

## FEATURES

- | Low Forward Voltage Drop
- | Extremely Small DFN1006 Package
- | Surface Device Type Mounting
- | Green EMC
- | Band Indicates Cathode



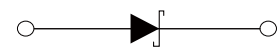
DFN1006



Marking

## APPLICATION

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



Schematic Symbol

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	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	$I_{F(AV)}$	500	mA
Repetitive Peak Forward Current ( $t_p \leq 1\text{ms}$ )	$I_{FRM}$	1	A
Peak Forward Surge Current ( $t_p = 8.3\text{ms}$ )	$I_{FSM}$	3	A
Power Dissipation	$P_{tot}$	250	mW
Junction Temperature	$T_J$	150	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to 150	$^{\circ}\text{C}$

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

Parameter		Symbol	Min.	Typ.	Max.	Unit
Reverse Current	$V_R=10\text{V}$	$I_R$			200	$\mu\text{A}$
	$V_R=30\text{V}$				500	
Forward Voltage	$I_F=0.1\text{mA}$	$V_F$			0.18	V
	$I_F=1\text{mA}$				0.20	
	$I_F=10\text{mA}$				0.27	
	$I_F=100\text{mA}$				0.36	
	$I_F=500\text{mA}$				0.50	
Total Capacitance at $V_R=1\text{V}, f=1\text{MHz}$		$C_T$			30	pF

## CHARACTERISTIC CURVES

Fig.1 Reverse Characteristic Curve

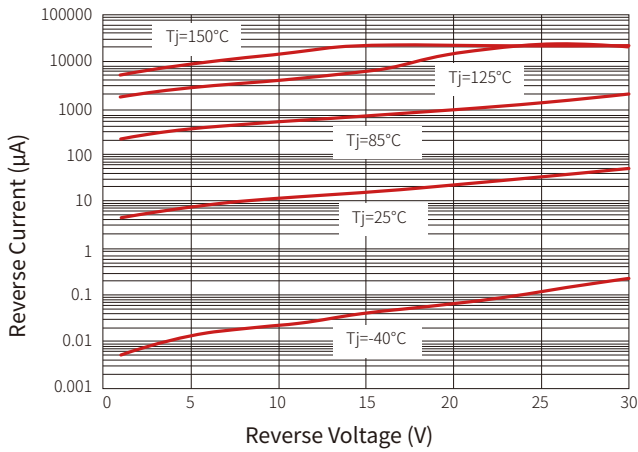
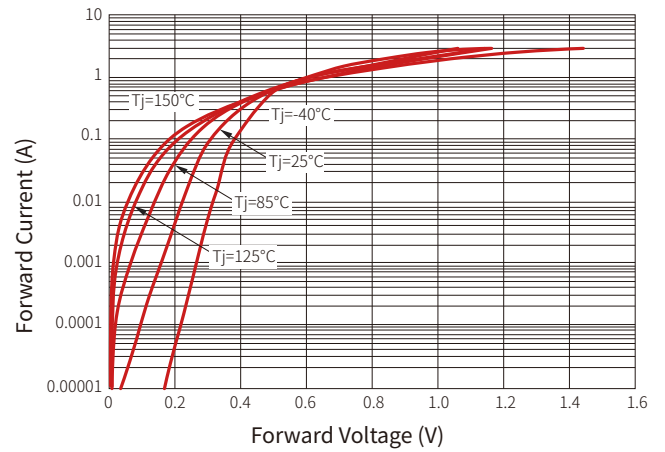
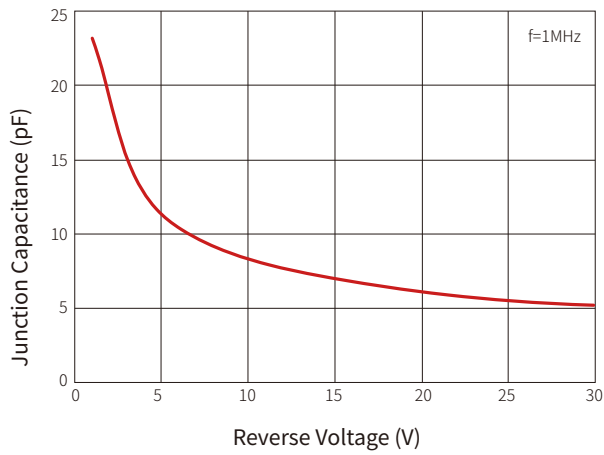


