

FEATURES

- | Low Forward Voltage Drop
- | Extremely Small DFN0603 Package
- | Surface Device Type Mounting
- | Green EMC
- | Band Indicates Cathode



DFN0603



Marking

APPLICATION

- | Low voltage rectification
- | Reverse polarity protection
- | Low power consumption applications



Schematic Symbol

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Value	Unit
Maximum DC blocking reverse voltage	V_R	30	V
Average Forward Current	$I_{F(AV)}$	100	mA
Peak Forward Surge Current ($t_p = 8.3\text{ms}$)	I_{FSM}	500	mA
Power Dissipation	P_D	100	mW
Operating Junction Range	T_J	125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 125	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	$I_F=10\text{mA}$			0.37	V
		$I_F=100\text{mA}$		0.46	0.53	V
Reverse Leakage Current	I_R	$V_R=10\text{V}$			10	μA
		$V_R=30\text{V}$			50	μA
Reverse Voltage	V_R	$I_R=50\mu\text{A}$	30			V

CHARACTERISTIC CURVES

Fig.1 Forward Characteristics

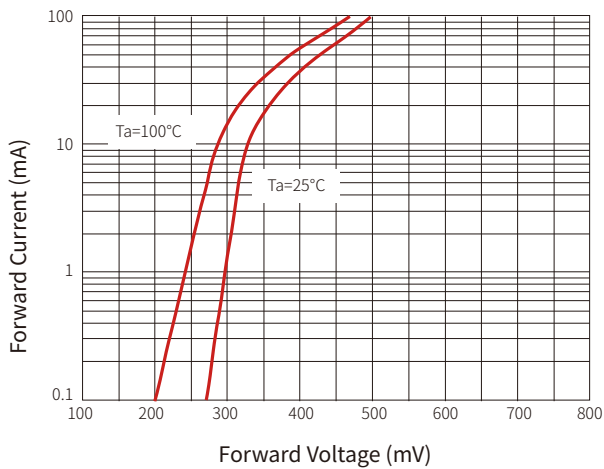


Fig.2 Reverse Characteristics

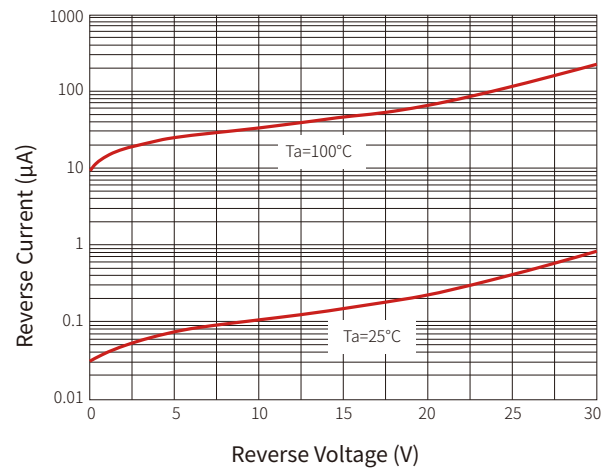
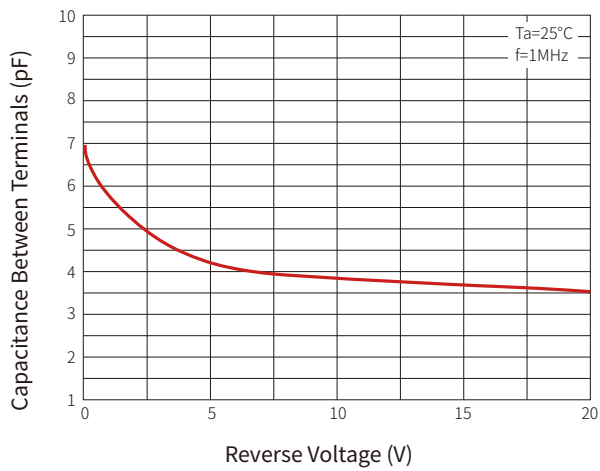
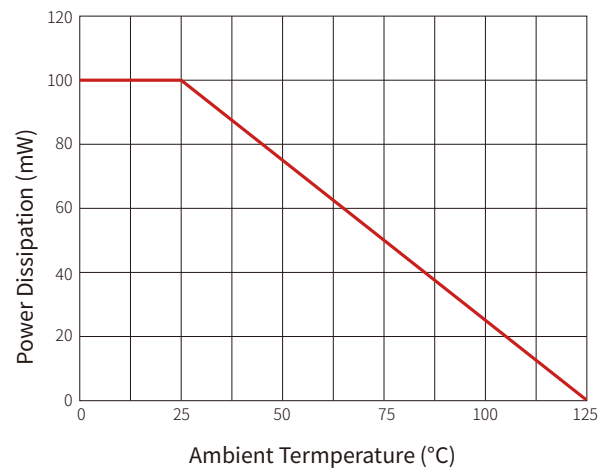
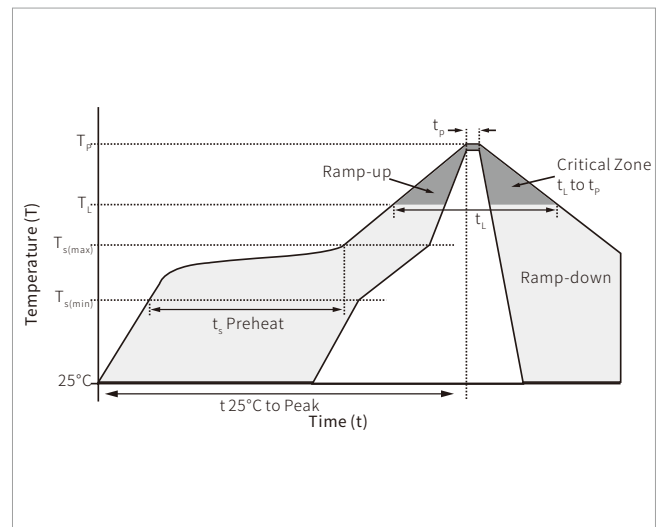


