

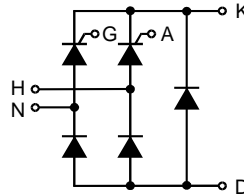
Single Phase Rectifier Bridge

$$I_{dAV} = 32 \text{ A}$$

$$V_{RRM} = 600-1200 \text{ V}$$

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
700	600	VHF 25-06io7
900	800	VHF 25-08io7
1300	1200	VHF 25-12io7



Symbol	Test Conditions	Maximum Ratings	Features	
I_{dAV} ①	$T_C = 85^\circ\text{C}$, module	32 A	Features <ul style="list-style-type: none"> • Package with DCB ceramic base plate • Isolation voltage 3000 V~ • Planar passivated chips • Low forward voltage drop • Leads suitable for PC board soldering Applications <ul style="list-style-type: none"> • Supply for DC power equipment • DC motor control Advantages <ul style="list-style-type: none"> • Easy to mount with two screws • Space and weight savings • Improved temperature and power cycling capability • Small and light weight 	
I_{TAVM}/I_{FAVM}	$T_C = 85^\circ\text{C}$; (180° sine ; per thyristor)	16 A		
I_{TSM}/I_{FSM}	$T_{VJ} = 45^\circ\text{C}$; $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		200 A 210 A
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		180 A 190 A
I^2t	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		200 A ² s 150 A ² s
	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine		160 A ² s 150 A ² s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f = 50 Hz, $t_p = 200 \mu\text{s}$ $V_D = 2/3 V_{DRM}$ $I_G = 0.15 \text{ A}$ $di_G/dt = 0.15 \text{ A}/\mu\text{s}$	repetitive, $I_T = 20 \text{ A}$		100 A/ μs
		non repetitive, $I_T = I_{TAVM}$		500 A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ $R_{GK} = \infty$; method 1 (linear voltage rise)	$V_{DR} = 2/3 V_{DRM}$		500 V/ μs
V_{RGM}				10 V
P_{GM}	$T_{VJ} = T_{VJM}$ $I_T = I_{TAVM}$	$t_p = 30 \mu\text{s}$	≤ 5 W	
		$t_p = 300 \mu\text{s}$	≤ 2.5 W	
P_{GAVM}			0.5 W	
T_{VJ}			-40...+125 °C	
T_{VJM}			125 °C	
T_{stg}			-40...+125 °C	
V_{ISOL}	50/60 Hz, RMS $I_{ISOL} \leq 1 \text{ mA}$	t = 1 min	2500 V~	
		t = 1 s	3000 V~	
M_d	Mounting torque (M4)		1.5 - 2 Nm	
			14 - 18 lb.in.	
Weight	typ.		18 g	

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

① for resistive load at bridge output. IXYS reserves the right to change limits, test conditions and dimensions.

Symbol	Test Conditions	Characteristic Values
I_D, I_R	$T_{VJ} = T_{VJM}; V_R = V_{RRM}; V_D = V_{DRM}$	≤ 5 mA
V_T	$I_T = 20$ A; $T_{VJ} = 25^\circ\text{C}$	≤ 1.6 V
V_{T0}	For power-loss calculations only ($T_{VJ} = 125^\circ\text{C}$)	0.85 V
r_T		27 m Ω
V_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	≤ 1.5 V ≤ 2.5 V
I_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	≤ 25 mA ≤ 50 mA
V_{GD}	$T_{VJ} = T_{VJM}; V_D = 2/3 V_{DRM}$	≤ 0.2 V
I_{GD}		≤ 3 mA
I_L	$T_{VJ} = 25^\circ\text{C}; t_p = 10$ μs $I_G = 0.1$ A; $di_G/dt = 0.1$ A/ μs	≤ 75 mA
I_H	$T_{VJ} = 25^\circ\text{C}; V_D = 6$ V; $R_{GK} = \infty$	≤ 50 mA
t_{gd}	$T_{VJ} = 25^\circ\text{C}; V_D = 1/2 V_{DRM}$ $I_G = 0.1$ A; $di_G/dt = 0.1$ A/ μs	≤ 2 μs
R_{thJC}	per thyristor; DC per module	1.3 K/W 0.22 K/W
R_{thJK}	per thyristor; DC per module	1.8 K/W 0.3 K/W
d_s	Creeping distance on surface	11.2 mm
d_A	Creepage distance in air	9.5 mm
a	Max. allowable acceleration	50 m/s ²

Dimensions in mm (1 mm = 0.0394")

