

Fast Recovery Rectifiers

Reverse Voltage - 100 to 1000 V

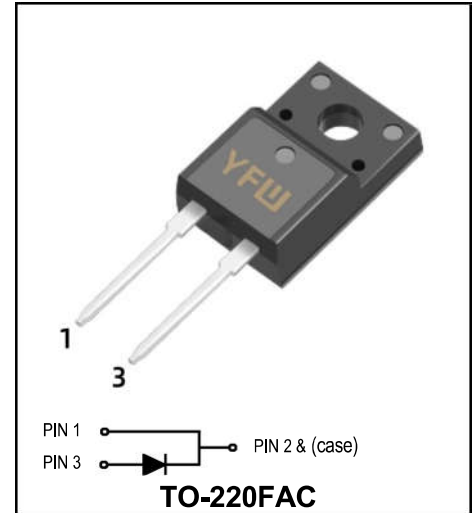
Forward Current - 10A

FEATURES

- ◆ Glass passivated chip junctions
- ◆ Low reverse current operation
- ◆ High Junction Temperature
- ◆ Fast recovery time for switching
- ◆ High Forward Surge Capability
- ◆ Lead free in compliance with EU RoHS 2011/65/EU directive

MECHANICAL DATA

- ◆ Circuit figure: Single positive
- ◆ Leads: Solderable per mil-std-202, Method 208
- ◆ Polarity: as marked
- ◆ Mounting torque: 5 in-lbs maximum
- ◆ Terminals: Puretin plated



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (TA=25°C)

RATINGS	SYMBOL	FR 1010DAF	FR 1020DAF	FR 1040DAF	FR 1060DAF	FR 1080DAF	FR 10100DAF	UNIT	
Maximum repetitive reverse voltage	V_{RRM}	100	200	400	600	800	1000	V	
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V_{DC}	100	200	400	600	800	1000	V	
Maximum average forward current	I_{AV}	10						A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	120						A	
Typical thermal resistance per diode (Note 1)	$R_{\theta-JC}$	4.0						°C/W	
Operating junction temperature range	T_J	-55 to +150						°C	
Storage temperature range	T_{STG}	-55 to +150						°C	
CHARACTERISTICS	SYMBOL	FR 1010DAF	FR 1020DAF	FR 1040DAF	FR 1060DAF	FR 1080DAF	FR 10100DAF	UNIT	
Maximum forward voltage per leg at 10A	V_F	1.30						V	
Maximum average reverse current at rated DC blocking voltage $T_J=25^{\circ}C$ $T_J=125^{\circ}C$	I_R	10				250			μA
Maximum reverse recovery time (Note 2)	T_{RR}	150			250	500		nS	

Notes: 1. Thermal resistance from junction to case.
2. Test conditions: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$.

