Thyristor Modules

ECO-PAC 2

I_{TRMS} =	**200 A**
I_{TAVM} =	**130 A**
V_{RRM} =	**1200/1600 V**

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Typ
1300	1200	VCO 132-12io7
1700	1600	VCO 132-16io7
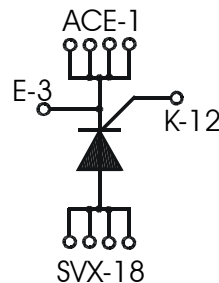
Symbol	Conditions			Maximum Ratings	
I_{TRMS}				200	A
I_{TAVM}	$T_C = 85°C$; $T_{VJ} = 130°C$; 180° sine			130	A
I_{TSM}	$T_{VJ} = 45°C$;	t = 10 ms	(50 Hz)	3600	A
	$V_R = 0$	t = 8.3 ms	(60 Hz)	3850	A
	$T_{VJ} = 125°C$;	t = 10 ms	(50 Hz)	3200	A
	$V_R = 0$	t = 8.3 ms	(60 Hz)	3420	A
I^2t	$T_{VJ} = 45°C$;	t = 10 ms	(50 Hz)	64 800	A^2s
	$V_R = 0$	t = 8.3 ms	(60 Hz)	62 300	A^2s
	$T_{VJ} = 125°C$;	t = 10 ms	(50 Hz)	51 200	A^2s
	$V_R = 0$	t = 8.3 ms	(60 Hz)	49 100	A^2s
$(di/dt)_{cr}$	$T_{VJ} = 125°C$; f = 50 Hz; $t_p = 200$ μs;	repetitive, $I_T = 250$ A		150	A/μs
	$V_D = {}^2/_3 V_{DRM}$; $I_G = 0.5$ A; $di_G/dt = 0.5$ A/μs	non repetitive, $I_T = I_{TAVM}$		500	A/μs
$(dv/dt)_{cr}$	$T_{VJ} = 125°C$; $V_D = {}^2/_3 V_{DRM}$; $R_{GK} = ∞$; method 1 (linear voltage rise)			1000	V/μs
P_{GM}	$T_{VJ} = 125°C$; $I_T = I_{T(AV)M}$;	$t_p = 30$ ms		≤ 10	W
		$t_p = 300$ ms		≤ 5	W
P_{GAVM}				0.5	W
V_{RGM}				10	V
T_{VJ}				-40...+130	°C
T_{VJM}				150	°C
T_{stg}				-40...+125	°C
V_{ISOL}	50/60 Hz, RMS	t = 1 min		3000	V~
	$I_{ISOL} ≤ 1$ mA	t = 1 s		3600	V~
M_d	Mounting torque (M4)			1.5 - 2.0	Nm
				14 - 18	lb.in.
Weight	Typical including screws			24	g

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

Features

- Isolation voltage 3600 V~
- Planar glass passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering

Applications

- DC Motor control
- Light and temperature control
- Softstart AC motor controller
- Solid state switches

Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling
- High power density
- Small and light weight

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

20170321a

Symbol	Conditions		Characteristic Values		
			typ.	max.	
I_D, I_R	V_R / V_D = V_{RRM}/ V_{DRM}	T_{VJ} = 125°C		10	mA
V_T	I_T = 200 A	T_{VJ} = 25°C		1.3	V
V_{T0}	For power-loss calculations only			0.80	V
r_t				1.65	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		300	mA
		T_{VJ} = -40°C		400	mA
V_{GD}	V_D = $^2/_3$ V_{DRM};	T_{VJ} = 125°C		0.2	V
I_{GD}				10	mA
I_L	t_p = 10 µs; I_G = 0.5 A; di_G /dt = 0.5 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 = 0.5 A; di_G /dt = 0.5 A/µs	T_{VJ} = 25°C		2	µs
R_{thJC}	per thyristor; DC current			0.25	K/W
R_{thJH}			0.35		K/W
d_S	Creeping distance on surface			11.2	mm
d_A	Creepage distance in air			5.0	mm
a	Maximum allowable acceleration			50	m/s²

Dimensions in mm (1 mm = 0.0394")

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

20170321a