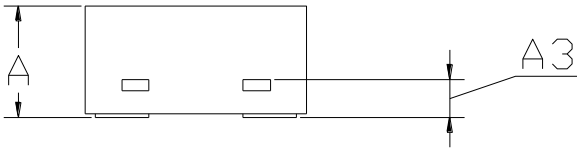
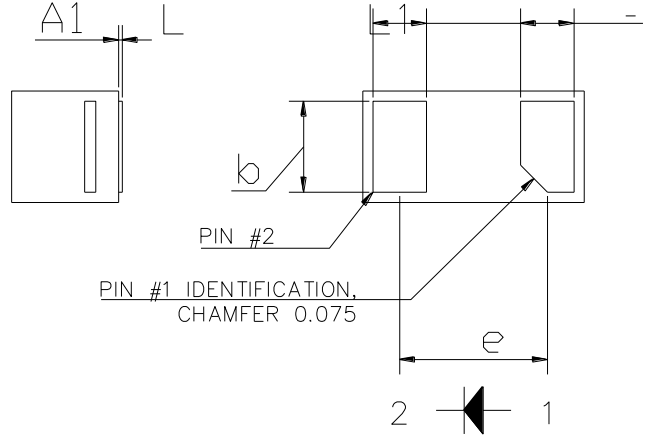
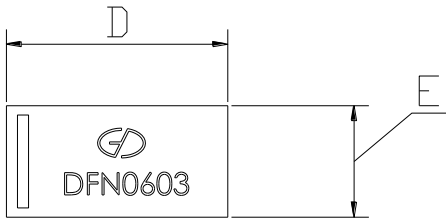
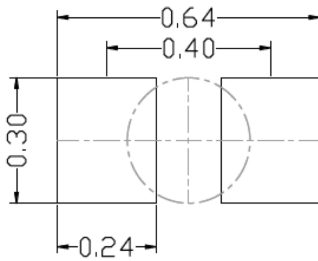


Fig 5. Typical Junction Capacitance

Package Outline Dimensions



Reference Soldering footprint, Unit:mm



PKG.	DFN0603 (Unit:mm)		
	Min	Nom	Max
A	0.23	-	0.33
A1	0.00	-	0.05
A3	0.102 REF		
b	0.195	0.245	0.295
D	0.55	0.60	0.65
E	0.25	0.30	0.35
e	0.40 REF		
L	0.095	0.145	0.15
L1	0.095	0.145	0.15