

Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

[IXYS Corporation](#)

[VUO35-18NO7](#)

For any questions, you can email us directly:

sales@integrated-circuit.com

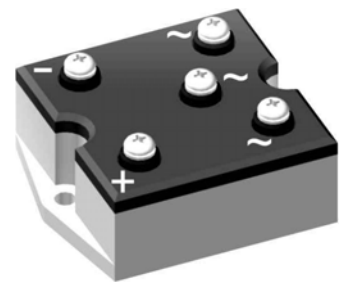
Standard Rectifier Module


3~ Rectifier	
V_{RRM}	= 1800 V
I_{DAV}	= 35 A
I_{FSM}	= 400 A

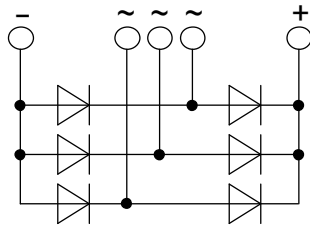
3~ Rectifier Bridge

Part number

VUO35-18N07



 E72873



Features / Advantages:

- Package with DCB ceramic
- Improved temperature and power cycling
- Planar passivated chips
- Very low forward voltage drop
- Very low leakage current

Applications:

- Diode for main rectification
- For three phase bridge configurations
- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Package: PWS-A

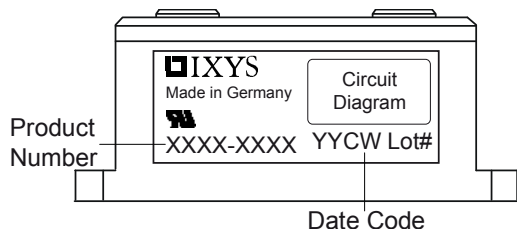
- Industry standard outline
- RoHS compliant
- Easy to mount with two screws
- Base plate: Aluminium internally DCB isolated
- Advanced power cycling

Rectifier				Ratings			
Symbol	Definition	Conditions	min.	typ.	max.	Unit	
V_{RSM}	max. non-repetitive reverse blocking voltage				1900	V	
V_{RRM}	max. repetitive reverse blocking voltage				1800	V	
I_R	reverse current	$V_R = 1800\text{ V}$	$T_{VJ} = 25^\circ\text{C}$		40	μA	
		$V_R = 1800\text{ V}$	$T_{VJ} = 150^\circ\text{C}$		1.5	mA	
V_F	forward voltage drop	$I_F = 15\text{ A}$	$T_{VJ} = 25^\circ\text{C}$		1.10	V	
					1.38	V	
		$I_F = 45\text{ A}$	$T_{VJ} = 125^\circ\text{C}$		1.01	V	
					1.38	V	
I_{DAV}	bridge output current	$T_C = 85^\circ\text{C}$ rectangular $d = \frac{1}{3}$	$T_{VJ} = 150^\circ\text{C}$		35	A	
V_{F0}	threshold voltage	} for power loss calculation only	$T_{VJ} = 150^\circ\text{C}$		0.80	V	
r_F	slope resistance				12.9	m Ω	
R_{thJC}	thermal resistance junction to case				4.2	K/W	
R_{thCH}	thermal resistance case to heatsink			0.6		K/W	
P_{tot}	total power dissipation		$T_C = 25^\circ\text{C}$		29	W	
I_{FSM}	max. forward surge current	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_{VJ} = 45^\circ\text{C}$		400	A	
					430	A	
		$t = 8,3\text{ ms}; (60\text{ Hz}), \text{ sine}$	$V_R = 0\text{ V}$	$T_{VJ} = 150^\circ\text{C}$		340	A
						365	A
I^2t	value for fusing	$t = 10\text{ ms}; (50\text{ Hz}), \text{ sine}$	$T_{VJ} = 45^\circ\text{C}$		800	A ² s	
					770	A ² s	
		$t = 8,3\text{ ms}; (60\text{ Hz}), \text{ sine}$	$V_R = 0\text{ V}$	$T_{VJ} = 150^\circ\text{C}$		580	A ² s
						555	A ² s
C_J	junction capacitance	$V_R = 400\text{ V}; f = 1\text{ MHz}$	$T_{VJ} = 25^\circ\text{C}$	10		pF	



