

INTERNATIONAL RECTIFIER



25CPF & 25JPF SERIES

25 Amp Fast Recovery Dual Center Tap Rectifiers

Major Ratings and Characteristics

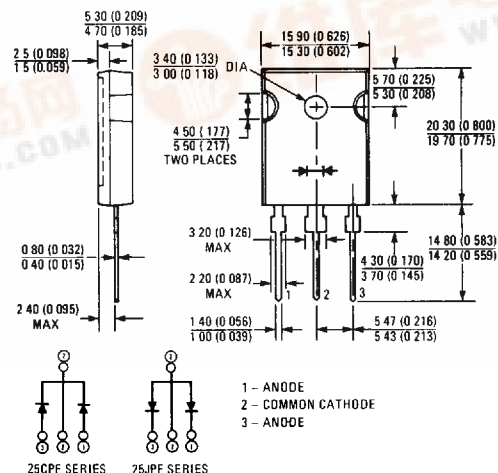
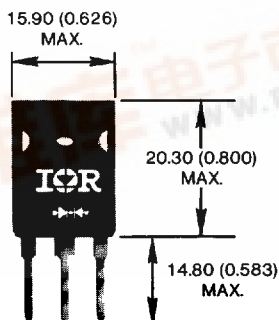
	25CPF10 25CPF20 25JPF10 25JPF20	25CPF30 25CPF40 25JPF30 25JPF40	Units
I_O	25		A
I_{FSM} @ 50 Hz	150	200	A
@ 60 Hz	157	209	
I_2^t @ 50 Hz	112	200	A ² S
@ 60 Hz	103	183	
t_{rr}	50	60	ns
T_J Range	-40 to 150		°C
V_{RRM} Range	100 & 200	300 & 400	V

Description/Features

The 25CPF and the 25JPF Series of Fast Recovery Rectifiers are rated at 25 Amps and together provide both positive output and negative output. They are designed for application in switching and inverter power supplies and as free wheeling diodes (both sides tied together).

- Ultrafast 50 or 60 nanosecond maximum recovery time
- Glass passivated junctions
- Popular TO-247AA package
- High voltage capability, to 400 volts
- Low forward drop
- Supplied in both positive and negative output versions for single-phase bridge applications

CASE STYLE AND DIMENSIONS



Conforms to JEDEC Outline TO-247-AA
Dimensions in Millimeters and (Inches)



25CPF, 25JPF Series**VOLTAGE RATINGS**

Part Numbers	V_{RRM} - Max. Repetitive Peak Reverse Voltage (V)	V_{RSM} - Max. Non-Repetitive Peak Reverse Voltage (V)
25CPF10	100	110
25JPF10		
25CPF20	200	220
25JPF20		
25CPF30	300	330
25JPF30		
25CPF40	400	440
25JPF40		

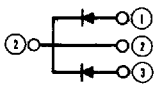
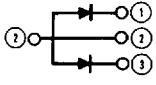
ELECTRICAL SPECIFICATIONS

