

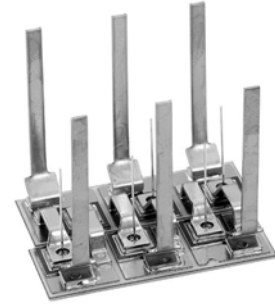
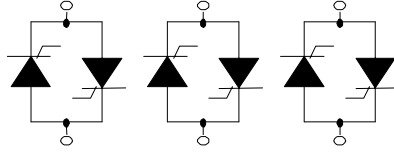
Three Phase AC Controller PSW3C 95 Subassemblies

$I_{RMS} = 3 \times 96A$
 $V_{RRM} = 800-1600 V$

Preliminary Data Sheet

V_{RSM} V_{DSM}	V_{RRM} V_{DRM}	Type
900	800	PSW3C 95/08
1300	1200	PSW3C 95/12
1500	1400	PSW3C 95/14
*1700	*1600	PSW3C 95/16

* Delivery on request



Symbol	Test Conditions	Maximum Ratings
I_{RMS}	$T_C = 85^\circ C$, 50-400 Hz (per phase)	96 A
I_{TRMS}	$T_{VJ} = T_{VJM}$	69 A
I_{TAVM}	$T_C = 85^\circ C$ 180° sine	44 A
I_{TSM}	$T_{VJ} = 45^\circ C$ t = 10 ms (50 Hz), sine	1150 A
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	1230 A
	$T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine	1000 A
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	1100 A
$\int i^2 dt$	$T_{VJ} = 45^\circ C$ t = 10 ms (50 Hz), sine	6600 A ² s
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	6280 A ² s
	$T_{VJ} = T_{VJM}$ t = 10 ms (50 Hz), sine	5000 A ² s
	$V_R = 0$ t = 8.3 ms (60 Hz), sine	5080 A ² s
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ repetitive, $I_T = 150 A$ f = 50Hz, $t_p = 200\mu s$ $V_D = 2/3 V_{DRM}$	100 A/ μs
	$I_G = 0.3 A$ non repetitive, $I_T = I_{TAVM}$ $di_G/dt = 0.3 A/\mu s$	500 A/ μs
$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ $V_{DR} = 2/3 V_{DRM}$ $R_{GK} = \infty$, method 1 (linear voltage rise)	1000 V/ μs
P_{GM}	$T_{VJ} = T_{VJM}$ $t_p = 30\mu s$	10 W
	$I_T = I_{TAVM}$ $t_p = 300\mu s$	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
Weight	typ.	20 g

Features

- Planar glasspassivated chips
- Package with metal base plate

Applications

- Solid state relays

Advantages

- Space and weight savings
- Improved temperature and power cycling
- High power density

Symbol	Test Conditions	Characteristic Value			
I_D, I_R	$T_{VJ} = T_{VJM}, V_R = V_{RRM}, V_D = V_{DRM}$	\leq	5	mA	
V_T	$I_T = 150A, T_{VJ} = 25^\circ C$	\leq	1.57	V	
V_{TO}	For power-loss calculations only ($T_{VJ} = T_{VJM}$)		0.85	V	
r_T			4.8	m Ω	
V_{GT}	$V_D = 6V$	$T_{VJ} = 25^\circ C$	\leq	1.0	V
		$T_{VJ} = -40^\circ C$	\leq	1.6	V
I_{GT}	$V_D = 6V$	$T_{VJ} = 25^\circ C$	\leq	100	mA
		$T_{VJ} = -40^\circ C$	\leq	150	mA
V_{GD}	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	\leq	0.2	V	
I_{GD}	$T_{VJ} = T_{VJM}, V_D = 2/3 V_{DRM}$	\leq	5	mA	
I_L	$T_{VJ} = 25^\circ C, t_p = 10\mu s$	\leq	200	mA	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$				
I_H	$T_{VJ} = 25^\circ C, V_D = 6V, R_{GK} = \infty$	\leq	150	mA	
t_{gd}	$T_{VJ} = 25^\circ C, V_D = 1/2 V_{DRM}$	\leq	2	μs	
	$I_G = 0.3A, di_G/dt = 0.3A/\mu s$				
t_q	$T_{VJ} = T_{VJM}, I_T = 20A, t_p = 200\mu s, V_R = 100V$		150	μs	
	$di/dt = -10A/\mu s, dv/dt = 15V/\mu s, V_D = 2/3 V_{DRM}$				
R_{thJC}	per thyristor; sine $180^\circ el$		0.66	K/W	
	per module		0.11	K/W	
a	Max. allowable acceleration		50	m/s ²	

Package, stil and outline

Dimensions in mm (1mm = 0.0394")