VUO35-18NO7

Package PWS-A				Ratings		
Symbol	Definition	Conditions	min.	typ.	max.	Unit
I_{RMS}	RMS current	per terminal			100	A
T_{stg}	storage temperature		-40		125	°C
T_{VJ}	virtual junction temperature		-40		150	°C
Weight				100		g
M_D	mounting torque		1.25		1.75	Nm
M_T	terminal torque		1.25		1.75	Nm
$d_{Spp/App}$	creepage distance on surface striking distance through air	terminal to terminal	6.5			mm
$d_{Spb/Apb}$		terminal to backside	8.5			mm
V_{ISOL}	isolation voltage	t = 1 second	3000			V
		t = 1 minute	2500			V



Ordering	Part Number	Marking on Product	Delivery Mode	Quantity	Code No.
Standard	VUO35-18NO7	VUO35-18NO7	Box	20	456667

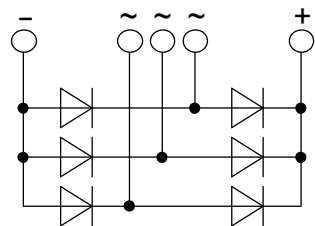
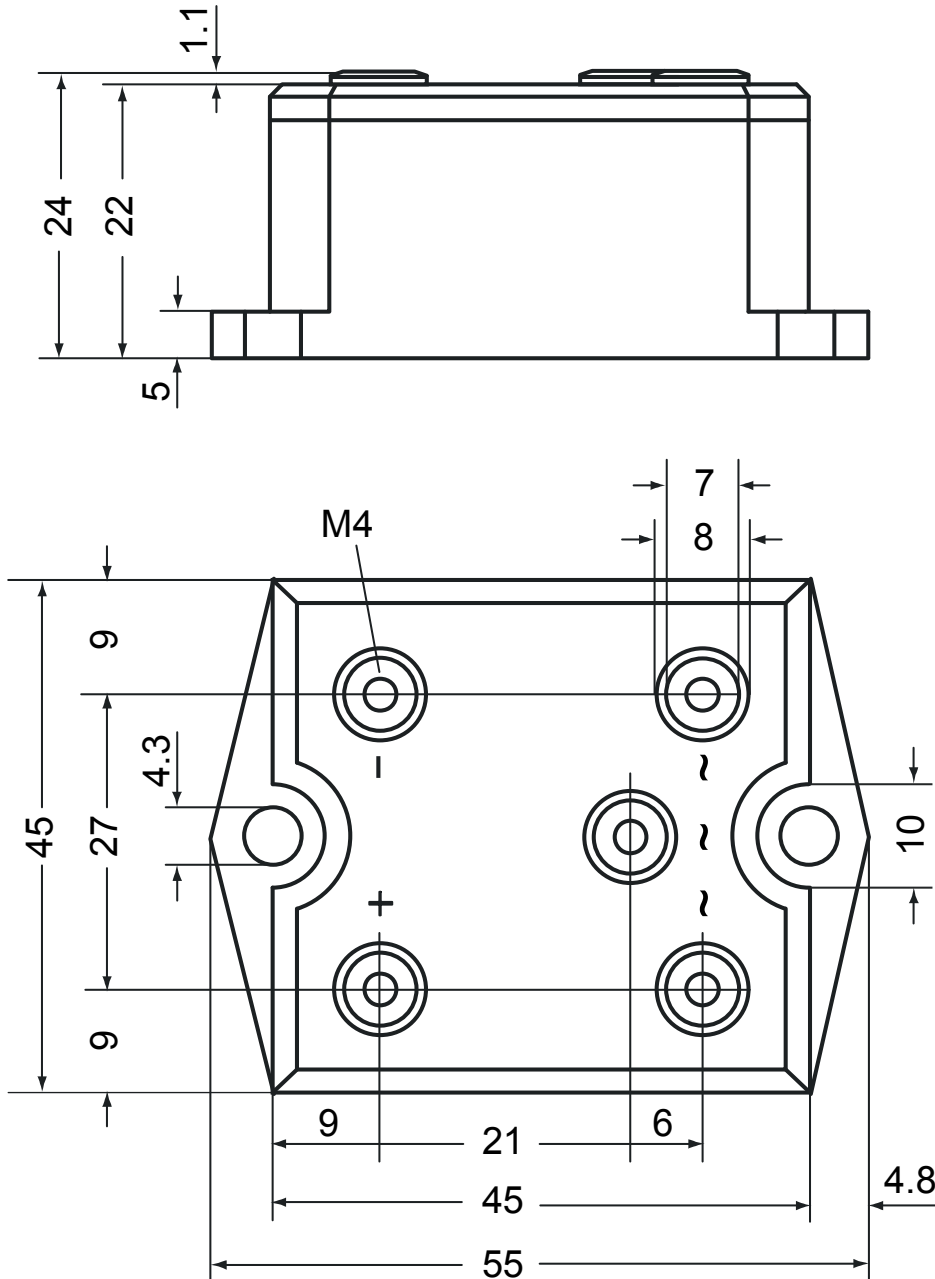
Equivalent Circuits for Simulation

