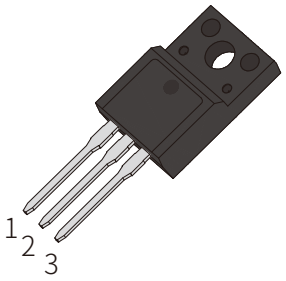
FEATURES

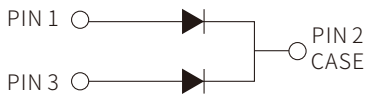
- Construction Utilizes Void-free Molded Plastic Technique
- Low Reverse Leakage
- High Forward Surge Current Capability



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°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		$R_{\theta JC}$	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

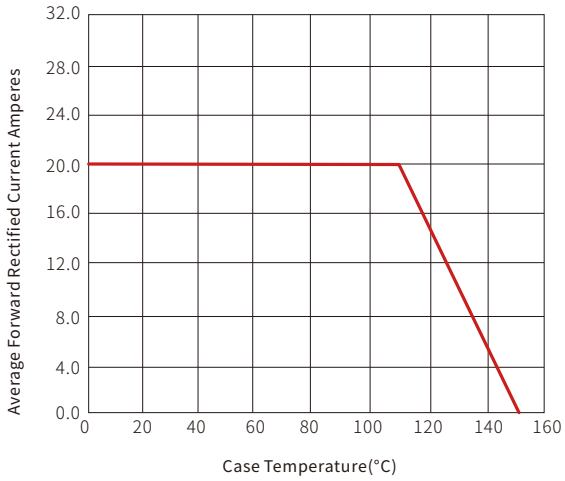


Fig. 2-Maximum Non-Repetitive Peak Forward Surge Current Perleg

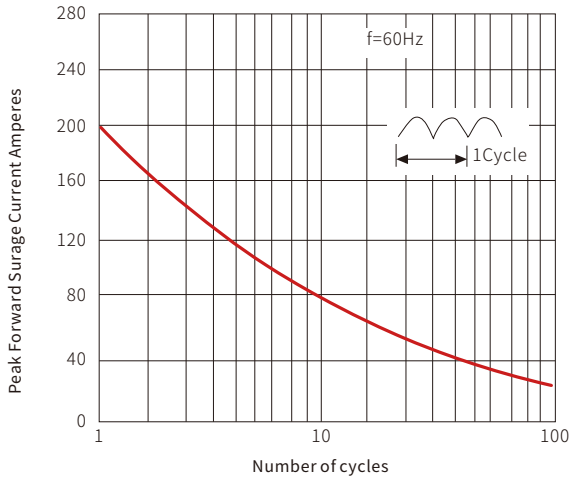


Fig. 3-Typical Forward Voltage Characteristics

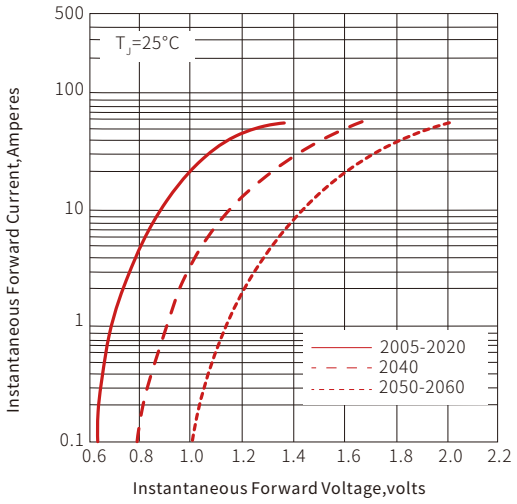
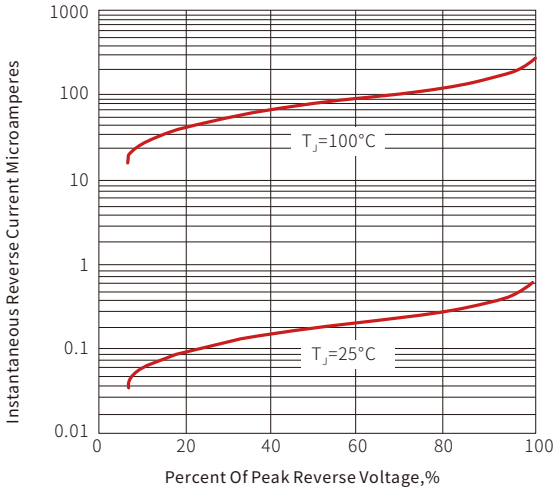
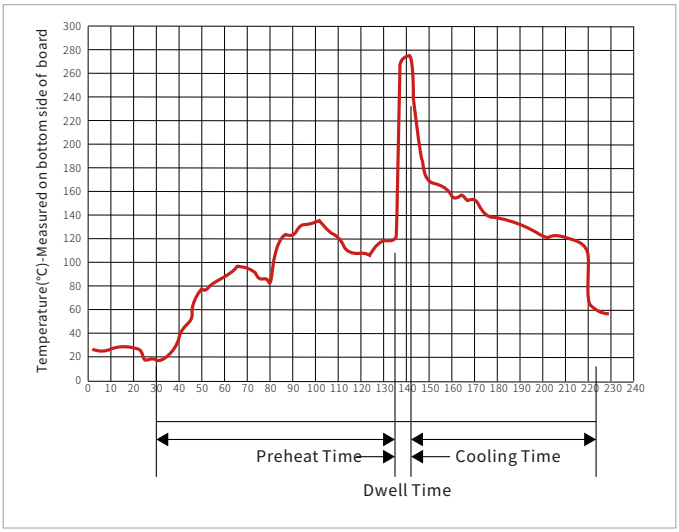


Fig. 4-Typical Reverse Leakage Characteristics

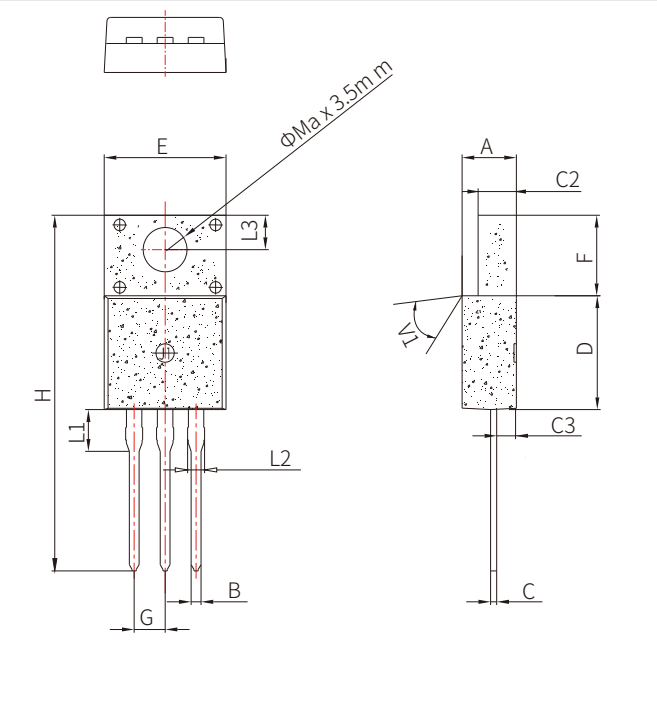


WAVE SOLDERING



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

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