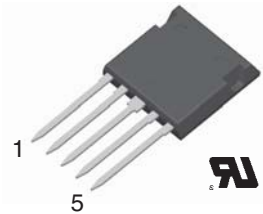
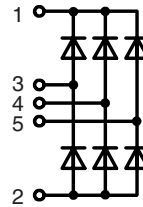


Three Phase Rectifier Bridge

in ISOPLUS i4-PAC™

$V_{RRM} = 1600 \text{ V}$
 $I_{D(AV)M} = 50 \text{ A}$
 $I_{FSM} = 200 \text{ A}$



Rectifier Bridge

Symbol	Conditions	Maximum Ratings	
V_{RRM}		1600	V
I_{FAV}	$T_C = 90^\circ\text{C}$; sine 180° (per diode)	20	A
$I_{D(AV)M}$	$T_C = 90^\circ\text{C}$	50	A
I_{FSM}	$T_{VJ} = 25^\circ\text{C}$; $t = 10 \text{ ms}$; sine 50 Hz	200	A
P_{tot}	$T_C = 25^\circ\text{C}$ (per diode)	60	W

Features

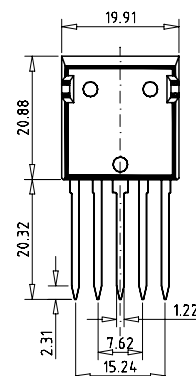
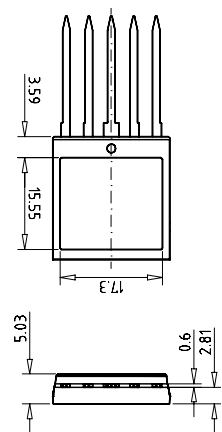
- rectifier diodes for line frequency
- ISOPLUS i4-PAC™ package
 - isolated back surface
 - UL registered E 72873
 - low coupling capacity between pins and heatsink
 - enlarged creepage towards heatsink
 - application friendly pinout
 - high reliability
 - industry standard outline

Symbol	Conditions	Characteristic Values		
		$(T_{VJ} = 25^\circ\text{C}$, unless otherwise specified)		
		min.	typ.	max.
V_F	$I_F = 20 \text{ A}$; $T_{VJ} = 25^\circ\text{C}$		1.1	1.3
		$T_{VJ} = 125^\circ\text{C}$	1.1	V
I_R	$V_R = V_{RRM}$; $T_{VJ} = 25^\circ\text{C}$ $V_R = 0.8 \cdot V_{RRM}$; $T_{VJ} = 125^\circ\text{C}$		0.2	10 μA
				mA
R_{thJC}	(per diode)		3.2	2.1 K/W
R_{thJH}				K/W

Applications

- three phase mains rectifiers

Dimensions in mm (1 mm = 0.0394")



Component

Symbol	Conditions	Maximum Ratings	
T_{VJ}		-55...+150	$^\circ\text{C}$
T_{stg}		-55...+125	$^\circ\text{C}$
V_{ISOL}	$I_{ISOL} \leq 1 \text{ mA}$; 50/60 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, d_A	pin - pin	1.7		mm
d_S, d_A	pin - backside metal	5.5		mm
Weight			9	g

