

## FEATURES

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



DFN1006



Marking

## MECHANICAL DATA

- | 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 repetitive reverse voltage	$V_{RRM}$	40	V
Maximum RMS voltage	$V_{RMS}$	28	V
Maximum DC blocking reverse voltage	$V_R$	40	V
Average Forward Current	$I_{F(AV)}$	200	mA
Peak Forward Surge Current (At 8.3ms single half sine-wave)	$I_{FSM}$	1	A
Operating Junction Range	$T_J$	-55 to 125	°C
Storage Temperature Range	$T_{STG}$	-55 to 150	°C

These ratings are limiting values above which the serviceability of the diode may be impaired.

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

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Forward Voltage	$V_F$	$I_F=20\text{mA}$			0.37	V
		$I_F=200\text{mA}$			0.60	V
Reverse Leakage Current	$I_R$	$V_R=40\text{V}$			5	$\mu\text{A}$
Breakdown Voltage	$V_{BR}$	$I_R=100\mu\text{A}$	40			V

## CHARACTERISTIC CURVES

Fig.1 Typical Forward Current Derating Curve

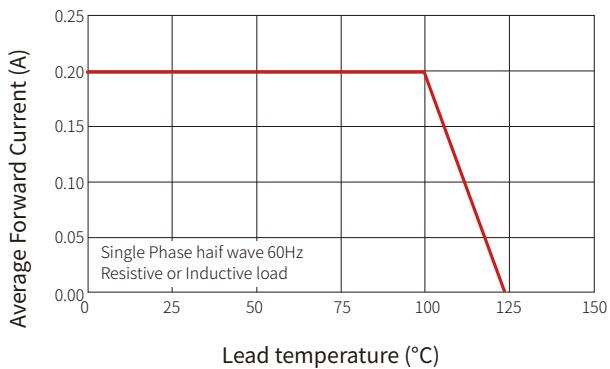
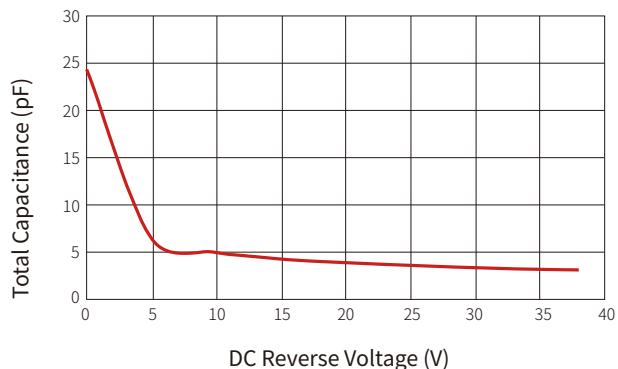
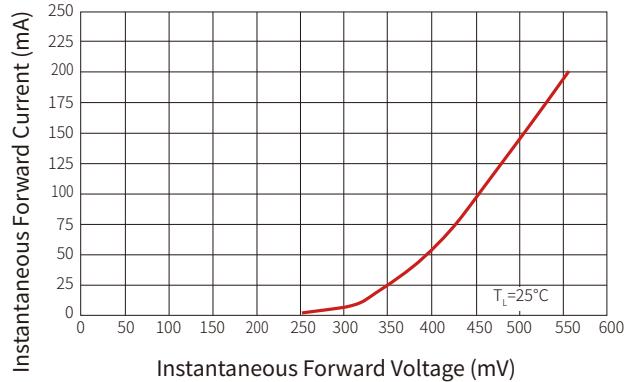
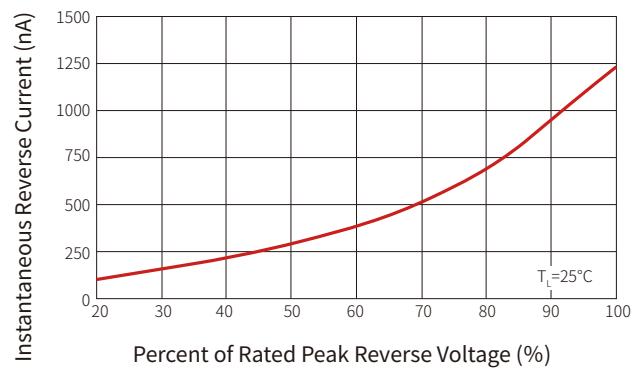


