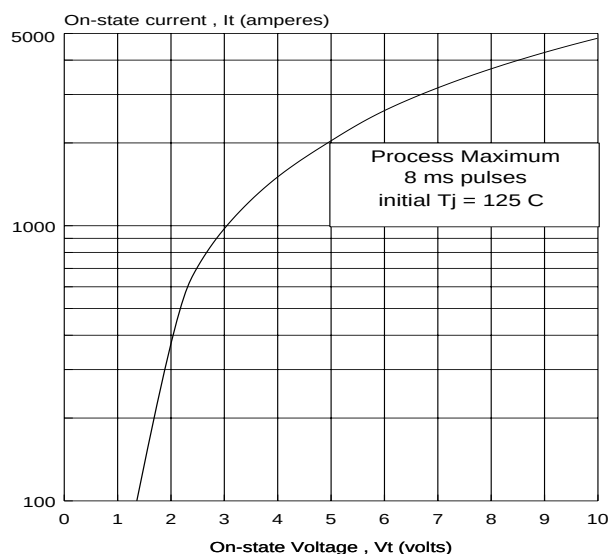


Type C604 thyristor is suitable for phase control applications such as static VAR compensators and synchronous motor drives.

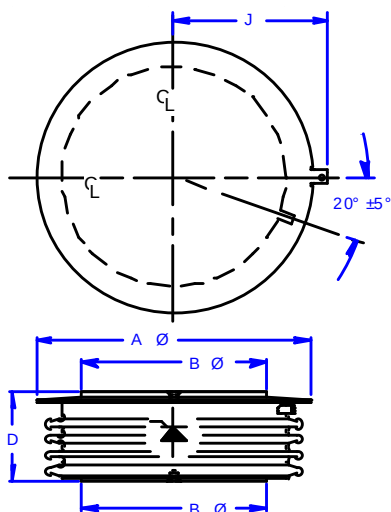
The silicon junction is manufactured by the proven multi-diffusion process and is supplied in an industry standard disc-type package, ready to mount to forced or naturally cooled heat dissipators using commercially available mechanical clamping hardware.

ON-STATE CHARACTERISTIC



96b:

MECHANICAL OUTLINE



$A \Phi = 2.30$ in (58.0 mm)
 $B \Phi = 1.35$ in (34.3 mm)
 $D = 1.04$ in (26.4 mm)

PRINCIPAL RATINGS AND CHARACTERISTICS

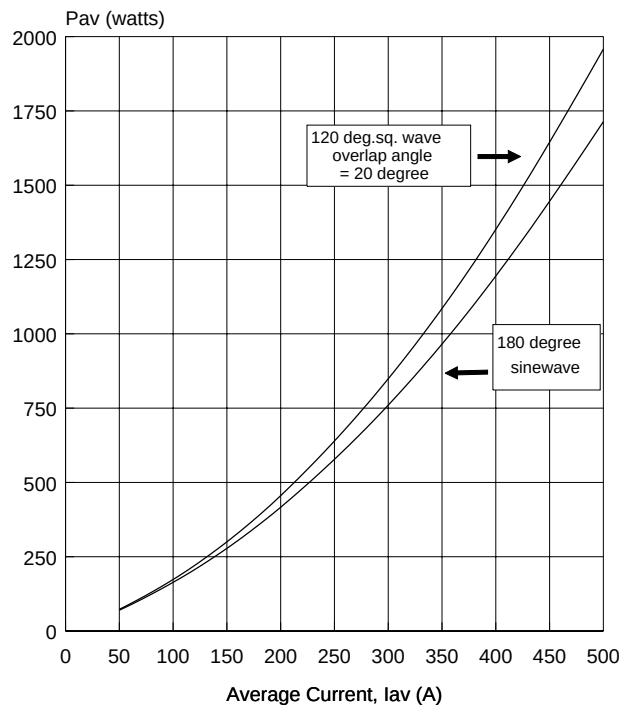
Repetitive peak off-state & reverse volts	V_{DRM} V_{RRM}	$T_j = 0$ to 125°C	up to 4500	V
Off-state & reverse leakage current	I_{DRM} I_{RRM}	$T_j = 0$ to 125°C	75 75	ma
Average on-state current	$I_{T(AV)}$	$T_{case} = 70^\circ\text{C}$	400	A
Peak half-cycle non-rep surge current	I_{TSM}	60 Hz 50 Hz	5500 5100	A
On-state voltage	V_{TM}	$T_{case} = 125^\circ\text{C}$, 320A 500A 8ms pulse	1.85 2.10	V
Critical rate of rise of on-state current	di/dt rep	$T_j = 110^\circ\text{C}$ 60 Hz $V_j = .67V_{DRM}$ allowable snubber discharge	40 40	A/us A
Critical rate of rise of off-state voltage	dv/dt	$T_j = 125^\circ\text{C}$ $V_{DCRIT} = 67\%V_{DRM}$	1000	V/us
Recovery current	I_{RM}	$T_j = 125^\circ\text{C}$ 2A/us 5A/us minimum snub factor $S = 0.3$	85 —	A
Turn-on delay	t_0	$V_d = .5V_{DRM}$	5	us
Turn-off time	T_{off}	5A/us, -100V 20V/us to 2000V	400	us
Thermal resistance	R_{thjc}		.040	c/w
Externally applied clamping force	F		3500 - 4200 15.6 - 18.7	lbs. kN
Gate Drive:			40V / 10 ohm / 0.5us risetime 20us pulse duration	

REPETITIVE PEAK REVERSE AND OFF-STATE BLOCKING VOLTAGE

$T_j = 0$ to 125°C

MODEL	V_{DRM} (volts)	V_{RRM} (volts)
C604DE	4500	4500
C604DD	4400	4400
C604DC	4300	4300
C604DB	4200	4200

FULL CYCLE AVERAGE POWER LOSS
versus
AVERAGE CURRENT 50/60 Hz



95f:

GATE SUPPLY REQUIREMENTS

Open circuit voltage	40 V
Short circuit current	4 A
- rise time	0.5 μ s
Pulse duration (min)	20 μ s