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!

Contact us

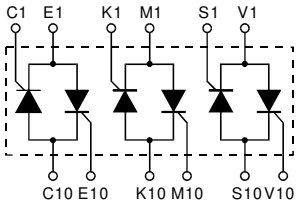
Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

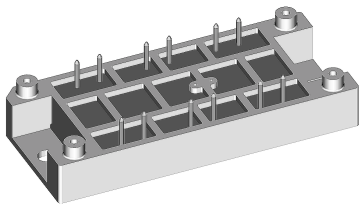
Three Phase AC Controller Modules

I_{RMS} = 3x 83 A
V_{RRM} = 800-1600 V

Preliminary data

V_{RSM} V_{DSM} V	V_{RRM} V_{DRM} V	Type
800	800	VWO 85-08io1
1200	1200	VWO 85-12io1
1400	1400	VWO 85-14io1
1600	1600	VWO 85-16io1





Symbol	Test Conditions		Max. Ratings per phase	
I_{RMS}	T_C = 85°C, 50 - 400 Hz (per phase)		59	A
I_{RMS}	T_C = 85°C, 50 - 400 Hz (per phase) for 10 sec.		83	A
I_{TAVM}	T_C = 85°C; (180° sine)		27	A
I_{TSM}	T_{VJ} = 45°C;	t = 10 ms (50 Hz), sine	520	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	560	A
	T_{VJ} = 125°C	t = 10 ms (50 Hz), sine	470	A
	V_R = 0	t = 8.3 ms (60 Hz), sine	510	A
I^2t	T_{VJ} = 45°C	t = 10 ms (50 Hz), sine	1350	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1320	A^2s
	T_{VJ} = 125°C	t = 10 ms (50 Hz), sine	1100	A^2s
	V_R = 0	t = 8.3 ms (60 Hz), sine	1090	A^2s
$(di/dt)_{cr}$	T_{VJ}=125°C f =50 Hz, t_P =200 µs V_D = 2/3 V_{DRM}	repetitive, I_T = 45 A	150	A/µs
	I_G = 0.45 A di_G/dt = 0.45 A/µs	non repetitive, I_T = I_{TAVM}	500	A/µs
$(dv/dt)_{cr}$	T_{VJ}=125°C; R_{GK} = ∞; method 1 (linear voltage rise)	V_{DR} = 2/3 V_{DRM}	1000	V/µs
P_{GM}	T_{VJ}=125°C	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}	for 10 sec.		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 (M5)		2-2.5 18-22	Nm. lb.in.
Weight	typ.		80	g

Features

- Thyristor controller for AC (circuit W3C acc. to IEC) for mains frequency
- Package with DCB base plate
- Isolation voltage 3600 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 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} = 125°C; $V_R = V_{RRM}$; $V_D = V_{DRM}$		≤	5	mA
V_T	I_T = 85 A; T_{VJ} = 25°C		≤	1.67	V
V_{T0}	For power-loss calculations only			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}=125°C;	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}=125°C; 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			0.92	K/W
	per module			0.154	K/W
R_{thJK}	per thyristor			1.22	K/W
	per module			0.204	K/W
d_S	Creeping distance on surface			12.7	mm
d_A	Creepage distance in air			9.4	mm
a	Max. allowable acceleration			50	m/s^2

Dimensions in mm (1 mm = 0.0394")