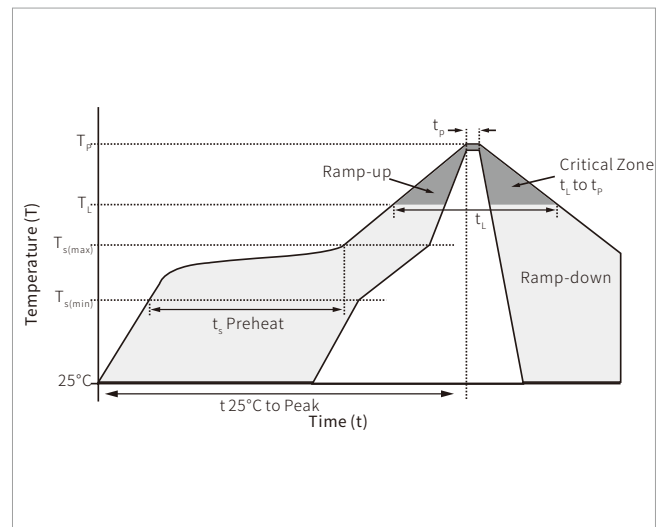
Fig.2 Forward Characteristic Curve



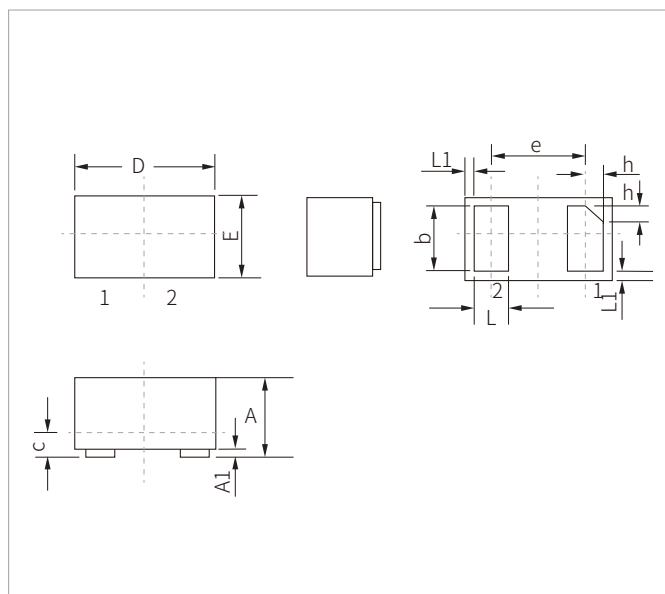
**Fig.3 Junction Capacitance**


## 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

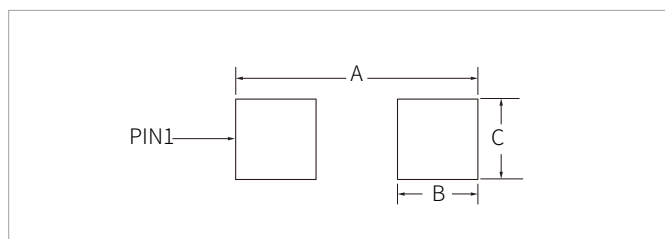


## DFN1006 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.40	0.60	0.016	0.024
A1	0	0.05	0	0.002
b	0.40	0.55	0.016	0.022
c	0.12	0.18	0.005	0.007
D	0.90	1.10	0.035	0.043
e	0.65BSC		0.026BSC	
E	0.55	0.75	0.022	0.030
L	0.20	0.35	0.008	0.014
L1	0.05REF		0.002REF	
h	0.07	0.17	0.003	0.007

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters	Inches
A	1.20	0.047
B	0.47	0.019
C	0.60	0.024

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SRB0503D1	DFN1006	10000PCS	7"

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