

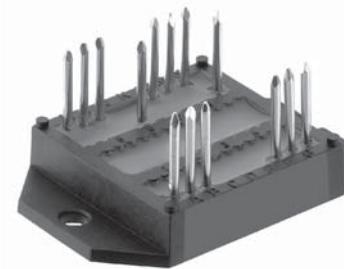
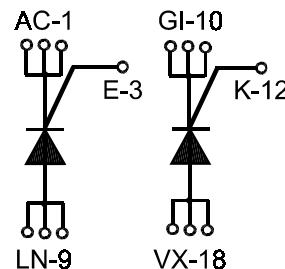
Thyristor Modules

ECO-PAC 2

$I_{TRMS} = 2 \times 180A$
 $I_{TAVM} = 2 \times 105A$
 $V_{RRM} = 800-1800 V$

Preliminary Data

V_{RSM} V V _{DSM}	V_{RRM} V V _{DRM}	Typ
900	800	VCC 2x105 - 08io7
1300	1200	VCC 2x105 - 12io7
1500	1400	VCC 2x105 - 14io7
1700	1600	VCC 2x105 - 16io7
1900	1800	VCC 2x105 - 18io7



Symbol	Conditions	Maximum Ratings		
I_{TRMS}		180	A	
I_{TAVM}	$T_C = 85^\circ C$; 180° sine	105	A	
I_{TSM}	$T_{VJ} = 45^\circ C$; $V_R = 0 V$; $t = 10 ms$ (50 Hz), sine $t = 8.3 ms$ (60 Hz), sine	2250	A	
	$T_{VJ} = 125^\circ C$; $V_R = 0 V$; $t = 10 ms$ (50 Hz), sine $t = 8.3 ms$ (60 Hz), sine	2400	A	
I^2dt	$T_{VJ} = 45^\circ C$; $V_R = 0 V$; $t = 10 ms$ (50 Hz), sine $t = 8.3 ms$ (60 Hz), sine	25300	A ² s	
	$T_{VJ} = 125^\circ C$; $V_R = 0 V$; $t = 10 ms$ (50 Hz), sine $t = 8.3 ms$ (60 Hz), sine	23900	A ² s	
$(di/dt)_{cr}$	$T_{VJ} = 125^\circ C$; $f = 50$ Hz; $t_p = 200 \mu s$; $V_D = \frac{2}{3}V_{DRM}$; $I_G = 0.45 A$ $di_G/dt = 0.45 A/\mu s$;	repetitive, $I_T = 250 A$ non repetitive, $I_T = I_{TAVM}$	150	A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = 125^\circ C$; $V_{DR} = \frac{2}{3}V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)		1000	V/ μs
P_{GM}	$T_{VJ} = 125^\circ C$; $I_T = I_{TAVM}$;	$t_p = 30 ms$ $t_p = 300 ms$	≤ 10 ≤ 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 $I_{ISOL} \leq 1 mA$	$t = 1 min$ $t = 1 s$	3000 3600	V ~
M_d	Mounting torque	(M4)	1.5 - 2.0 14 - 18	Nm lb.in.
Weight	typ.		26	g

Data according to IEC 60747 refer to a single thyristor unless otherwise stated
 IXYS reserves the right to change limits, test conditions and dimensions.

Component

Symbol	Conditions	Characteristic Values		
		min.	typ.	max.
I_D, I_R	$T_{VJ} = 125^\circ C; V_R = V_{RRM}; V_D = V_{DRM}$		5	mA
V_T	$I_T = 300 A; T_{VJ} = 25^\circ C$		1.5	V
V_{TO}	For power-loss calculations only		0.8	V
r_T			2.4	$m\Omega$
V_{GT}	$V_D = 6 V; T_{VJ} = 25^\circ C$ $T_{VJ} = -40^\circ C$		1.5	V
			1.6	V
I_{GT}	$V_D = 6 V; T_{VJ} = 25^\circ C$ $T_{VJ} = -40^\circ C$		150	mA
			200	mA
V_{GD}	$T_{VJ} = 125^\circ C; V_D = \frac{2}{3} V_{DRM}$		0.2	V
I_{GD}	$T_{VJ} = 125^\circ C; V_D = \frac{2}{3} V_{DRM}$		10	mA
I_L	$T_{VJ} = 25^\circ C; t_p = 10 ms$ $I_G = 0.45 A; di_G/dt = 0.45 A/\mu s$		450	mA
I_H	$T_{VJ} = 25^\circ C; V_D = 6 V; R_{GK} = \infty$		200	mA
t_{gd}	$T_{VJ} = 25^\circ C; V_D = \frac{1}{2} V_{DRM}$ $I_G = 0.45 A; di_G/dt = 0.45 A/\mu s$		2	μs
R_{thJC}	per Thyristor; DC per module		0.26	K/W
R_{thCH}	per Thyristor; DC per module	0,2	0.13	K/W
d_s	Creeping distance on surface		11.2	mm
d_A	Creeping distance in air		5.0	mm
a	Max. allowable acceleration		50	m/s^2

Dimensions in mm (1 mm = 0.0394")

