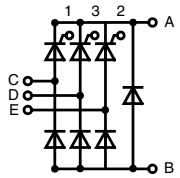
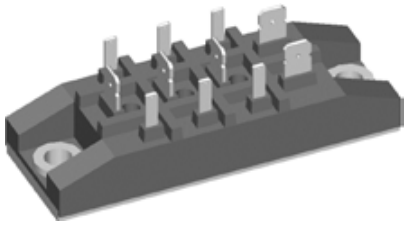
Three Phase Rectifier Bridge

I_{dAV} = 70 A
V_{RRM} = 1600 V

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
1700	1600	VVZF 70-16io7





Symbol	Conditions			Maximum Ratings	
I_{dAV} ①	T_C = 85°C, module			70	A
I_{dAVM} ①	module			70	A
I_{FRMS}, I_{TRMS}	per leg			36	A
I_{FSM}, I_{TSM}	T_{VJ} = 45°C;	t = 10 ms	(50 Hz)	550	A
	V_R = 0	t = 8.3 ms	(60 Hz)	600	A
	T_{VJ} = T_{VJM};	t = 10 ms	(50 Hz)	500	A
	V_R = 0	t = 8.3 ms	(60 Hz)	550	A
I^2t	T_{VJ} = 45°C;	t = 10 ms	(50 Hz)	1520	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	1520	A^2s
	T_{VJ} = T_{VJM};	t = 10 ms	(50 Hz)	1250	A^2s
	V_R = 0	t = 8.3 ms	(60 Hz)	1250	A^2s
$(di/dt)_{cr}$	T_{VJ} = 125°C f = 50 Hz; tp = 200 µs		repetitive; I_T = 50 A	150	A/µs
	V_D = $^2/_3$ V_{DRM} I_G = 0.3 A di_G/dt = 0.3 A/µs		non repetitive; I_T = ½I_{dAV}	500	A/µs
$(dv/dt)_{cr}$	T_{VJ} = T_{VJM}; V_D = $^2/_3$ V_{DRM} R_{GK} = ∞, method 1 (linear voltage rise)			1000	V/µs
V_{RGM}				10	V
P_{GM}	T_{VJ} = T_{VJM}	t_p = 30 µs		10	W
	I_T = I_{TAVM}	t_p = 500 µs		5	W
		t_p = 10 µs		1	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	(M5)		5 ±15%	Nm
		(10-32 UNF)		44 ±15%	lb.in.
Weight	Typ.			100	g

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

Features

- Package with copper base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- Low forward voltage drop
- ¼" fast-on power terminals

Applications

- Supplies for DC power equipment
- Input rectifiers for PWM inverter
- Battery DC power supplies
- Field supply for DC motors

Advantages

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

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

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Symbol	Conditions		Characteristic Values		
I_D; I_R	$V_R = V_{RRM}$; $V_D = V_{DRM}$	$T_{VJ} = T_{VJM}$	≤	5	mA
V_T	I_T = 80 A	T_{VJ} = 25°C	≤	1.64	V
V_{T0}	For power-loss calculations only			0.85	V
r_t				11	mΩ
V_{GT}	V_D = 6 V	T_{VJ} = 25°C	≤	1.5	V
		T_{VJ} = -40°C	≤	1.6	V
I_{GT}	V_D = 6 V	T_{VJ} = 25°C	≤	100	mA
		T_{VJ} = -40°C	≤	200	mA
V_{GD}	$V_D = {}^2/_3 V_{DRM}$	$T_{VJ} = T_{VJM}$	≤	0.2	V
I_{GD}			≤	5	mA
I_L	t_p = 10 µs I_G = 0.45 A; di_G/dt = 0.45 A/µs	T_{VJ} = 25°C	≤	450	mA
I_H	V_D = 6 V; R_{GK} = ∞	T_{VJ} = 25°C	≤	200	mA
t_{gd}	$V_D = ½V_{DRM}$ I_G = 0.45 A; di_G/dt = 0.45 A/µs	T_{VJ} = 25°C	≤	2	µs
t_q	I_T = 20 A; t_p = 200 µs V_R = 100 V; di/dt = -10 A/µs dv/dt = -15 V/µs; $V_D = {}^2/_3 V_{DRM}$	T_{VJ} = 25°C	≤	250	µs
R_{thJC}	per thyristor / diode; DC			0.9	K/W
	per module			0.15	K/W
R_{thJH}	per thyristor / diode; DC			1.1	K/W
	per module			0.157	K/W
d_S	Creeping distance on surface			16.1	mm
d_A	Creepage distance in air			7.5	mm
a	Max. allowable acceleration			50	m/s^2

Dimensions in mm (1 mm = 0.0394“)