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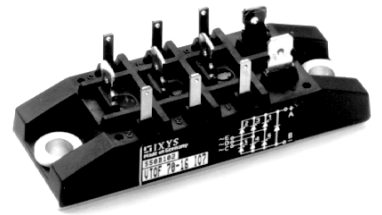
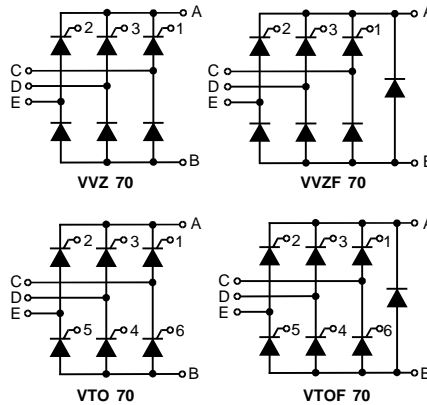
	VVZ 70 VVZF 70 VTO 70 VTOF 70
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Three Phase Rectifier Bridge

I_{dAV} = 70 A
V_{RRM} = 800-1600 V

Preliminary data

V _{RSM} V _{DSM} V	V _{RRM} V _{DRM} V	Type
800	800	xxx 70-08io7
1200	1200	xxx 70-12io7
1400	1400	xxx 70-14io7
1600	1600	xxx 70-16io7
xxx = type		



Symbol	Test 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; V _R = 0 V	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	550 600	A A
	T _{VJ} = T _{VJM} V _R = 0 V	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	500 550	A A
I ² t	T _{VJ} = 45°C V _R = 0 V	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	1520 1520	A ² s A ² s
	T _{VJ} = T _{VJM} V _R = 0 V	t = 10 ms (50 Hz), sine t = 8.3 ms (60 Hz), sine	1250 1250	A ² s A ² s
(di/dt) _{cr}	T _{VJ} = 125°C f = 50 Hz, t _p = 200 μs V _D = 2/3 V _{DRM} I _G = 0.3 A, di _G /dt = 0.3 A/μs	repetitive, I _T = 50 A non repetitive, I _T = 1/2 • I _{dAV}	150 500	A/μs A/μs
(dv/dt) _{cr}	T _{VJ} = T _{VJM} ; V _{DR} = 2/3 V _{DRM} R _{GK} = ∞; method 1 (linear voltage rise)		1000	V/μs
V _{RGM}			10	V
P _{GM}	T _{VJ} = T _{VJM} I _T = I _{TAVM}	t _p = 30 μs	≤ 10	W
		t _p = 500 μs	≤ 5	W
		t _p = 10 ms	≤ 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 I _{ISOL} ≤ 1 mA	t = 1 min	2500	V~
		t = 1 s	3000	V~
M _d	Mounting torque (M5) (10-32 UNF)		5 ± 15 %	Nm
			44 ± 15 %	lb.in.
Weight			50	g

Features

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

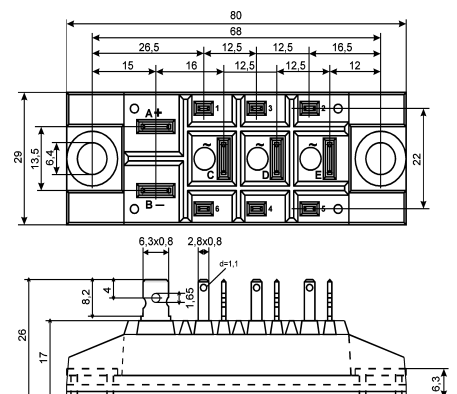
Applications

- 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 screws
- Space and weight savings
- Improved temperature and power cycling capability
- Small and light weight

Dimensions in mm (1 mm = 0.0394")



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	$I_T = 80$ A; $T_{VJ} = 25^\circ\text{C}$	≤ 1.64 V
V_{T0}	For power-loss calculations only	0.85 V
r_T		11 mΩ
V_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$	≤ 1.5 V
	$T_{VJ} = -40^\circ\text{C}$	≤ 1.6 V
I_{GT}	$V_D = 6$ V; $T_{VJ} = 25^\circ\text{C}$	≤ 100 mA
	$T_{VJ} = -40^\circ\text{C}$	≤ 200 mA
V_{GD}	$T_{VJ} = T_{VJM}; V_D = 2/3 V_{DRM}$	≤ 0.2 V
I_{GD}		≤ 5 mA
I_L	$T_{VJ} = 25^\circ\text{C}; t_p = 10$ μs $I_G = 0.45$ A; $di_G/dt = 0.45$ A/μs	≤ 450 mA
I_H	$T_{VJ} = 25^\circ\text{C}; V_D = 6$ V; $R_{GK} = \infty$	≤ 200 mA
t_{gd}	$T_{VJ} = 25^\circ\text{C}; V_D = 1/2 V_{DRM}$ $I_G = 0.45$ A; $di_G/dt = 0.45$ A/μs	≤ 2 μs
t_q	$T_{VJ} = T_{VJM}; I_T = 20$ A, $t_p = 200$ μs; $di/dt = -10$ A/μs typ. $V_R = 100$ V; $dv/dt = 15$ V/μs; $V_D = 2/3 V_{DRM}$	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