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

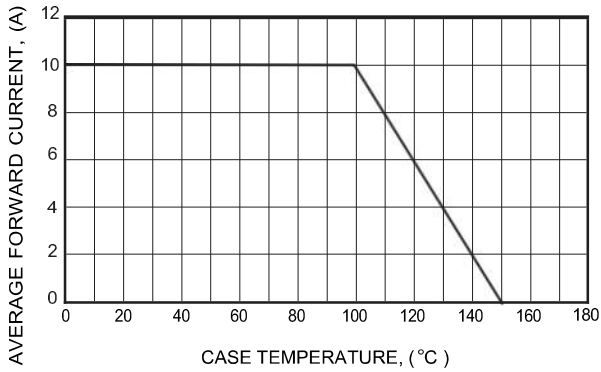


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

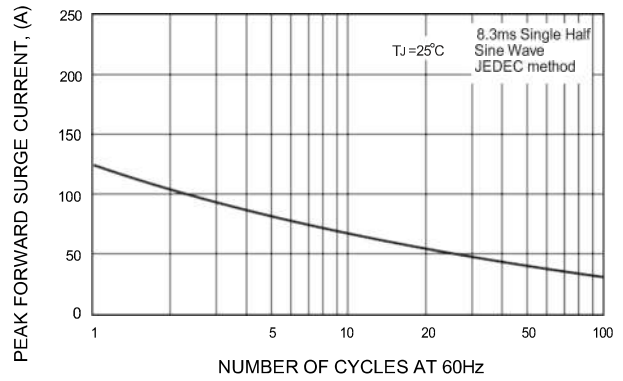


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

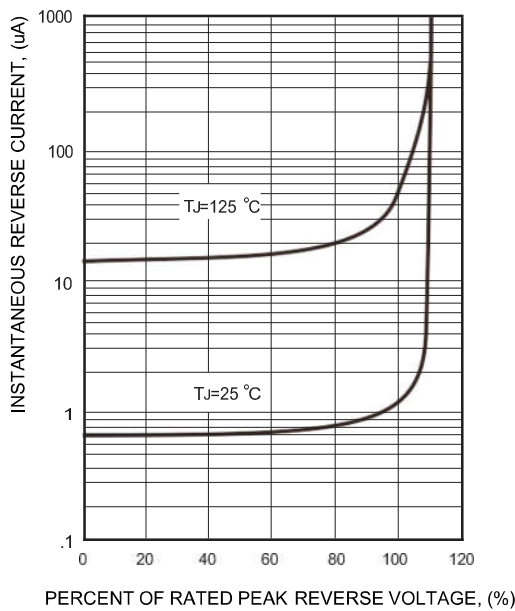


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

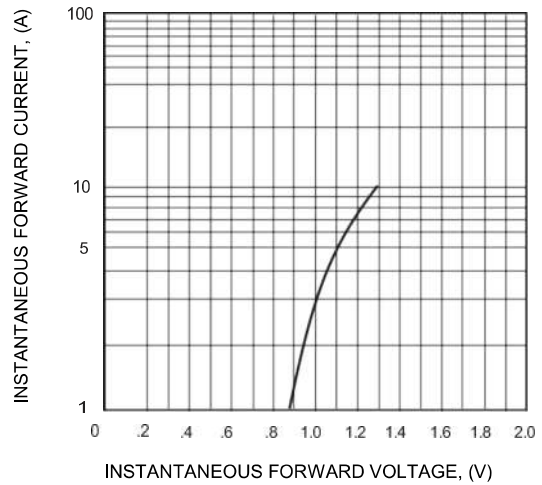
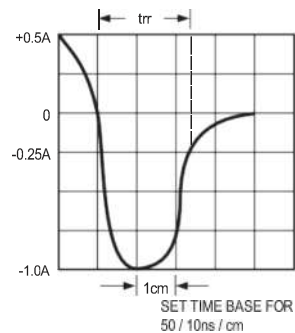
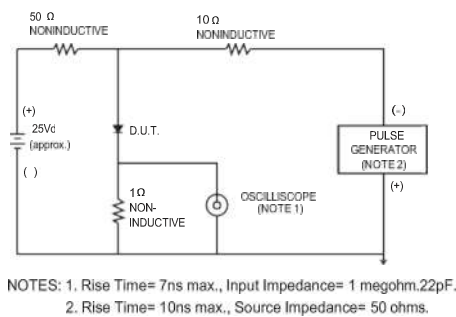
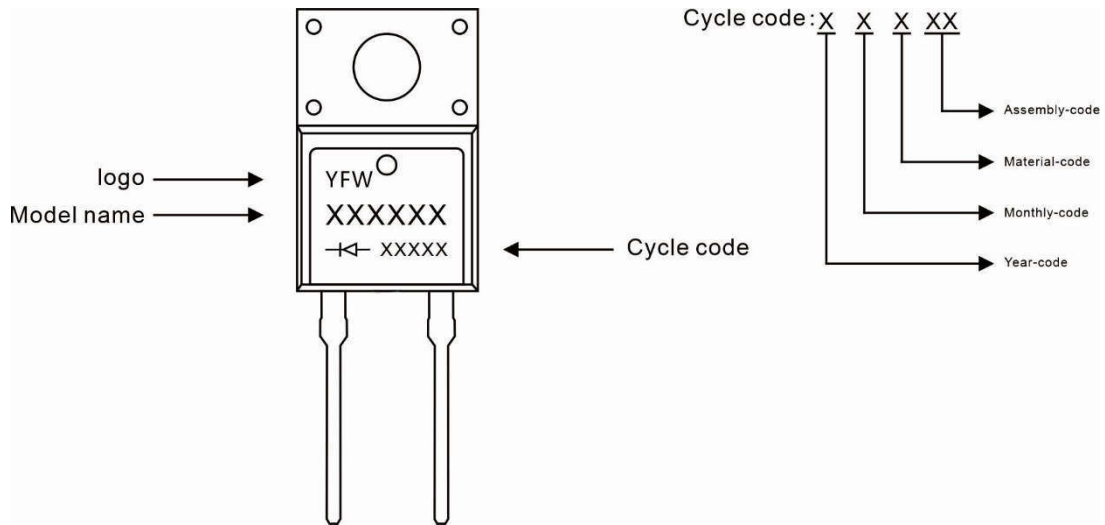


FIG.6- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
FRXXXXXDAF	TO-220FAC	0.06oz(1.7g)	50pcs/tube	1000PCS/Box 5000PCS/Carton

Package Dimensions

TO-220FAC

Symbol	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	4.50	4.90	0.177	0.193
A1	2.34	2.74	0.092	0.108
A2	2.66	2.86	0.105	0.113
b	0.75	0.85	0.030	0.033
b1	1.24	1.44	0.049	0.057
c	0.40	0.60	0.016	0.024
D	10.00	10.32	0.394	0.406
E	15.75	16.05	0.620	0.632
e	4.88	5.28	0.192	0.208
F	3.10	3.5	0.122	0.138
L	12.90	13.50	0.508	0.531
L1	2.90	3.30	0.114	0.130
Φ	3.10	3.30	0.122	0.130

Disclaimer

The information presented in this document is for reference only. Guangdong Youfeng Microelectronics Co.,Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise. The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), YFW or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale. This publication supersedes & replaces all information previously supplied. For additional information, please visit our website <https://www.yfwdiode.com>, or consult YFW sales office for further assistance.