

Single Phase AC Controller Modules

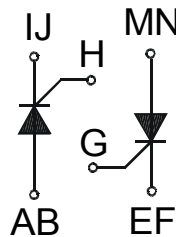
PSW1C40

$$I_{TRMS} = 44 \text{ A}$$

$$V_{RRM} = 600-1600 \text{ V}$$

Preliminary Data Sheet

V_{RSM} V_{DSM} (V)	V_{RRM} V_{DRM} (V)	Type
700	600	PSW1C 40/06
900	800	PSW1C 40/08
1300	1200	PSW1C 40/12
1500	1400	PSW1C 40/14
1700	1600	PSW1C 40/16



Symbol	Test Conditions	Maximum Ratings
I_{TRMS}	$T_{VJ} = T_{VJM}$	44 A
I_{TAVM}	$T_C = 75^\circ \text{C}; 180^\circ \text{ sine}$	32 A
I_{TAVM}	$T_C = 85^\circ \text{C}; 180^\circ \text{ sine}$	27 A
I_{TSM}	$T_{VJ} = 45^\circ \text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	520 A
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	560 A
	$T_{VJ} = 125^\circ \text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	460 A
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	500 A
$\int i^2 dt$	$T_{VJ} = 45^\circ \text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	1350 A ² s
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	1300 A ² s
	$T_{VJ} = 125^\circ \text{C}$ $t = 10 \text{ ms}$ (50 Hz), sine	1050 A ² s
	$V_R = 0$ $t = 8.3 \text{ ms}$ (60 Hz), sine	1030 A ² s
$(di/dt)_{cr}$	$T_{VJ} = 125^\circ \text{C}$ repetitive, $I_T = 45 \text{ A}$ $f=50\text{Hz}$, $t_p=200\mu\text{s}$	150 A/ μs
	$V_D=2/3V_{DRM}$ $I_G=0.45 \text{ A}$ non repetitive, $I_T = I_{TAVM}$ $di_G/dt=0.45\text{A}/\mu\text{s}$	500 A/ μs
	$T_{VJ} = 125^\circ \text{C}$ $V_D=2/3V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)	1000 V/ μs
P_{GM}	$T_{VJ} = 125^\circ \text{C}$ $t_p=30\mu\text{s}$	≤ 10 W
	$I_T = I_{TAVM}$ $t_p=300\mu\text{s}$	≤ 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 $t = 1 \text{ min}$	2500 V~
	$I_{ISOL} \leq 1 \text{ mA}$ $t = 1 \text{ s}$	3000 V~
M_d	Mounting torque (M4)	1.5 - 1.8 Nm
		14 - 16 lb.in.
Weight	typ.	18 g

Features

- Thyristor controller for AC (circuit W1C acc. to IEC) for mains frequency □
- Isolation voltage 3000 V~
- Planar glass passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- UL registered, E 148688

Applications

- Switching and control of single and three phase AC circuits
- 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 capability
- High power density
- Small and light weight

Data according to IEC 60747 refer to a single thyristor unless otherwise stated