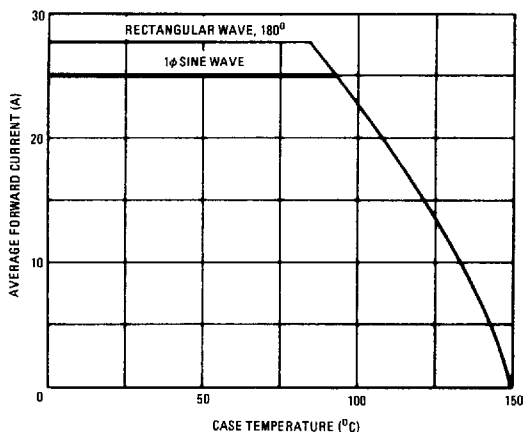
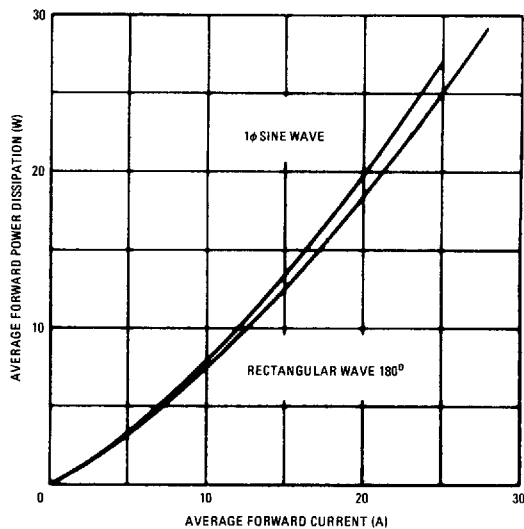
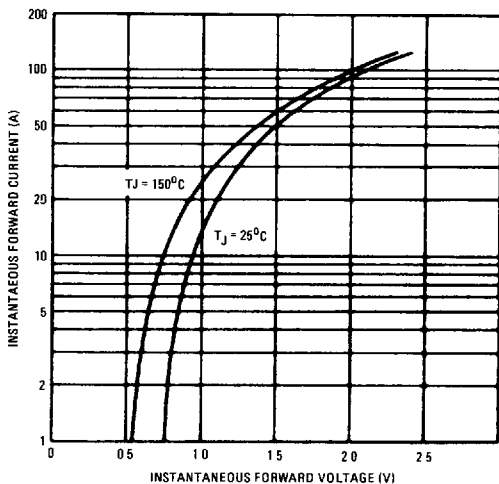
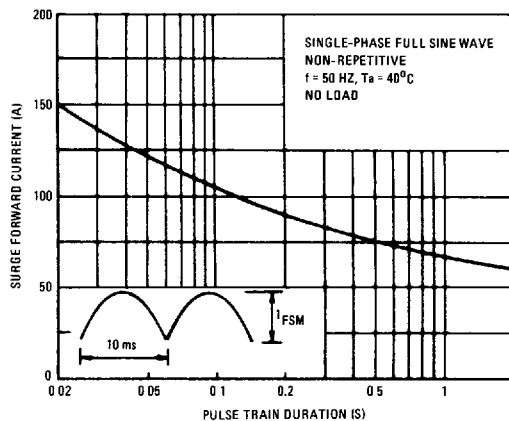
	25CPF10 25CPF20 25JPF10 25JPF20	25CPF30 25CPF40 25JPF30 25JPF40	Units	Conditions
I_O Max. average output current from center tap circuit	25	25	A	$T_C = 93^\circ\text{C}$
				$T_C = 85^\circ\text{C}$
I_{FSM} Max. peak one cycle, non- repetitive surge current, per diode	150	200	A	50 Hz half cycle sine wave or 6 ms rectangular pulse
	157	183		60 Hz half cycle sine wave or 5 ms rectangular pulse
I^2_t Max. I^2_t for fusing, per diode	112	200	A^2s	$t = 10 \text{ ms}$
	103	183		$t = 8.3 \text{ ms}$
V_{FM} Max. peak forward voltage per diode	0.98	1.25	V	$T_J = 25^\circ\text{C}$ $I_{FM} = 12.5\text{A}$
I_{RM} Max. peak reverse current per diode	25	50	μA	$T_J = 25^\circ\text{C}$ $I_{RM} = V_{RRM}$
t_{rr} Max. reverse recovery time	50	60	ns	$T_J = 25^\circ\text{C}$ $I_{FM} = 10\text{A}$ $-di/dt = 50\text{A}/\mu\text{s}$

THERMAL-MECHANICAL SPECIFICATIONS

T_J Max. operating junction temperature range	-40 to 150	$^\circ\text{C}$	
T_{stg} Max. storage temperature range	-40 to 150	$^\circ\text{C}$	
R_{thJC} Max. thermal resistance, dc, junction-to-case	2	deg. C/W	Based on power dissipated in both junctions
wt Approximate weight	6.0 (0.21)	g (oz)	
Recommended mounting torque	0.49 (4.4)	$\text{N}\cdot\text{m}/$ ($\text{lbf}\cdot\text{in.}$)	Typical screw mount
Case Style	TO-247AC		

25CPF, 25JPF Series

SERIES	POLARITY	
25CPF	FORWARD	
25JPF	REVERSE	

25CPF10 & 20, 25JPF10 & 20 Series**Fig. 1 – Average Forward Current Vs. Maximum Allowable Case Temperature****Fig. 2 – Average Forward Power Dissipation Vs. Average Forward Current****Fig. 3 – Maximum Instantaneous Forward Voltage****Fig. 4 – Maximum Non-Repetitive Surge Current**

