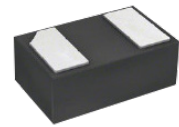


## FEATURES

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



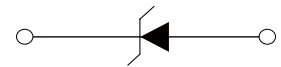
DFN1006



Marking

## MECHANICAL DATA

- | Encapsulation: DFN1006 Small Outline Plastic Package
- | Polarity: Color band denotes cathode end
- | Mounting Position: Any



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
DC Blocking voltage	$V_R$	30	V
Forward current	$I_{F(AV)}$	200	mA
Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	500	mA
Power Dissipation	$P_D$	150	mW
Operating junction range	$T_J$	125	$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward voltage	$V_F$	$I_F=10\text{mA}$			0.35	V
		$I_F=200\text{mA}$			0.50	V
Reverse Leakage Current	$I_R$	$V_R=30\text{V}$			3	$\mu\text{A}$
Breakdown Voltage	$B_V$	$I_R=100\mu\text{A}$	30			V

## CHARACTERISTIC CURVES

Fig.1 Typical Forward Current Derating Curve

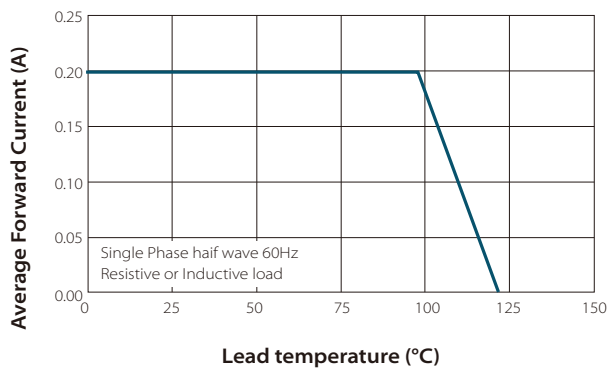
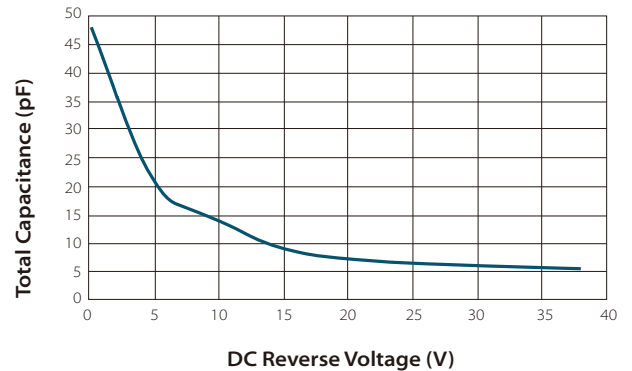
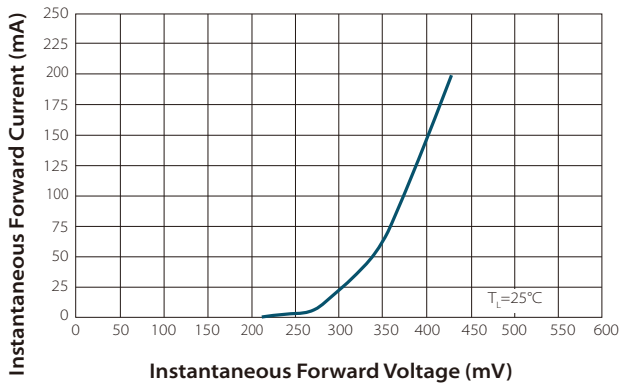
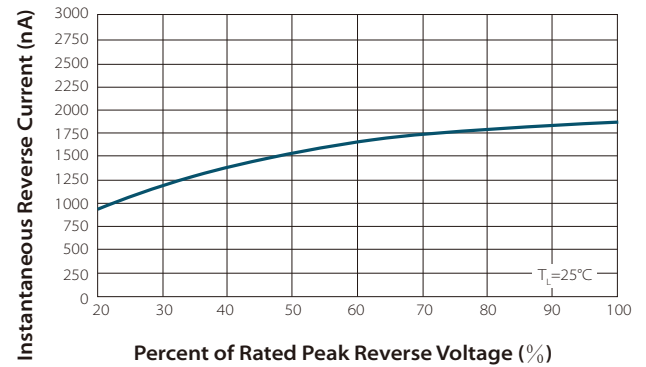


