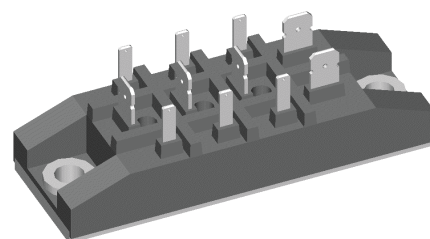
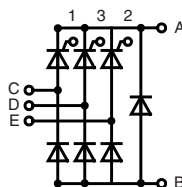


Three Phase Rectifier Bridge

$$I_{dAV} = 70 \text{ A}$$

$$V_{RRM} = 1600 \text{ V}$$

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



Symbol	Conditions	Maximum Ratings
I_{dAV} ①	$T_C = 85^\circ\text{C}$, module	70 A
I_{dAVM} ①	module	70 A
I_{FRMS} , I_{TRMS}	per leg	36 A
I_{FSM} , I_{TSM}	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	550 A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	600 A
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	500 A
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	550 A
I^2t	$T_{VJ} = 45^\circ\text{C}$; $t = 10 \text{ ms}$ (50 Hz)	1520 A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	1520 A ² s
	$T_{VJ} = T_{VJM}$; $t = 10 \text{ ms}$ (50 Hz)	1250 A ² s
	$V_R = 0$; $t = 8.3 \text{ ms}$ (60 Hz)	1250 A ² s
$(di/dt)_{cr}$	$T_{VJ} = 125^\circ\text{C}$ $f = 50 \text{ Hz}$; $t_p = 200 \mu\text{s}$	repetitive; $I_T = 50 \text{ A}$ 150 A/ μs
	$V_D = \frac{2}{3} V_{DRM}$ $I_G = 0.3 \text{ A}$ $di_G/dt = 0.3 \text{ A}/\mu\text{s}$	non repetitive; $I_T = \frac{1}{2} I_{dAV}$ 500 A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_D = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)	1000 V/ μs
V_{RGM}		10 V
P_{GM}	$T_{VJ} = T_{VJM}$; $t_p = 30 \mu\text{s}$	10 W
	$I_T = I_{TAVM}$; $t_p = 500 \mu\text{s}$	5 W
	$t_p = 10 \mu\text{s}$	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; $t = 1 \text{ min}$	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$; $t = 1 \text{ s}$	3000 V~
M_d	Mounting torque (M5)	5 ±15% Nm
	(10-32 UNF)	44 ±15% lb.in.
Weight	Typ.	100 g

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

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

Disclaimer Notice

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

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Symbol	Conditions	Characteristic Values	
$I_D; I_R$	$V_R = V_{RRM}; V_D = V_{DRM}$ $T_{VJ} = T_{VJM}$	\leq	5 mA
V_T	$I_T = 80$ A $T_{VJ} = 25^\circ\text{C}$	\leq	1.64 V
V_{T0}	For power-loss calculations only		0.85 V
r_t			11 m Ω
V_{GT}	$V_D = 6$ V $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	\leq	1.5 V 1.6 V
I_{GT}	$V_D = 6$ V $T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	\leq	100 mA 200 mA
V_{GD} I_{GD}	$V_D = \frac{2}{3}V_{DRM}$ $T_{VJ} = T_{VJM}$	\leq	0.2 V 5 mA
I_L	$t_p = 10$ μs $I_G = 0.45$ A; $di_G/dt = 0.45$ A/ μs $T_{VJ} = 25^\circ\text{C}$	\leq	450 mA
I_H	$V_D = 6$ V; $R_{GK} = \infty$ $T_{VJ} = 25^\circ\text{C}$	\leq	200 mA
t_{gd}	$V_D = \frac{1}{2}V_{DRM}$ $I_G = 0.45$ A; $di_G/dt = 0.45$ A/ μs $T_{VJ} = 25^\circ\text{C}$	\leq	2 μs
t_{qi}	$I_T = 20$ A; $t_p = 200$ μs $V_R = 100$ V; $di/dt = -10$ A/ μs $dv/dt = -15$ V/ μs ; $V_D = \frac{2}{3}V_{DRM}$ $T_{VJ} = 25^\circ\text{C}$	\leq	250 μs
R_{thJC}	per thyristor / diode; DC per module		0.9 K/W 0.15 K/W
R_{thJH}	per thyristor / diode; DC per module		1.1 K/W 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

