Features

- Halogen Free. “Green” Device (Note 1)
- Fast Reverse Recovery Time
- Glass Passivated Chip Junction
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

3 Amp Fast Recovery Rectifier 400 to 1000 Volts

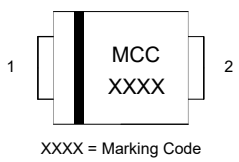
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value			Unit
		FR3GBFL	FR3JBFL	FR3MBFL	
Peak Repetitive Reverse Voltage	V_{RRM}	400	600	1000	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
RMS Reverse Voltage	V_{RMS}	280	420	700	V
Average Rectified Forward Current @ T_L=100°C	$I_{F(AV)}$	3			A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	100			A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		200			
Current Squared Time @1ms≤t≤8.3ms	I^2t	41.5			A^2s

Marking Code

Part Number	Marking Code
FR3GBFL	FR3G
FR3JBFL	FR3J
FR3MBFL	FR3M

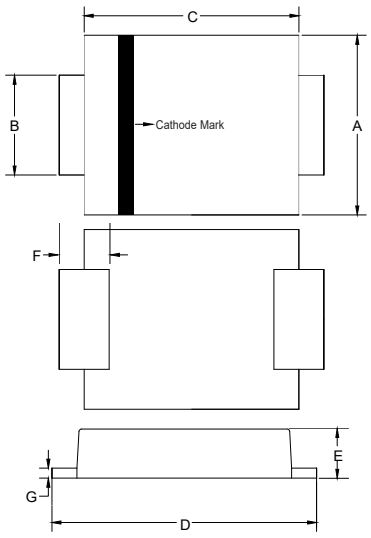
Internal Structure

Pin	Description	Simplified Outline	Graphic Symbol
1	Cathode	 XXXX = Marking Code	
2	Anode		

Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

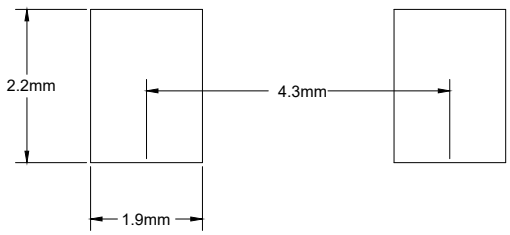
2. High temperature solder exemption applied, see EU directive annex 7a.

SMBF



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.134	0.150	3.40	3.80	
B	0.075	0.083	1.90	2.10	
C	0.163	0.175	4.15	4.45	
D	0.201	0.220	5.10	5.60	
E	0.041	0.061	1.05	1.55	
F	0.028	0.053	0.70	1.35	
G	0.006	0.010	0.15	0.25	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-L)}$	Thermal Resistance from Junction to Lead	Note 1		20		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		60		°C/W

Note:
1.Mounted on P.C.B. with 8mm*8mm copper pad areas.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=3A;T_J=25°C			1.30	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 100	μA
Reverse Recovery Time FR3GBFL FR3JBFL FR3MBFL	t_{rr}	I_F=0.5A; I_R=1.0A; I_{rr}=0.25A;T_J=25°C			 150 250 500	ns
Junction Capacitance FR3GBFL FR3JBFL~FR3MBFL	C_J	V_R=4V;f=1MHz;T_J=25°C		 40 30		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