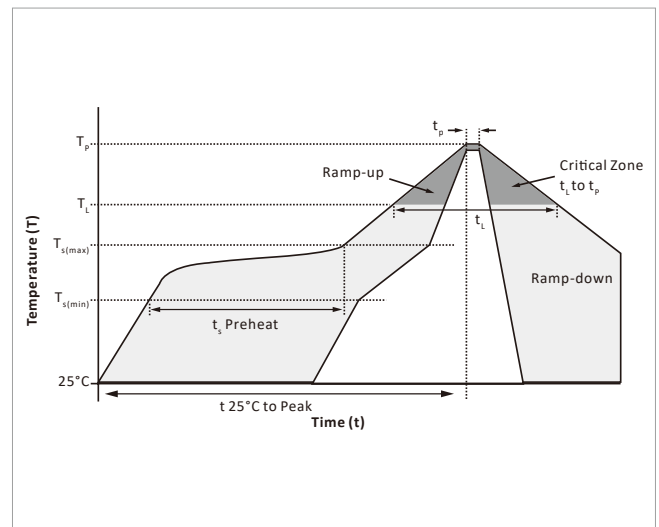
Fig.2 Total Capacitance vs.Reverse Voltage



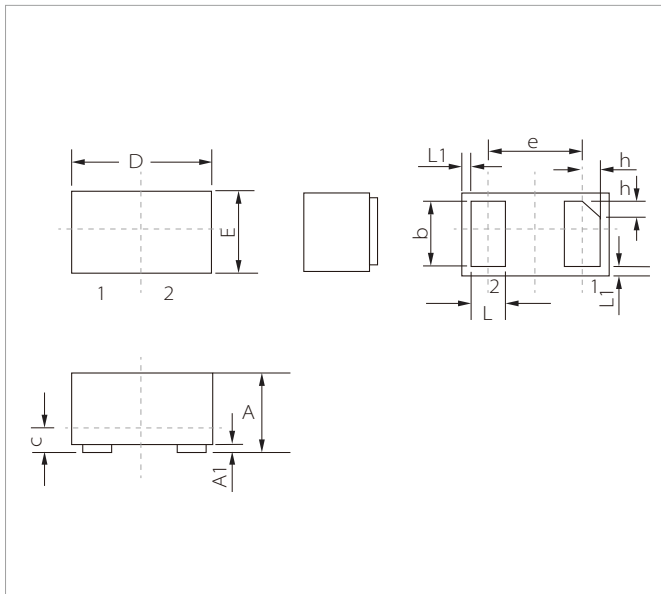
**Fig.3 Typical Instantaneous Forward Characteristics**

**Fig.4 Typical Reverse Characteristics**


## 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

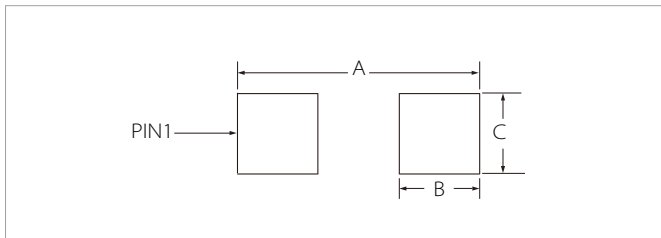


## DFN1006 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.35	0.50	0.014	0.020
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	0.95	1.05	0.037	0.041
e	0.65BSC		0.026BSC	
E	0.55	0.70	0.022	0.027
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
SRB521D1-30	DFN1006	10000PCS	7"

To find your local partner within Semiwell's website : [www.semiwell.com.cn](http://www.semiwell.com.cn)

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