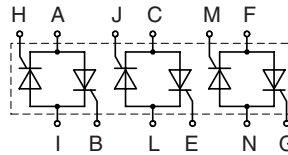


AC Controller Modules

$I_{RMS} = 3 \times 35 \text{ A}$
 $V_{RRM} = 800-1200 \text{ V}$

Preliminary data

V_{RSM}	V_{RRM}	Type
V_{DSM}	V_{DRM}	
V	V	
900	800	VWO 35-08ho7
1300	1200	VWO 35-12ho7



Symbol	Conditions	Maximum Ratings
I_{RMS}	$T_C = 85^\circ\text{C}$, (per phase)	35 A
I_{TAVM}	$T_C = 85^\circ\text{C}$; (180° sine ; per thyristor)	16 A
I_{TSM}	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine 200 A
		t = 8.3 ms (60 Hz), sine 210 A
I^2t	$T_{VJ} = T_{VJM}$ $V_R = 0$	t = 10 ms (50 Hz), sine 180 A
		t = 8.3 ms (60 Hz), sine 190 A
$(di/dt)_{cr}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$	t = 10 ms (50 Hz), sine 200 A ² s
		t = 8.3 ms (60 Hz), sine 150 A ² s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f = 50 Hz, $t_p = 200 \mu\text{s}$ $V_D = \frac{2}{3} V_{DRM}$ $I_G = 0.15 \text{ A}$ $di_G/dt = 0.15 \text{ A}/\mu\text{s}$	repetitive, $I_T = 20 \text{ A}$ 100 A/ μs
		non repetitive, $I_T = I_{TAVM}$ 500 A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$; $V_{DR} = \frac{2}{3} V_{DRM}$ $R_{GK} = \infty$; method 1 (linear voltage rise)	500 V/ μs
V_{RGM}		10 V
P_{GM}	$T_{VJ} = T_{VJM}$	$t_p = 30 \mu\text{s}$ $\leq 5 \text{ W}$
	$I_T = I_{TAVM}$	$t_p = 300 \mu\text{s}$ $\leq 2.5 \text{ W}$
P_{GAVM}		0.5 W
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~
	$I_{ISOL} \leq 1 \text{ mA}$	t = 1 s 3000 V~
M_d	Mounting torque (M4)	1.5 - 2 Nm
Weight	typ.	18 g

Features

- Thyristor controller for AC (circuit W3C acc. to IEC) for mains frequency
- Soldering connections for PCB mounting
- Isolation voltage 3000 V~
- Planar passivated chips

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 thyristor/diode unless otherwise stated.

Symbol	Conditions	Characteristic Values	
I_D, I_R	$T_{VJ} = T_{VJM}; V_R = V_{RRM}; V_D = V_{DRM}$	≤ 5 mA	
V_T	$I_T = 20$ A; $T_{VJ} = 25^\circ\text{C}$	≤ 1.6 V	
V_{T0}	For power-loss calculations only	0.85 V	
r_T		27 m Ω	
V_{GT}	$V_D = 6$ V	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	≤ 1.5 V ≤ 2.5 V
I_{GT}	$V_D = 6$ V	$T_{VJ} = 25^\circ\text{C}$ $T_{VJ} = -40^\circ\text{C}$	≤ 25 mA ≤ 50 mA
V_{GD}	$T_{VJ} = T_{VJM}; V_D = \frac{2}{3} V_{DRM}$		≤ 0.2 V
I_{GD}			≤ 3 mA
I_L	$T_{VJ} = 25^\circ\text{C}; t_p = 10$ μs $I_G = 0.1$ A; $di_G/dt = 0.1$ A/ μs		≤ 75 mA
I_H	$T_{VJ} = 25^\circ\text{C}; V_D = 6$ V; $R_{GK} = \infty$		≤ 50 mA
t_{gd}	$T_{VJ} = 25^\circ\text{C}; V_D = \frac{1}{2} V_{DRM}$ $I_G = 0.1$ A; $di_G/dt = 0.1$ A/ μs		≤ 2 μs
R_{thJC}	per thyristor; DC		1.3 K/W
	per module		0.22 K/W
R_{thJK}	per thyristor; DC		1.8 K/W
	per module		0.3 K/W
d_s	Creeping distance on surface		11.2 mm
d_A	Creepage distance in air		5.0 mm
a	Max. allowable acceleration		50 m/s ²

Dimensions in mm (1 mm = 0.0394")