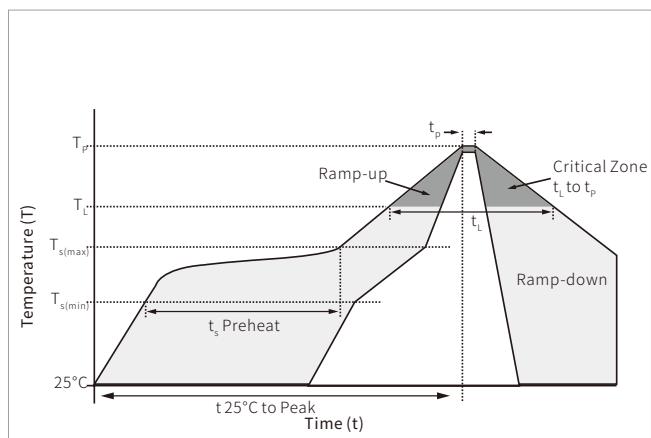
Fig.2 Total Capacitance vs. Reverse Voltage



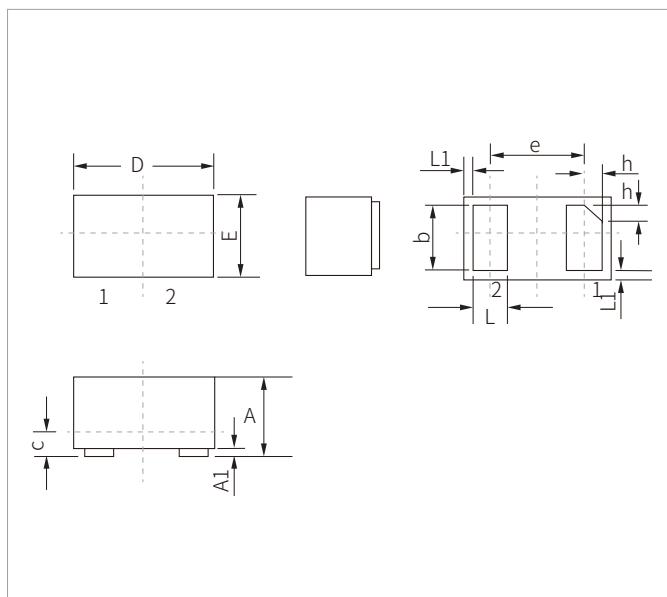
**Fig.3 Typical Instantaneous Forward Characteristics**

**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
Reflow	$T_{s(\max)}$ to $T_L$ - Ramp-up Rate	3°C/second max
	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

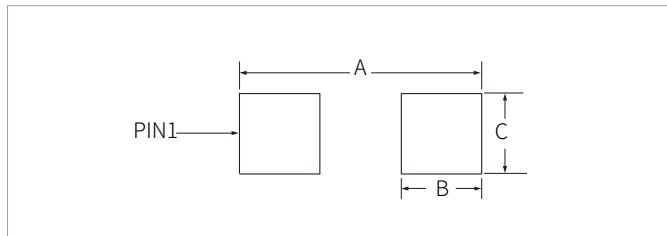


## DFN1006 PACKAGE INFORMATION



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
SRB0240D1	DFN1006	10000PCS	7"

**Headquarters**

No.3387 Shendu Road  
Pujiang I&E Park  
Minhang Shanghai China  
201000

**Hotline**

400-021-5756

**Web**

[Https://www.semiware.com](https://www.semiware.com)

**Sales Center**

Tel: 86-21-3463-7458  
Email: [sales18@semiware.com](mailto:sales18@semiware.com)

**Customer Service**

Tel: 86-21-5484-1001  
Email: [sales17@semiware.com](mailto:sales17@semiware.com)

**Technical Support**

Tel: 86-21-3463-7654  
Email: [fae01@semiware.com](mailto:fae01@semiware.com)

**Complaint & Suggestions**

Tel: 86-21-3463-7172  
Ext: 8868  
Email: [cs03@semiware.com](mailto:cs03@semiware.com)

**By QR Code**

Website



Wechat

To find your local partner within Semiware's global website: [www.semiware.com](http://www.semiware.com)

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.