

Single Phase Rectifier Bridge

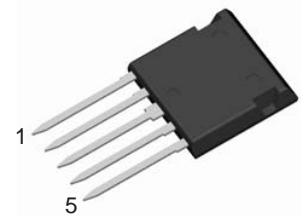
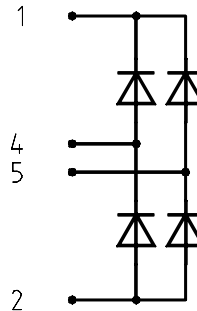
in ISOPLUS i4-PAC™

FBO40-12N

$$V_{RRM} = 1200 \text{ V}$$

$$I_{D(AV)M} = 40 \text{ A}$$

$$I_{FSM} = 250 \text{ A}$$



Rectifier Bridge

Symbol	Conditions	Maximum Ratings	
V_{RRM}		1200	V
I_{FAV}	$T_C = 90^\circ\text{C}$; sine 180° (per diode)	20	A
$I_{D(AV)M}$	$T_C = 90^\circ\text{C}$	40	A
I_{FSM}	$T_{VJ} = 25^\circ\text{C}$; $t = 10 \text{ ms}$; sine 50 Hz	250	A
P_{tot}	$T_C = 25^\circ\text{C}$ (per diode)	55	W

Features

- rectifier diodes for line frequency
- ISOPLUS i4-PAC™ package
 - isolated back surface
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - high reliability
 - industry standard outline

Symbol	Conditions	Characteristic Values ($T_{VJ} = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_F	$I_F = 25 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$	1.1	1.2	V
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = 125^\circ\text{C}$	0.4	20	μA mA
R_{thJC} R_{thJS}	(per diode)	2.9	2.3	K/W K/W

Applications

- single phase mains rectifiers
- power factor correction in conjunction with boost chopper (FID.../FMD... type)

Data according to IEC 60747 refer to a single diode unless otherwise stated

IXYS reserves the right to change limits, test conditions and dimensions.

Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-55...+150	°C
T_{stg}		-55...+125	°C
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}; 50/60 \text{ Hz}$	2500	V~
F_C	mounting force with clip	20...120	N

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
C_p	coupling capacity between shorted pins and mounting tab in the case		40	pF
$d_{S^1d_A}$	pin - pin	1.7		mm
$d_{S^1d_A}$	pin - backside metal	5.5		mm
Weight			9	g

Dimensions in mm (1 mm = 0.0394")

