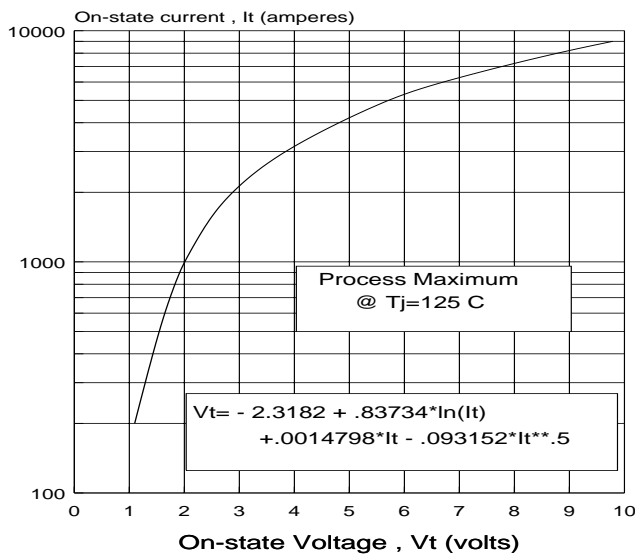


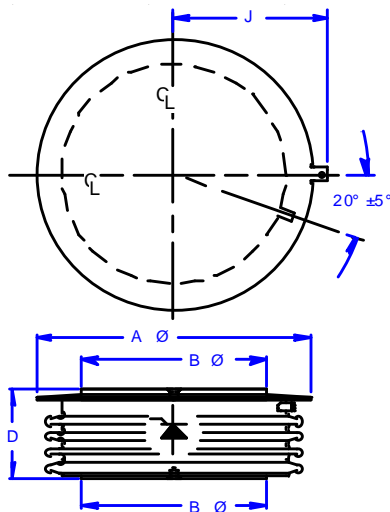
Type C717 thyristor is suitable for phase control applications such as HMDC valves, static VAR compensators and synchronous motor drives.

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



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

PRINCIPAL RATINGS AND CHARACTERISTICS

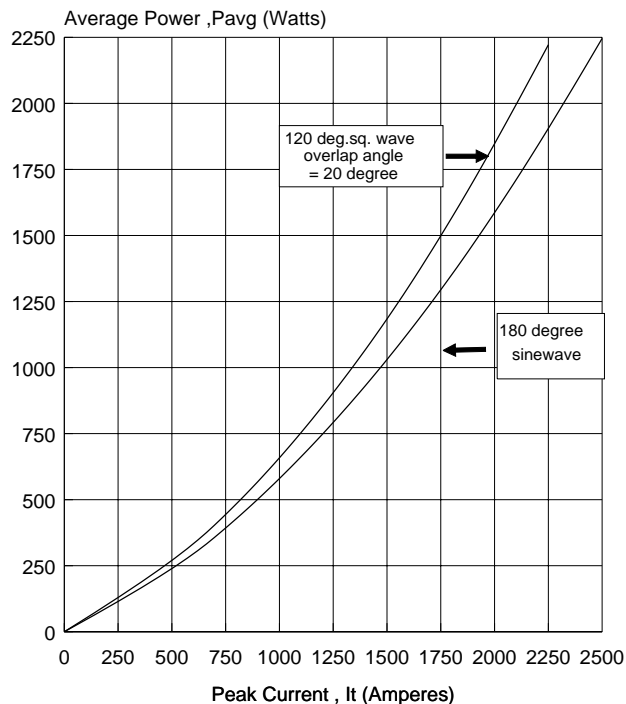
Repetitive peak off-state & reverse volts	V_{DRM} V_{RRM}	$T_j=0$ to 125°C	up to 4500	V
Repetitive working crest voltage	V_{DWM} V_{RRM}	$T_j=0$ to 125°C	$0.8V_{DRM}$ $0.8V_{RRM}$	
Off-state & reverse leakage current	I_{DWM} I_{RRM}	$T_j=0$ to 125°C	75 75	ma
Average on-state current	$I_{T(AV)}$	$T_{case} = 70^\circ\text{C}$	800	A
Peak half-cycle non-rep surge current	I_{TSM}	60 Hz 50 Hz	9 8	kA
On-state voltage	V_{TM}	$I_T=1\text{kA}$ $t_b=8\text{ms}$ $T_j=125^\circ\text{C}$	2.0	V
Critical rate of rise of on-state current	di/dt_{sp}	$T_j=125^\circ\text{C}$ 60 Hz	75	A/us
Critical rate of rise of off-state voltage	dv/dt	$T_j=125^\circ\text{C}$ $V_D = .67V_{DRM}$	1000	V/us
Recovery current	I_{RM}	$T_j=125^\circ\text{C}$ 2A/us 5A/us	60 100	A
Turn-on delay	t_a	$V_d = .5V_{DRM}$	3	us
Turn-off time	T_{off}	5A/us, -100V 20V/us to 2000V	500	us
Thermal resistance	R_{thJC}		.025	c/w
Externally applied clamping force	F		5500 24.5	lb kN