* on die level

$T_{VJ} = 150\text{ °C}$

Symbol	Definition	Value	Unit
V_0	threshold voltage	0.8	V
R_0	slope resistance *	11.7	mΩ

Outlines PWS-A



Rectifier

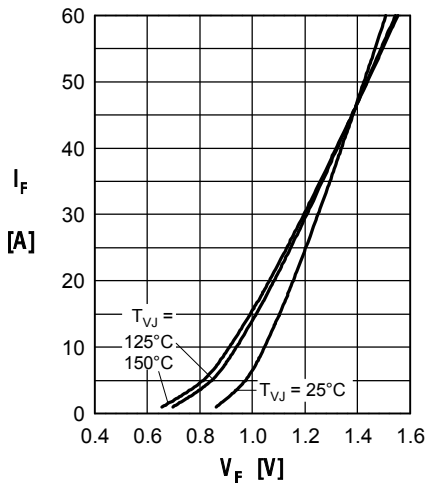


Fig. 1 Forward current vs. voltage drop per diode

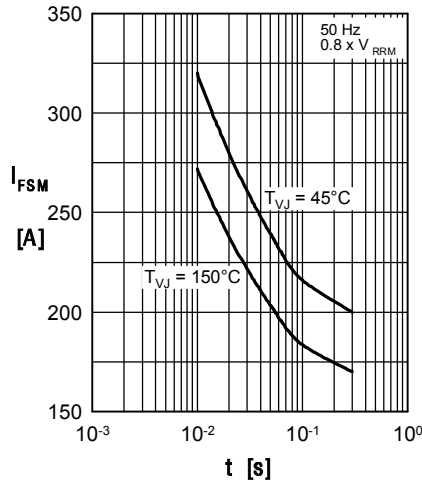


Fig. 2 Surge overload current vs. time per diode

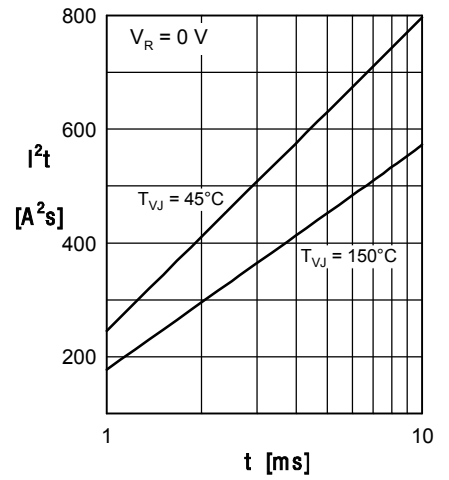


Fig. 3 I²t vs. time per diode

