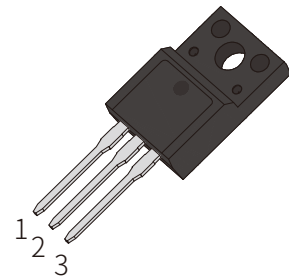


FEATURES

Construction Utilizes Void-free Molded Plastic Technique

Low Reverse Leakage

High Forward Surge Current Capability



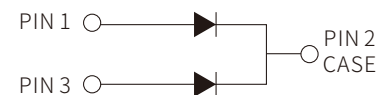
TO-220F

MECHANICAL DATA

Case : Molded Plastic Body

Terminals : Solder plated, solderable per MIL-STD-750,Method 2026

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	SF 2005FCT	SF 2010FCT	SF 2020FCT	SF 2040FCT	SF 2050FCT	SF 2060FCT	Unit
Marking			SF 2005FCT	SF 2010FCT	SF 2020FCT	SF 2040FCT	SF 2050FCT	SF 2060FCT	
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	500	600	V
Maximum RMS Voltage		V _{RMS}	35	70	140	280	350	420	V
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	500	600	V
Maximum Average Forward Rectified Current at T _c =110°C	per device	I _(AV)	20.0						A
	per diode		10.0						
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed On Rated Load		I _{FSM}	200.0						A
Maximum Instantaneous Forward Voltage per Diode at 10.0A		V _F	1.0			1.3	2.0		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	10						μA
	T _A =125°C		500						μA
Maximum Reverse Recovery Time ^(Note 1)		T _{rr}	35						ns
Typical Thermal Resistance		R _{θJC}	3.5						°C/W
Operating Junction Temperature Range		T _J	-55 to +150						°C
Storage Temperature Range		T _{STG}	-55 to +150						°C

Note:1.Reverse recovery time test condition: $I_F=0.5A$ $I_R=1.0A$ $I_{rr}=0.25A$

