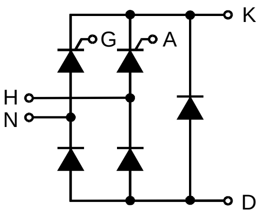
IXYS **VHF 25**

Single Phase Rectifier Bridge

I_{dAV} = 32 A
V_{RRM} = 600-1200 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	
I_{dAV} ①	T_C = 85°C, module		32	A
I_{TAVM}/I_{FAVM}	T_C = 85°C; (180° sine ; per thyristor)		16	A
I_{TSM}/I_{FSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	200	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	210	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	180	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	190	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	200	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	150	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	160	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	150	A^2s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f =50 Hz, t_P =200 µs V_D = 2/3 V_{DRM}	repetitive, I_T = 20 A	100	A/µs
	I_G = 0.15 A di_G/dt = 0.15 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}	$T_{VJ} = T_{VJM}$	t_p = 30 µs	≤ 5	W
	$I_T = I_{TAVM}$	t_p = 300 µs	≤ 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	t = 1 min	2500	V~
	I_{ISOL} ≤ 1 mA	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.

Features

- Package with DCB ceramic base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering

Applications

- Supply for DC power equipment
- DC motor control

Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

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°C		≤	1.6	V
V_{T0}	For power-loss calculations only (T_{VJ} = 125°C)			0.85	V
r_T				27	mΩ
V_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	1.5	V
		T_{VJ} = -40°C	≤	2.5	V
I_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	25	mA
		T_{VJ} = -40°C	≤	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°C; t_P = 10 µs I_G = 0.1 A; di_G/dt = 0.1 A/µs		≤	75	mA
I_H	T_{VJ} = 25°C; V_D = 6 V; $R_{GK} = \infty$		≤	50	mA
t_{gd}	T_{VJ} = 25°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			1.3	K/W
	per module			0.22	K/W
R_{thJK}	per thyristor; DC			1.8	K/W
	per module			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/s²

Dimensions in mm (1 mm = 0.0394")