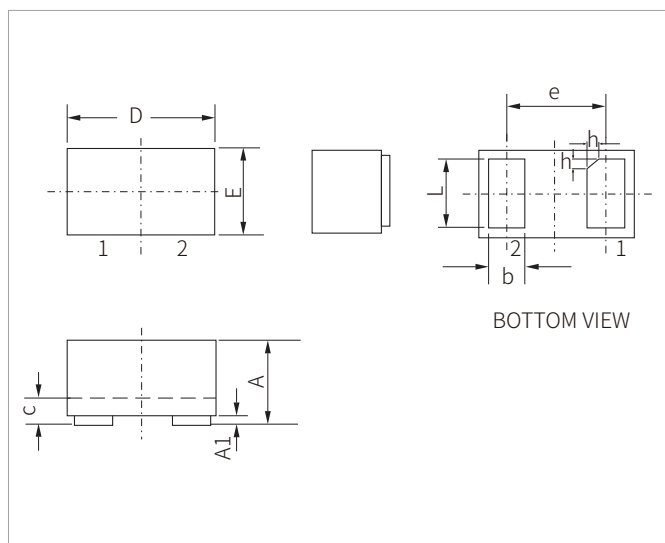
Fig.3 Capacitance Characteristics

Fig.4 Power Derating Curve


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_s)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C

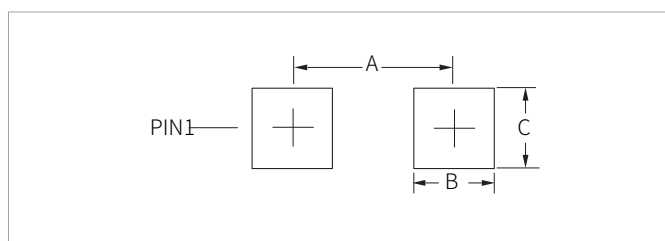


DFN0603 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.28	0.36	0.011	0.014
A1	0	0.05	0	0.002
b	0.13	0.24	0.005	0.009
c	0.05	0.15	0.002	0.006
D	0.55	0.70	0.022	0.028
e	0.35BSC		0.014BSC	
E	0.25	0.35	0.010	0.014
L	0.20	0.30	0.008	0.012
h	0	0.10	0	0.004

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	0.38	0.015
B	0.23	0.009
C	0.30	0.012

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SRB521D3-30	DFN0603	15000PCS	7"

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