CHARACTERISTIC CURVES

Fig. 1- Derating Curve Output Rectified Current

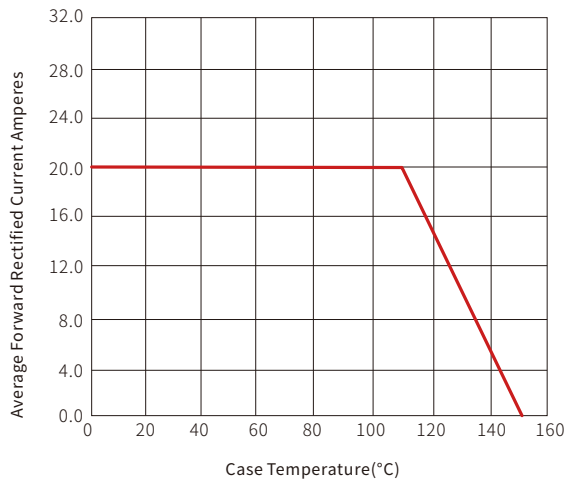


Fig. 2-Maximum Non-Repetitive Peak Forward Surge Current Perleg

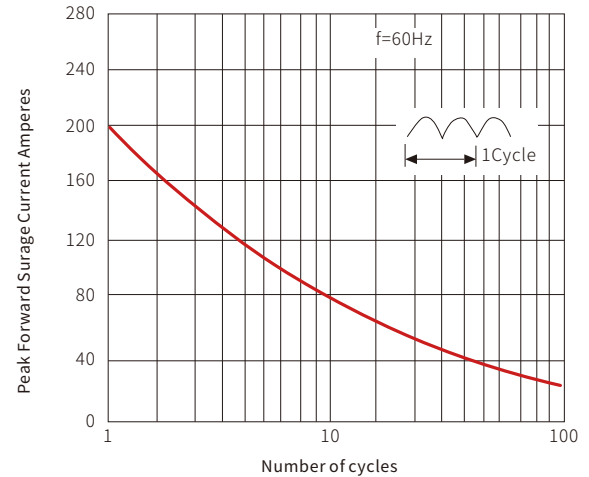


Fig. 3-Typical Forward Voltage Characteristics

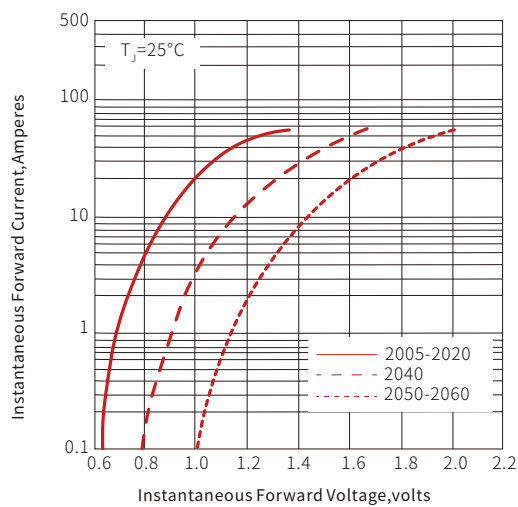
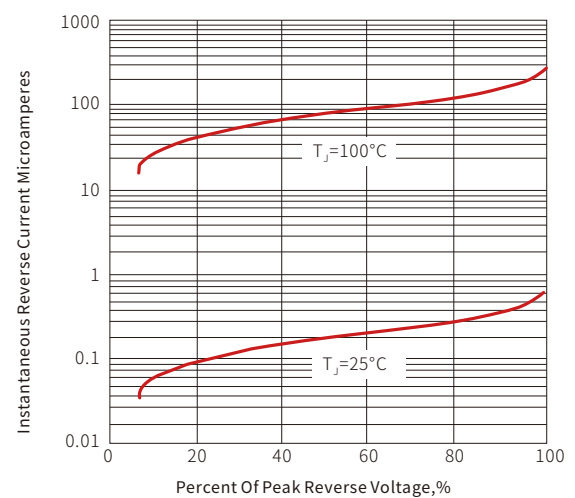
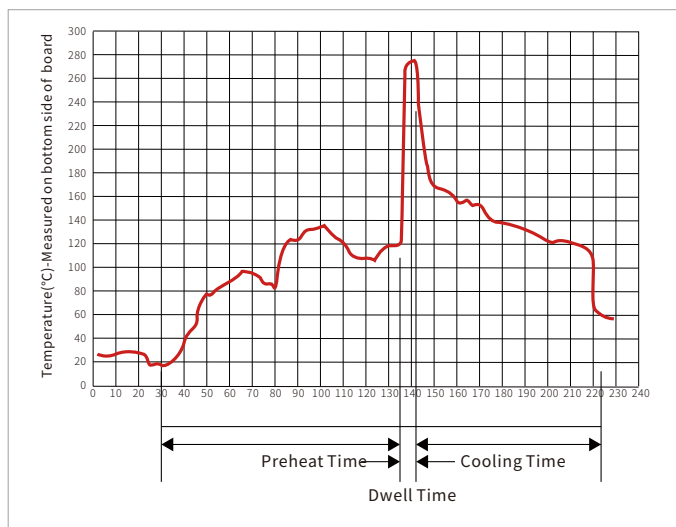


Fig. 4-Typical Reverse Leakage Characteristics

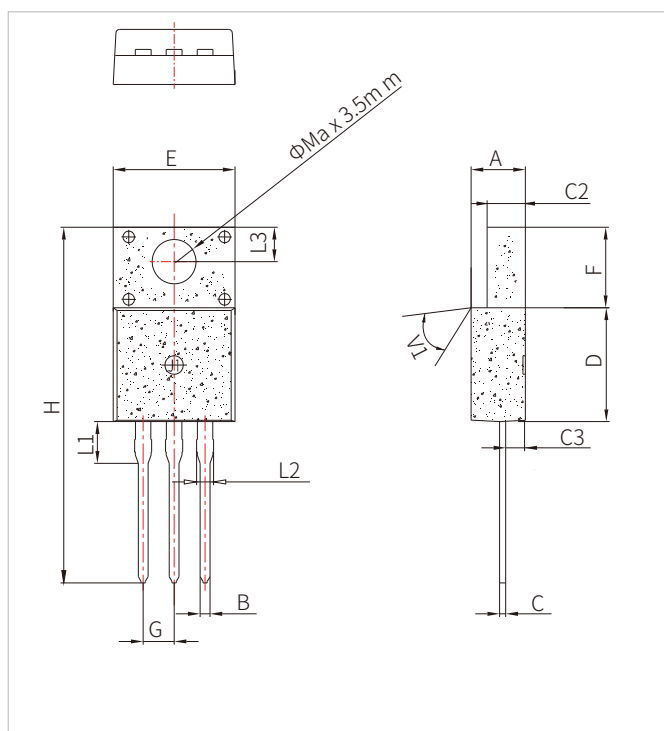


WAVE SOLDERING



Wave Parameter		Lead-free assembly
Pre Heat	Temperature Min	100°C
	Temperature Max	150°C
	Time(min to max)	60 – 180 secs
Solder pot Temperature		280°C Max
Solder Dwell Time		2-5 seconds

TO-220F PACKAGE MECHANICAL DATA



Ref.	Dimensions					
	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.40		4.90	0.173		0.193
B	0.74	0.80	0.83	0.029		0.033
C	0.45		0.75	0.018		0.030
C2	2.40		2.70	0.094		0.106
C3	2.60		3.00	0.102		0.118
D	8.80		9.30	0.346		0.366
E	9.70		10.4	0.382		0.409
F	6.40		7.00	0.252		0.276
G		2.54			0.1	
H	28.0		30.0	1.102		1.181
L1		3.55			0.140	
L2	1.14		1.70	0.045		0.067
L3		3.30			0.130	
V1		45°			45°	

ORDERING INFORMATION

Part Number	Component Package	QTY/Tube	QTY/Box	QTY/Carton
SF2005FCT-SF2060FCT	TO-220F	50PCS	1000PCS	5000PCS

Headquarters

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

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware' s global website: 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.