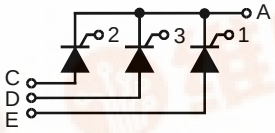
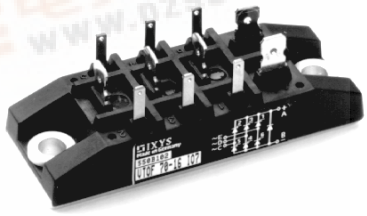
Three Thyristor Module

I_{FAV} = 3x 28 A
V_{RRM} = 800-1600 V

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
800	800	VYK 70-08io7
1200	1200	VYK 70-12io7
1400	1400	VYK 70-14io7
1600	1600	VYK 70-16io7





Symbol	Test Conditions		Maximum Ratings	
I_{FAVM}	T_C = 85°C, 50 - 400 Hz (per phase)		28	A
I_{FRMS}	T_C = 85°C, 50 - 400 Hz (per phase)		43	A
I_{TSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	550	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	600	A
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	500	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	550	A
$\int i^2dt$	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	1520	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1520	A^2s
	T_{VJ} = T_{VJM}	t = 10 ms (50 Hz), sine	1250	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1250	A^2s
$(di/dt)_{cr}$	T_{VJ} = T_{VJM}	repetitive, I_T = 25 A	150	A/µs
	f =50 Hz, t_P =200 µs			
	V_D = 2/3 V_{DRM}			
	I_G = 0.45 A	non repetitive, I_T = I_{TAVM}	500	A/µs
	di_G/dt = 0.45 A/µs			
$(dv/dt)_{cr}$	T_{VJ} = T_{VJM};	V_{DR} = 2/3 V_{DRM}	1000	V/µs
	R_{GK} = ∞; method 1 (linear voltage rise)			
P_{GM}	T_{VJ} = T_{VJM}	t_p = 30 µs	10	W
	I_T = I_{TAVM}	t_p = 300 µs	5	W
P_{GAVM}			0.5	W
V_{RGM}			10	V
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.		110	g

Features

- Package with metal base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- UL applied
- ¼" fast-on power terminals

Applications

- Switching and control of three phase AC circuits
- Softstart AC motor controller
- Solid state switches
- Light and temperature control

Advantages

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

Data according to IEC 60747 refer to a single diode/thyristor unless otherwise stated
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 = 45 A; T_{VJ} = 25°C		≤	1.45	V
V_{T0}	For power-loss calculations only (T_{VJ} = 125°C)			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}	$T_{VJ} = T_{VJM}$;	V_D = 2/3 V_{DRM}	≤	0.2	V
I_{GD}			≤	5	mA
I_L	T_{VJ} = 25°C; t_P = 10 µs I_G = 0.45 A; di_G/dt = 0.45 A/µs		≤	450	mA
I_H	T_{VJ} = 25°C; V_D = 6 V; R_{GK} = ∞		≤	200	mA
t_{gd}	T_{VJ} = 25°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 V_R = 100 V; dv/dt = 15 V/µs; V_D = 2/3 V_{DRM}		typ.	150	µs
R_{thJC}	per thyristor; sine 180°el			0.9	K/W
	per module			0.15	K/W
R_{thJH}	per thyristor; sine 180°el			1.1	K/W
	per module			0.183	K/W
d_S	Creeping distance on surface			16.1	mm
d_A	Creepage distance in air			6.0	mm
a	Max. allowable acceleration			50	m/s^2

Dimensions in mm (1 mm = 0.0394")