Data Sheet No. PD-2.194

INTERNATIONAL RECTIFIER IOR

25CPF & 25JPF SERIES

25 Amp Fast Recovery Dual Center Tap Rectifiers

Major Ratings and Characteristics

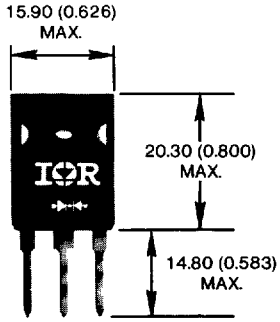
		25CPF10 25CPF20 25JPF10 25JPF20	25CPF30 25CPF40 25JPF30 25JPF40	Units
I_O		25		A
I_{FSM}	@ 50 Hz	150	200	A
	@ 60 Hz	157	209	
I^2t	@ 50 Hz	112	200	A^2S
	@ 60 Hz	103	183	
t_{rr}		50	60	ns
T_J Range		-40 to 150		°C
V_{RRM} Range		100 & 200	300 & 400	V

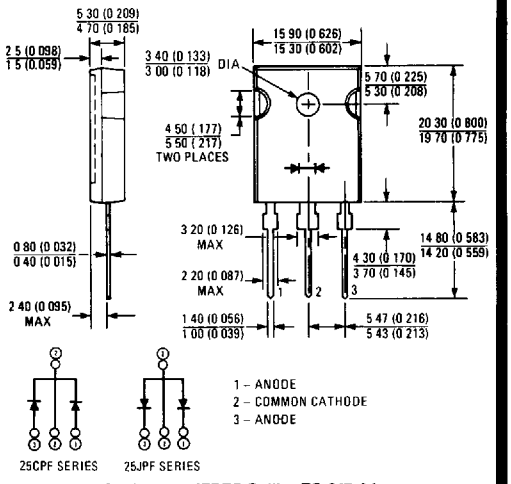
Description/Features

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 25JPF10	100	110
25CPF20 25JPF20	200	220
25CPF30 25JPF30	300	330
25CPF40 25JPF40	400	440

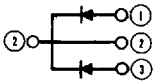
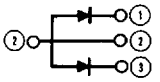
ELECTRICAL SPECIFICATIONS

		25CPF10 25CPF20 25JPF10 25JPF20	25CPF30 25CPF40 25JPF30 25JPF40	Units	Conditions
I_O	Max. average output current from center tap circuit	25		A	T_C = 93°C
			25		T_C = 85°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^2t	Max. I^2t for fusing, per diode	112	200	A^2s	t = 10 ms
		103	183		t = 8.3 ms
V_{FM}	Max. peak forward voltage per diode	0.98	1.25	V	T_J = 25°C I_{FM} = 12.5A
I_{RM}	Max. peak reverse current per diode	25	50	μA	T_J = 25°C I_{RM} = V_{RRM}
t_{rr}	Max. reverse recovery time	50	60	ns	T_J = 25°C I_{FM} = 10A -di/dt = 50A/μs

THERMAL-MECHANICAL SPECIFICATIONS

T_J	Max. operating junction temperature range	-40 to 150	°C	
T_{stg}	Max. storage temperature range	-40 to 150	°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)	N•m/ (lbf-in.)	Typical screw mount
	Case Style	TO-247AC		