REPETITIVE PEAK REVERSE AND OFF-STATE BLOCKING VOLTAGE

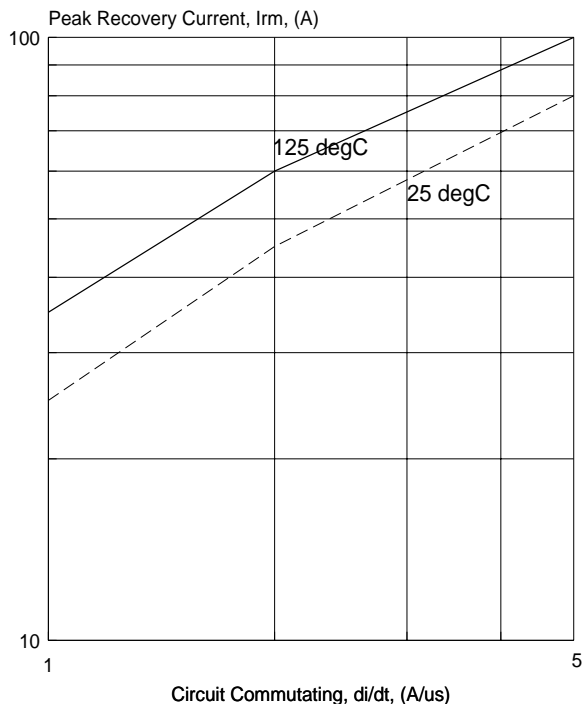
$T_j = 0 \text{ to } 125^\circ\text{C}$

MODEL	V_{DRM} (volts)	V_{RRM} (volts)
C717DE	4500	4500
C717DD	4400	4400
C717DC	4300	4300
C717DB	4200	4200
C717DA	4100	4100
C717DP	4000	4000

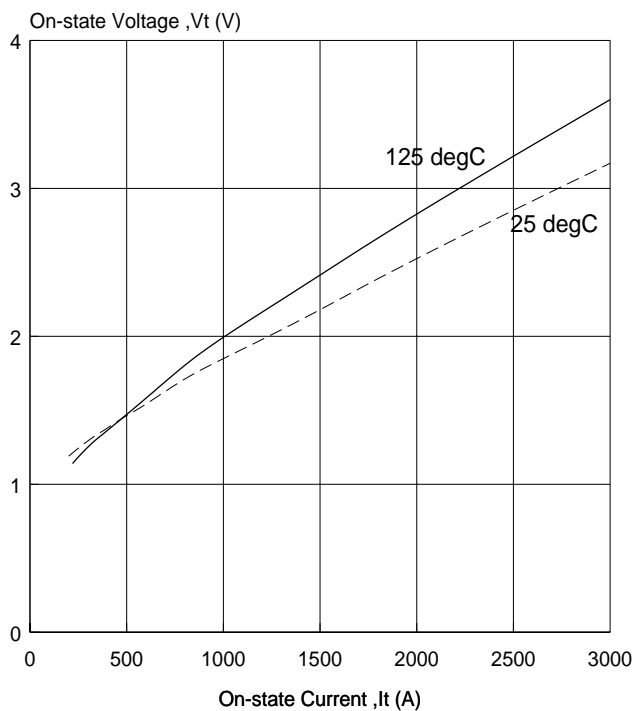
FULL CYCLE AVERAGE POWER LOSS
versus
PEAK CURRENT at 50/60 Hz
(plasma spreading and conduction loss)



MAXIMUM PEAK RECOVERY CURRENT
versus **COMMUTATING di/dt**



ON-STATE CHARACTERISTIC
Temperature Dependence



GATE SUPPLY REQUIREMENTS

Open circuit voltage	30 V
Short circuit current	3 A
- rise time	0.5us
Pulse duration (min)	20 us