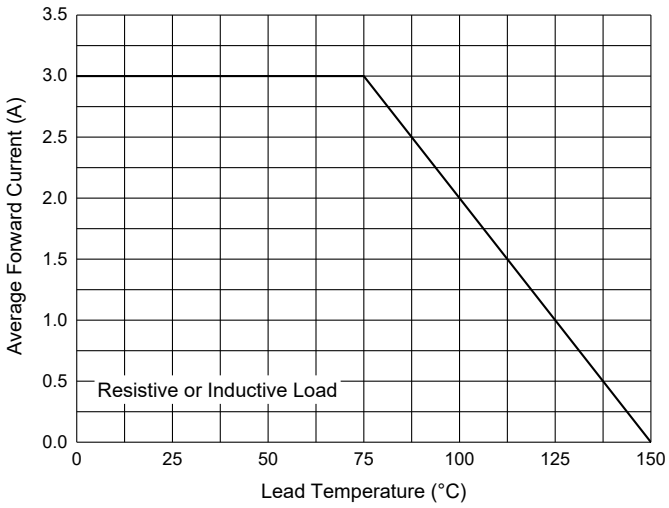


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

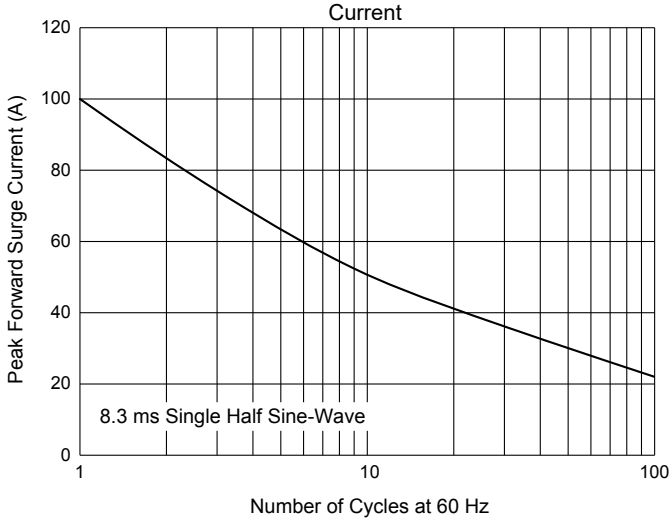


Fig. 3 - Typical Forward Characteristics

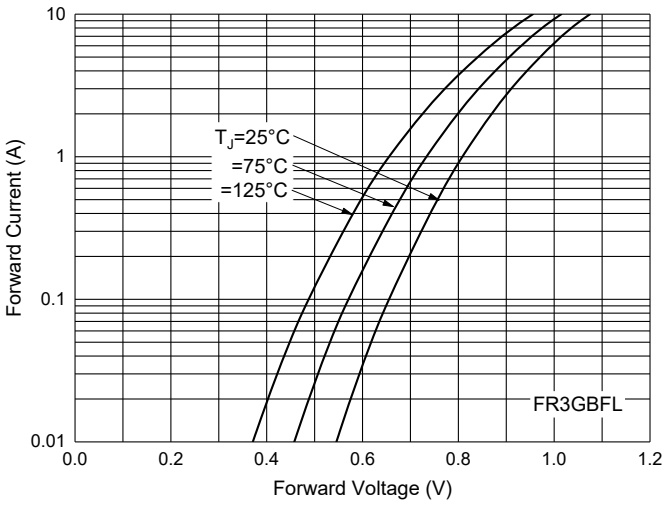


Fig. 4 - Typical Forward Characteristics

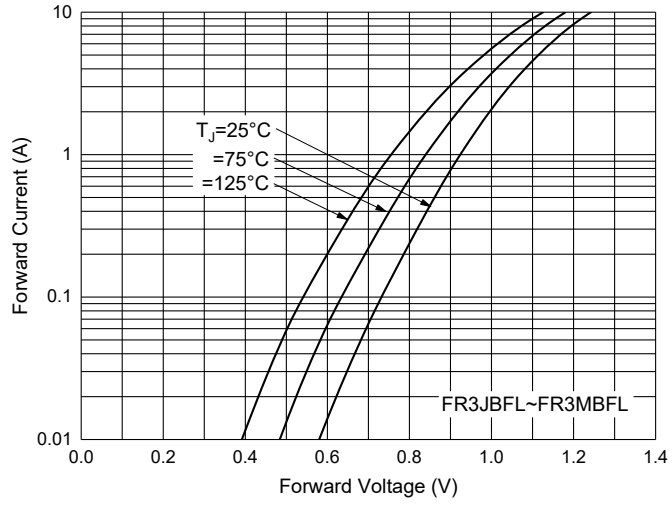


Fig. 5 - Typical Reverse Leakage Characteristics

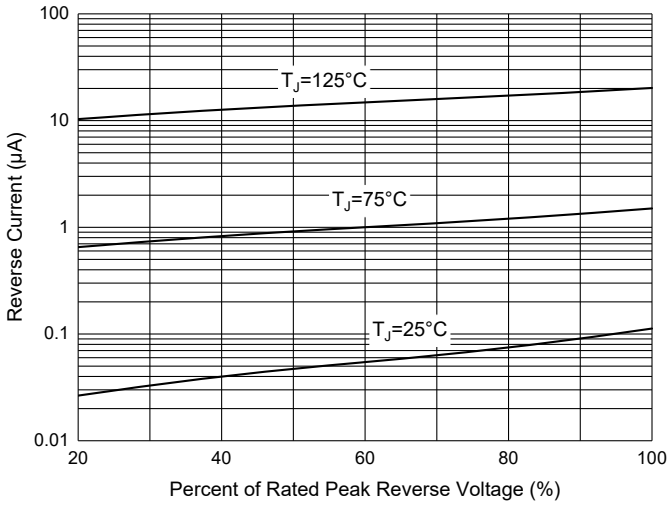
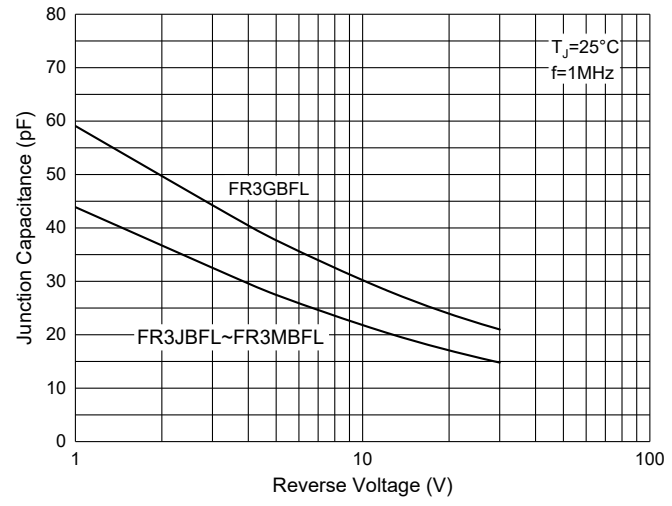


Fig. 6 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:5Kpcs/Reel

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