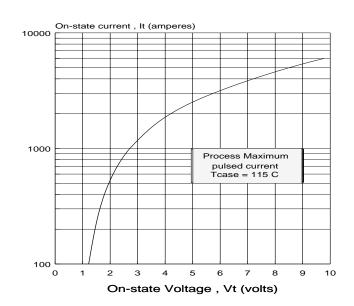


C716 53mm / 6kV THYRISTOR

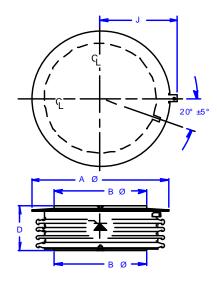
Type C716 thyristor is suitable for phase control applications such as HMDC valves, static VAR compensators and synchronous motor drives.

The silicon junction is manufactured by the proven multi-diffusion process and is supplied in an industry standard disc-type package, ready to mount to forced or naturally cooled heat dissipators using commercially available mechanical clamping hardware.

ON-STATE CHARACTERISTIC



MECHANICAL OUTLINE



 $A\Phi = 2.96$ in (75.2 mm) $B\Phi=1.90$ in (48.3 mm) D=1.07 in (27.2 mm)

S ANI	CHARACTER	ISTICS	
$\mathbf{V}_{\mathtt{DRM}}$ $\mathbf{V}_{\mathtt{RRM}}$	T _J =0 to 115℃	up to 6000	v
V _{DWM} V _{RWM} I _{DWM} I _{RWM}	$T_{J}=0$ to 115°C $T_{J}=0$ to 115°C	0.8V _{DRM} 0.8V _{RRM} 75	ma
I _{T(AV)}	T= 70°C	550	A
I _{rsm}	60 Hz 50 Hz	6 5.5	kA
V _{T M}	I _r =500A t _r =8ms T =115°C	2.00	v
di√dt. nep	T _J =115℃ 60 Hz	50	A/us
V _a =.67 snubberd	V _{drm} ischarge	50	A
dw/dt	$T_J=115^{\circ}C$ $V_{DCRIT}=60 & V_{DRM}$	1500	V/us
I _{R M}	T _J =115°C 24√us 54 √us	60 100	A
nap factor	S = 0.3		
t _a	$Vd=.5V_{DRM}$	5	us
T _{eff}	5A/us,-100V 20V/us to 2000V	600	us
R _{thuc}		.025	c/w
F		5500 24.5	lss. kn
	VDRM VRRM VRRM VRWM LWM LYM LYM LYM LYM LYM LYM LYM LYM LYM LY	V _{DRM} T _J =0 V _{RRM} to 115°C V _{RRM} T _J =0 V _{RRM} to 115°C I _{DRM} T _J =0 I _{RRM} to 115°C I _{T(AV)} T _{DE} = 70°C I _{TSM} 60 Hz 50 Hz V _{TM} I _T =500A t _p =8ms T _J =115°C rep 60 Hz V _d =.67V _{DRM} snitter discharge dw/dt T _J =115°C V _{DCRIT} =60°tV _{DRM} I _{RM} T _J =115°C 24/US 54/US 54/US 1000 11	V _{RRM} to 115°C 6000 V _{DWM} T _J =0 0.8V _{DRM} V _{RWM} to 115°C 0.8V _{RRM} I _{DWM} T _J =0 75 I _{RWM} to 115°C 75 I _{T(XV)} T _{OSE} = 550 I _{T(XV)} T _{OSE} = 550 V _{TM} I _T =500A 2.00 t _D =8ms T _J =115°C 50 rep 60 Hz V _d =67V _{DRM} smitter discharge 50 dw/dt T _J =115°C 1500 V _{DCRIT} =60°t V _{DRM} I _{RM} T _J =115°C 1500 v _{DCRIT} =6

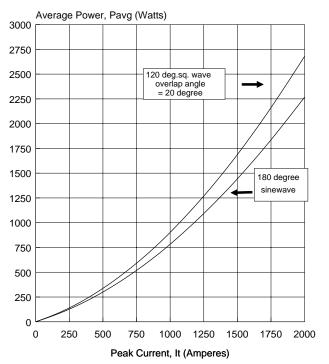
REPETI	TIVE PEA	K REVERSE		
AND OF	F-STATE	BLOCKING		
<u>VOLTAGE</u>				
T _. = 0 to 115°C				
MODEL	V_{DRM}	V _{RRM}		
	(volts)	(valts)		
C716FP	6000	6000		
C716ET	5900	5900		
C716EN	5800	5800		
C716ES	5700	5700		
C716EM	5600	5600		
C716EE	5500	5500		



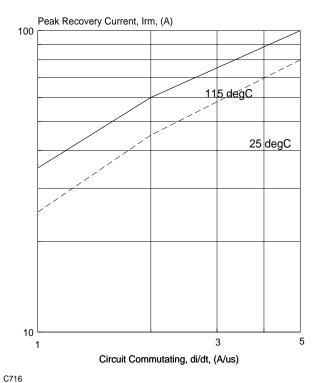
FULL CYCLE AVERAGE POWER LOSS versus

PEAK CURRENT at 50/60 Hz

(plasma spreading and conduction loss)



MAXIMUM PEAK RECOVERY CURRENT versus COMMUTATING di/dt



Full Cycle Power Loss (watts)
50/60 Hz, T_{.I}=115°C

c716los1(vt=2.0)

I_T (peak) Half-sine 3 Phase

GATE SUPPLY REQUIREMENTS

Open circuit voltage	30 V
Short circuit current - rise time	3 A 0.5.5
Pulse duration (min)	20 us