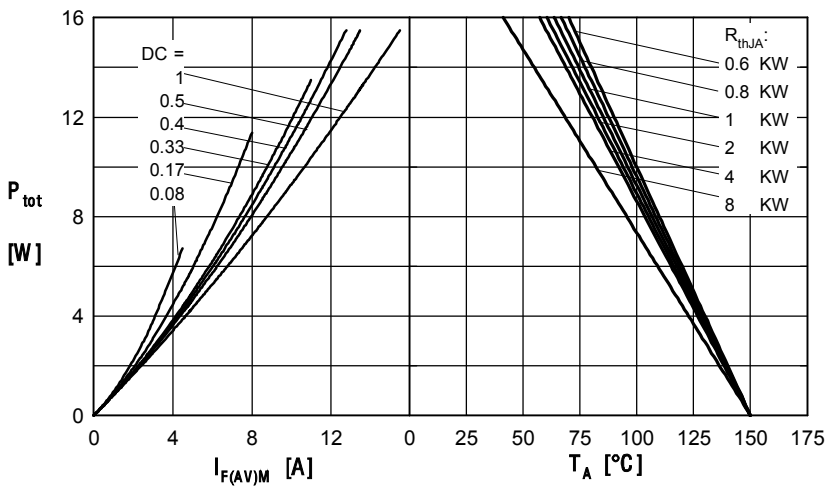


Fig. 4 Power dissipation vs. forward current and ambient temperature per diode

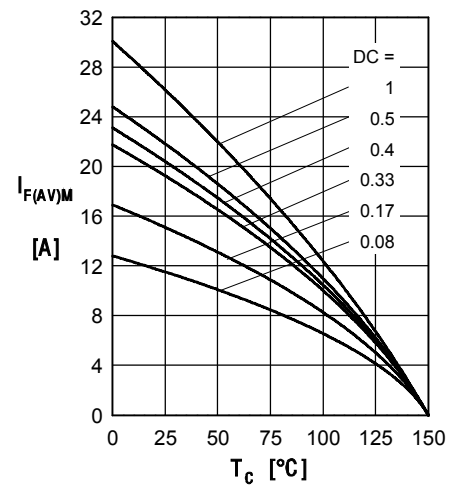


Fig. 5 Max. forward current vs. case temperature per diode

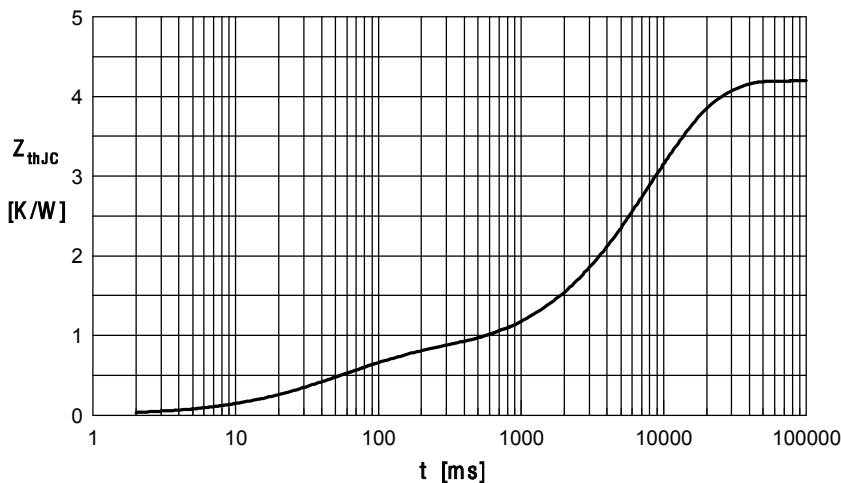


Fig. 6 Transient thermal impedance junction to case vs. time per diode

Constants for Z_{thJC} calculation:

i	R _{th} (K/W)	t _i (s)
1	0.194	0.024
2	0.556	0.070
3	0.450	3.250
4	3.000	9.300