25CPF30 & 40, 25JPF30 & 40 Series

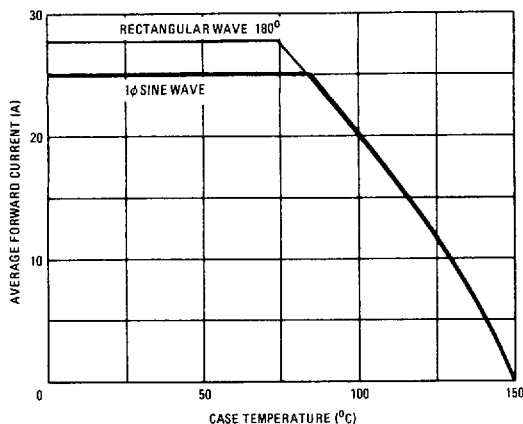


Fig. 5 - Average Forward Current Vs. Maximum Allowable Case Temperature

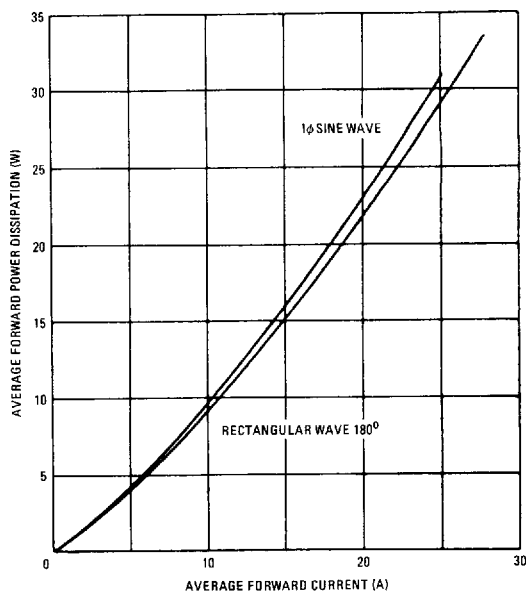


Fig. 6 - Average Forward Power Dissipation Vs. Average Forward Current

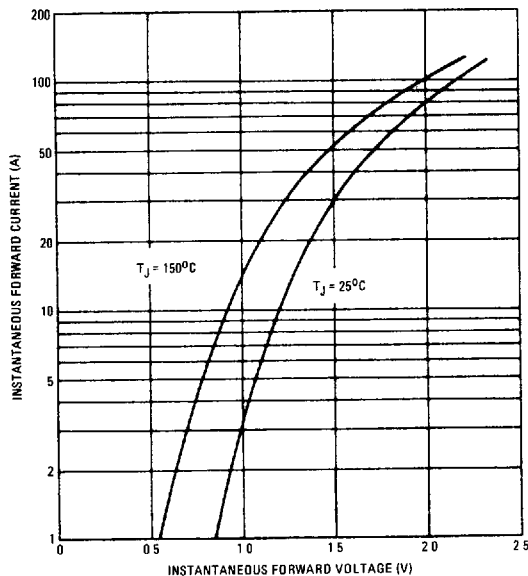


Fig. 7 - Maximum Instantaneous Forward Voltage Vs. Instantaneous Forward Current

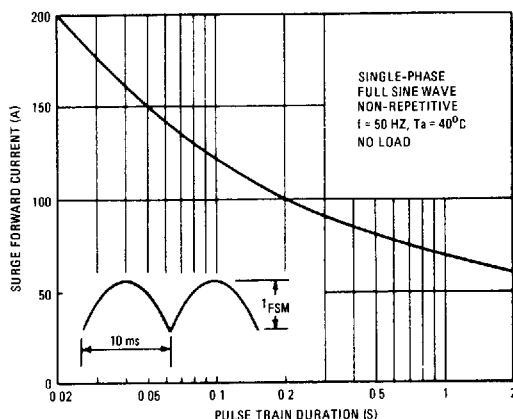


Fig. 8 - Maximum Non-Repetitive Surge Current Vs. Pulse Duration

International
IR Rectifier

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