25CPF, 25JPF Series

SERIES	POLARITY	
25CPF	FORWARD	
25JPF	REVERSE	

25CPF10 & 20, 25JPF10 & 20 Series

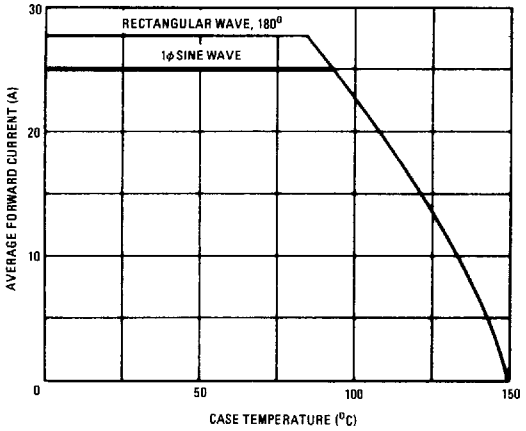


Fig. 1 – Average Forward Current Vs. Maximum Allowable Case Temperature

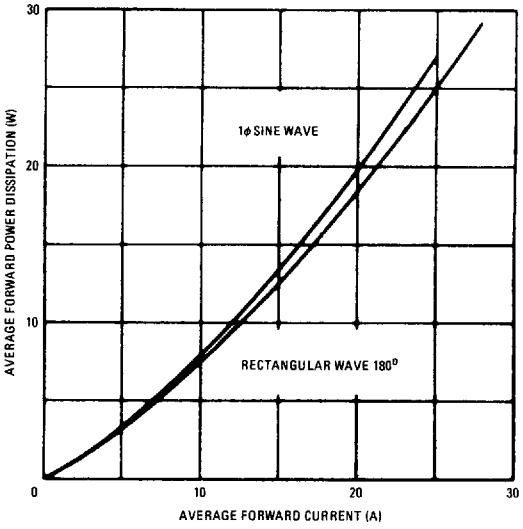


Fig. 2 – Average Forward Power Dissipation Vs. Average Forward Current

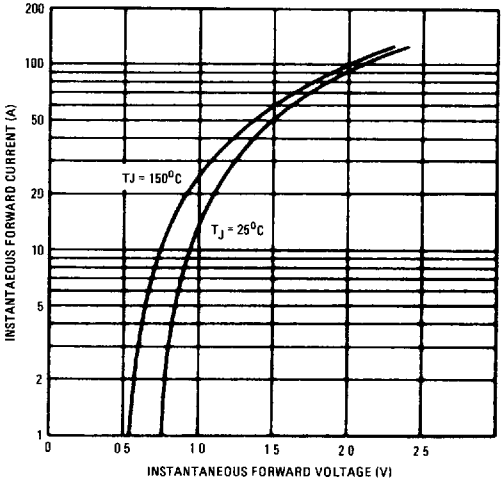


Fig. 3 – Maximum Instantaneous Forward Voltage Vs. Instantaneous Forward Current

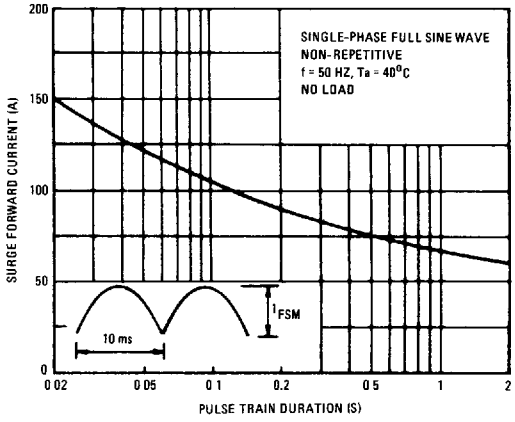


Fig. 4 – Maximum Non-Repetitive Surge Current Vs. Pulse Duration

25CPF30 & 40, 25JPF30 & 40 Series

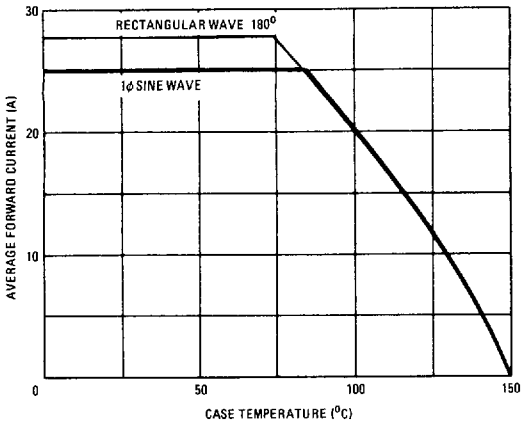


Fig. 5 – Average Forward Current Vs. Maximum Allowable Case Temperature

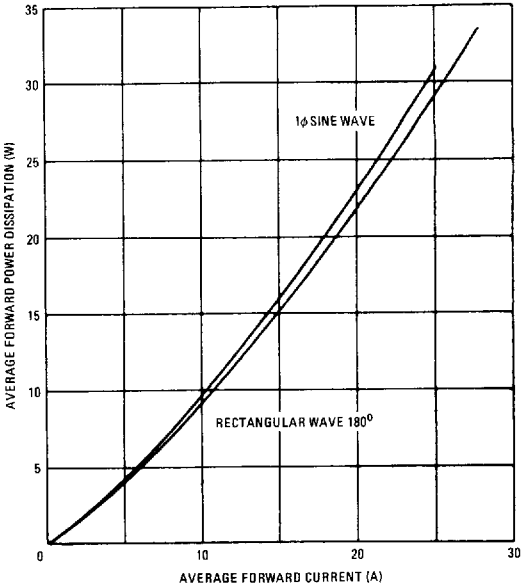


Fig. 6 – Average Forward Power Dissipation Vs. Average Forward Current

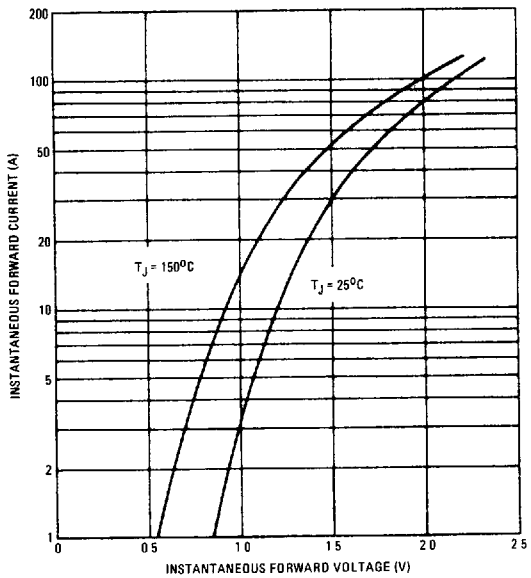


Fig. 7 – Maximum Instantaneous Forward Voltage Vs. Instantaneous Forward Current

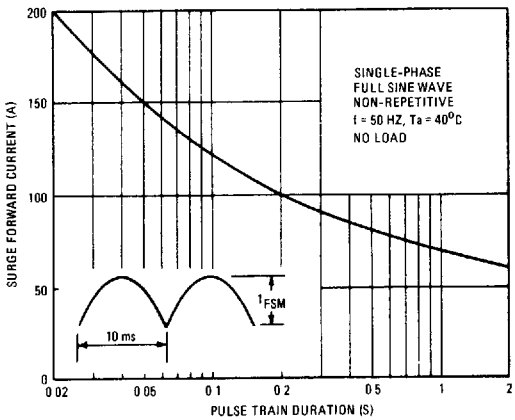


Fig. 8 – Maximum Non-Repetitive Surge Current Vs. Pulse Duration

International IOR Rectifier

U.S. WORLD HEADQUARTERS: 233 Kansas St , El Segundo, California 90245 Tel (213) 772-2000 Tlx 4720403
U.K. EUROPEAN HEADQUARTERS: Hurst Green, Oxted, Surrey RH8 9BB Tel (088 33) 3215/4231 Tlx 95219

