Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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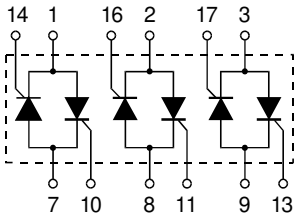
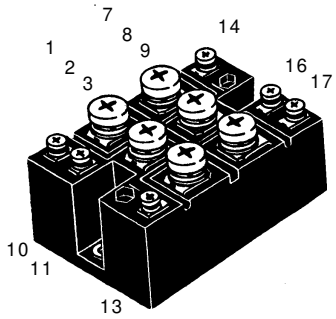
Three Phase AC Controller Modules

I_{RMS} = 80/95 A
V_{RRM} = 800-1400 V

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type	
800	800	VWO 80-08io7	VWO 95-08io7
1200	1200	VWO 80-12io7	VWO 95-12io7
1400	1400	VWO 80-14io7	VWO 95-14io7





Symbol	Test Conditions		Maximum Ratings VWO 80	VWO 95	
I_{RMS}	T_C = 85°C, 50 - 400 Hz (per phase)		82	96	A
I_{TRMS}	$T_{VJ} = T_{VJM}$		59	69	A
I_{TAVM}	T_C = 85°C; (180° sine)		37	44	A
I_{TSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	1000	1150	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	1100	1230	A
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	900	1000	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	1000	1100	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	5000	6600	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	5080	6280	A^2s
	$T_{VJ} = T_{VJM}$	t = 10 ms (50 Hz), sine	4050	5000	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	4200	5080	A^2s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$	repetitive, I_T = 150 A		100	A/µs
	f =50 Hz, t_P =200 µs				
	V_D = 2/3 V_{DRM}				
	I_G = 0.3 A	non repetitive, $I_T = I_{TAVM}$		500	A/µs
	di_G/dt = 0.3 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~
	$I_{ISOL} \leq$ 1 mA	t = 1 s		3000	V~
M_d	Mounting torque (M5)			5/44±15 %	Nm/lb.in.
	Terminal connection torque (M3; M5)			1.5/13±15 %	Nm/lb.in.
Weight	typ.			180	g

Features

- Thyristor controller for AC (circuit W3C acc. to IEC) for mains frequency
- Package with metal base plate
- Isolation voltage 3000 V~
- Planar passivated chips
- UL applied

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
- High power density

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

Symbol	Test Conditions			Characteristic Values VWO 80	VWO 95	
I_D, I_R	$T_{VJ} = T_{VJM}$; $V_R = V_{RRM}$; $V_D = V_{DRM}$		≤	5	5	mA
V_T	I_T = 150 A; T_{VJ} = 25°C		≤	1.65	1.57	V
V_{T0}	For power-loss calculations only			0.85	0.85	V
r_T				5.2	4.8	mΩ
V_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	1.0	1.0	V
		T_{VJ} = -40°C	≤	1.6	1.6	V
I_{GT}	V_D = 6 V;	T_{VJ} = 25°C	≤	100	100	mA
		T_{VJ} = -40°C	≤	150	150	mA
V_{GD}	$T_{VJ} = T_{VJM}$;	V_D = 2/3 V_{DRM}	≤	0.2	0.2	V
I_{GD}			≤	5	5	mA
I_L	T_{VJ} = 25°C; t_P = 10 µs I_G = 0.3 A; di_G/dt = 0.3 A/µs		≤	200	200	mA
I_H	T_{VJ} = 25°C; V_D = 6 V; R_{GK} = ∞		≤	150	150	mA
t_{gd}	T_{VJ} = 25°C; V_D = 1/2 V_{DRM} I_G = 0.3 A; di_G/dt = 0.3 A/µs		≤	2	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	150	µs
R_{thJC}	per thyristor; sine 180°el			0.81	0.66	K/W
	per module			0.135	0.11	K/W
R_{thJK}	per thyristor; sine 180°el			1.0	0.93	K/W
	per module			0.167	0.155	K/W
d_S	Creeping distance on surface			8.0		mm
d_A	Creepage distance in air			4.5		mm
a	Max. allowable acceleration			50		m/s^2

Dimensions in mm (1 mm = 0.0394")