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

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

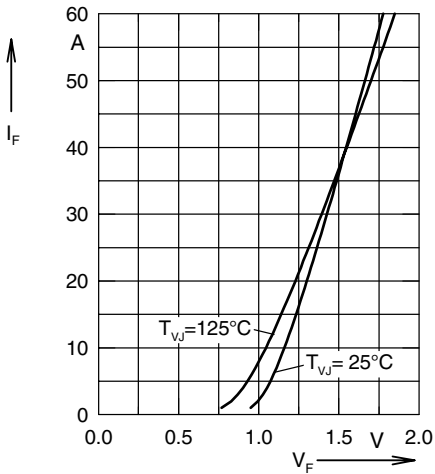


Fig. 1 Forward current vs. voltage drop per leg

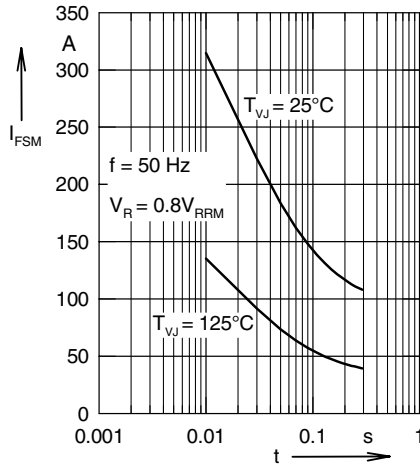


Fig. 2 Surge overload current

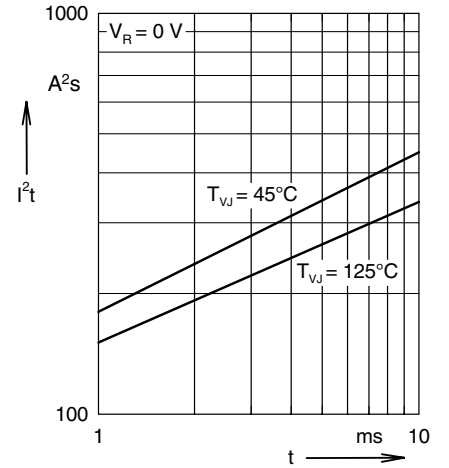


Fig. 3 t versus time per diode

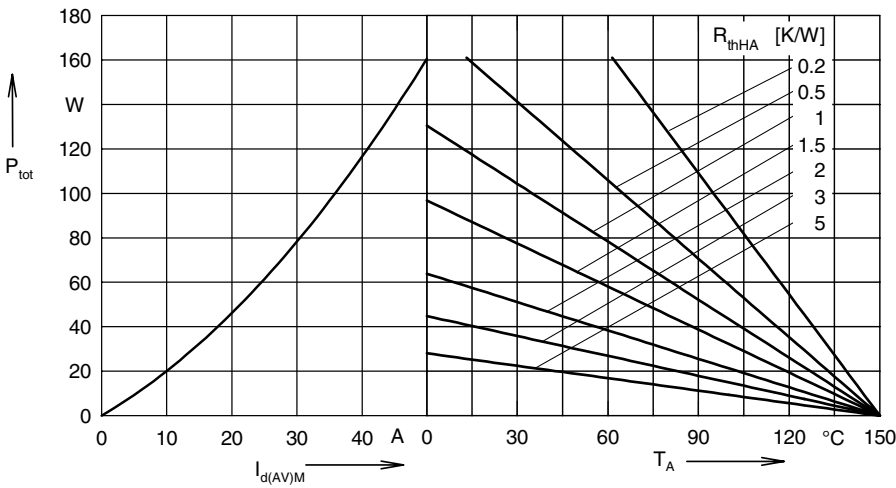


Fig. 4 Power dissipation versus direct output current and ambient temperature; sinusoidal 120°

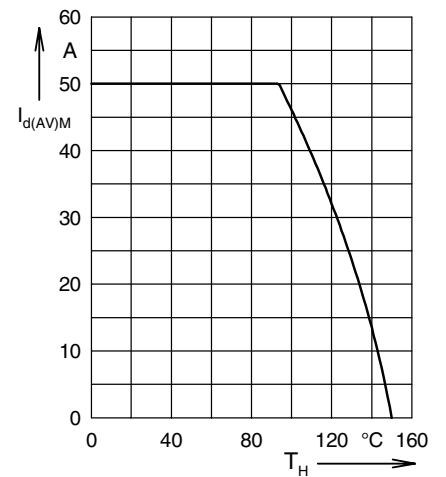


Fig. 5 Max. forward current vs. case temperature $I_{d(AVM)} = f(T_{case})$

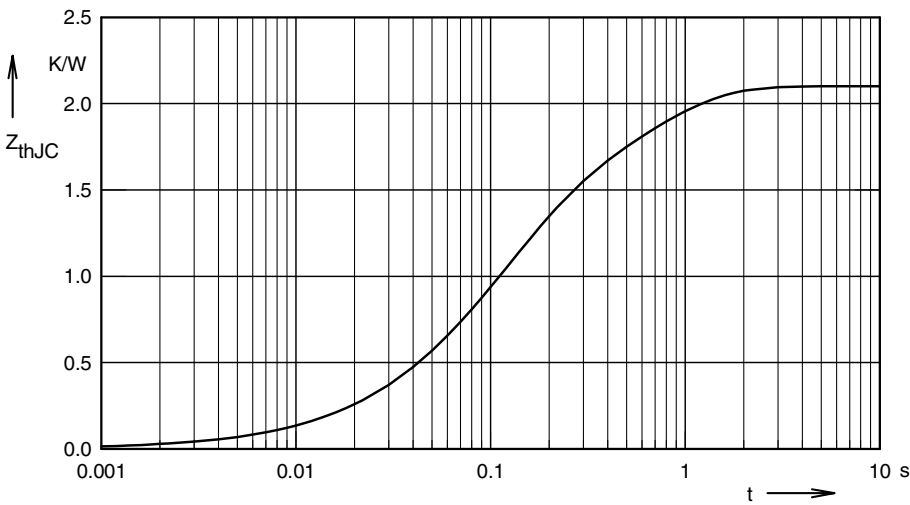


Fig. 6 Transient thermal impedance junction to case Z_{thjc}

Constants for Z_{thjc} calculation

i	R_{thi} (K/W)	t_i (s)
1	1.159	0.1015
2	0.1286	0.1026
3	0.2651	0.4919
4	0.5473	0.62