

FEATURES

- | Low Forward Voltage Drop
- | Extremely Small DFN1006 Package
- | Surface Device Type Mounting
- | Green EMC
- | Band Indicates Cathode
- | Meet AEC-Q101 Requirements



DFN1006



Marking

MECHANICAL DATA

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



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
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	μA
Breakdown Voltage	B_V	$I_R=100\mu\text{A}$	30			V

CHARACTERISTIC CURVES

Fig.1 Typical Forward Current Derating Curve

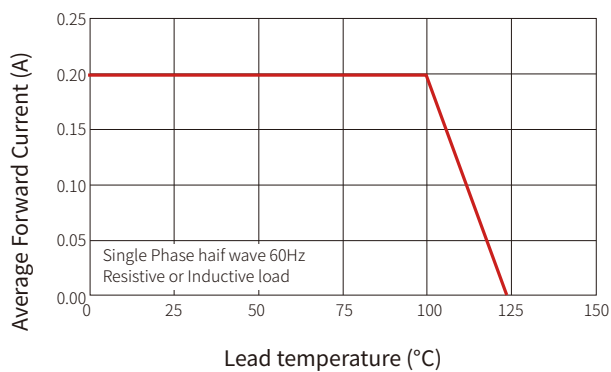


Fig.2 Total Capacitance vs.Reverse Voltage

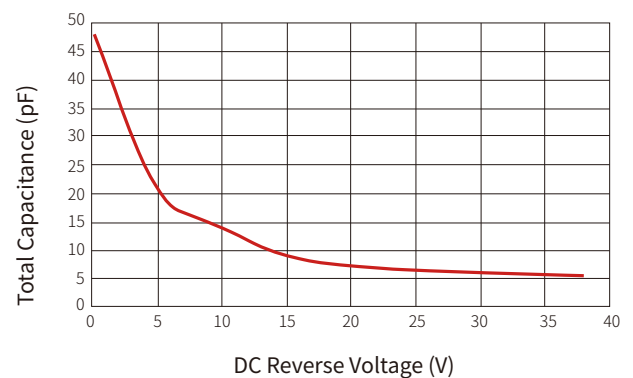
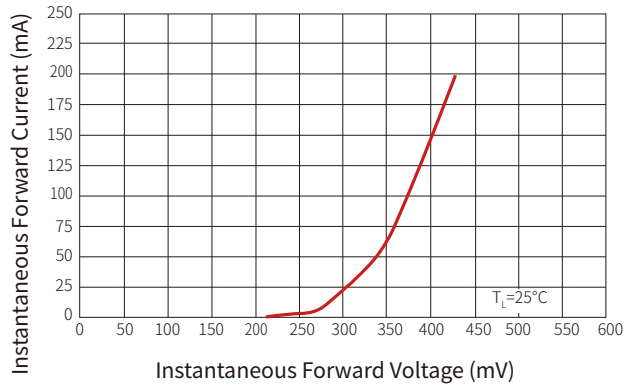
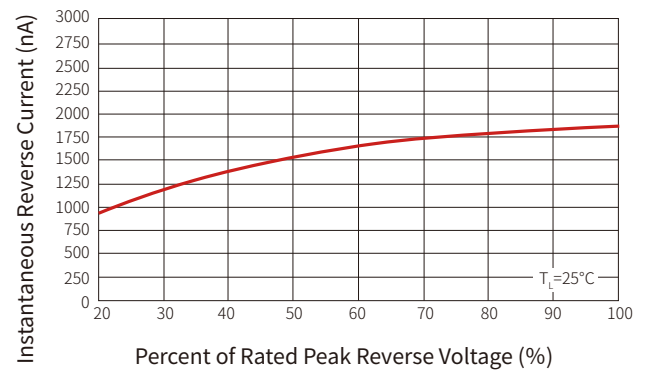
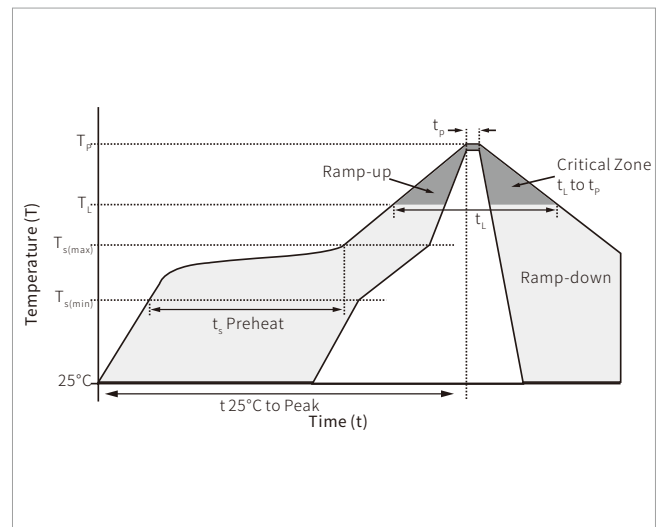


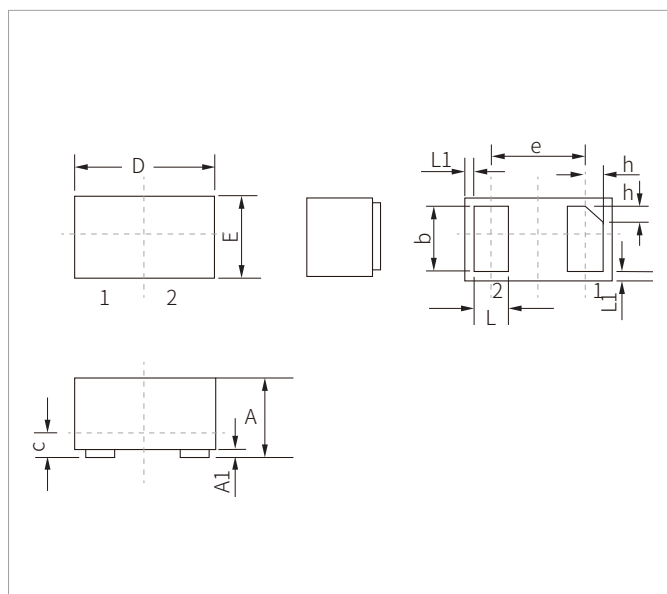
Fig.3 Typical Instantaneous Forward Characteristics

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

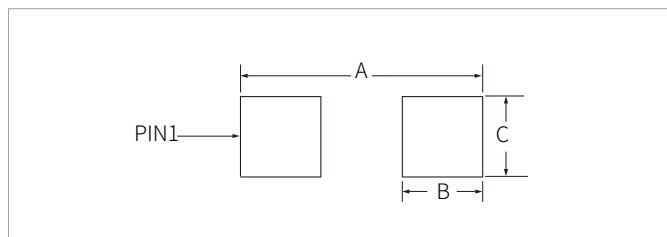


DFN1006 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.40	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
SRB521D1-30Q	DFN1006	10000PCS	7"

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