IR CANADA: 101 Bentley St , Markham, Ontario L3R 3L1 Tel (416) 475-1897, 280 Dorval Ave , Suite 201A, Dorval, Quebec H9S 3H4, Tel (514) 631-4696 **IR FRANCE:** 123, rue de Petit Vaux, 91360 Epinay Sur Orge Tel 33 1 64 54 83 29 **IR GERMANY:** Savignystrasse 55, D-6000 Frankfurt/Main 1, Tel (0611) 74 26 74 **IR ITALY:** Via Ligutia 49, 10071 Bogaro, Torino, Tel (011) 470 1484 **IR INDIA:** International House, L B S Marg, Vikhroli, Bombay 400-083, Tel (022) 58 15 84 **IR JAPAN:** Daiei Building, 23-7 Shinjuku 3-Chrome, Shinjuku-ku, Tokyo 160, Tel (03) 354 8011 **IR FAR EAST:** 3-30-4 Nishi-Ikebukuro Toshima-ku, K&H Building 2F, Tokyo 171, Tel (03) 983 0641 **U.S. Central Zone Office:** 2100 Manchester Rd , Suite 501, Wheaton, IL 60187, Tel (312) 690-7700 **U.S. Eastern Zone Office:** 71 Grand Ave , Palisades Park, NJ 07650 Tel. (201) 943-4554

Sales Offices, Agents and Distributors in Major Cities Throughout the World.

Data and specifications subject to change without notice.

Printed in U S A 7/86

This datasheet has been downloaded from:

www.DatasheetCatalog.com

Datasheets for electronic components.

littlediode
COMPONENTS FOR ALL

Littlediode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.