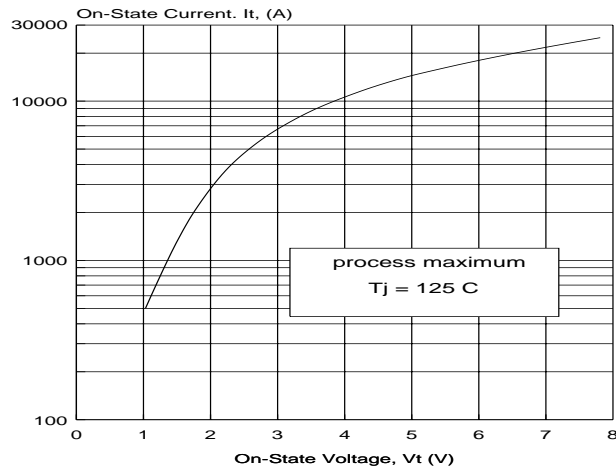


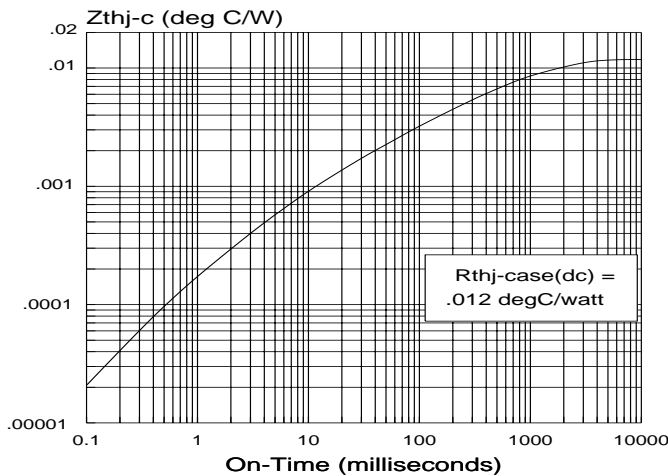
Type C771 reverse blocking thyristor is suitable for inverter applications. The silicon junction is manufactured by the proven multi-diffusion process and utilizes the exclusive involute gate structure. It is supplied in an industry accepted disc-type package, ready to mount using commercially available heat dissipators and mechanical clamping hardware.

### ON-STATE CHARACTERISTIC



### THERMAL IMPEDANCE

THERMAL IMPEDANCE vs. ON-TIME



MODEL	$V_{DRM} / V_{RRM}$ 0 to +125°C	@ -40°C
	volts	
C771LS	2800	2700
C771LM	2700	2600
C771LE	2600	2500
C771LD	2500	2400
C771LC	2400	2300
C771LB	2300	2200
C771LA	2200	2100
C771L	2100	2000

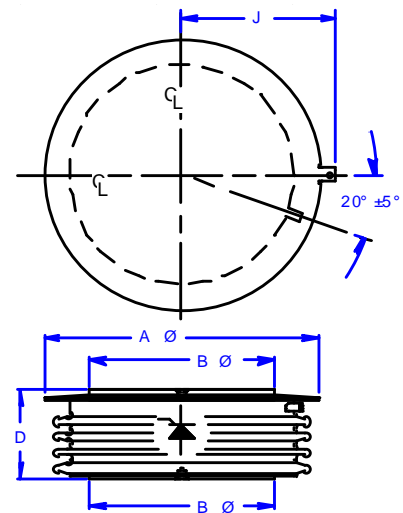
#### Gate Drive Requirements:

20 - 30V / 10 ohms / 0.5us risetime  
10 - 20 us minimum duration

#### External Clamping Force

7000 - 9000 lbs.  
31.1 - 40.0 kN

### MECHANICAL OUTLINE

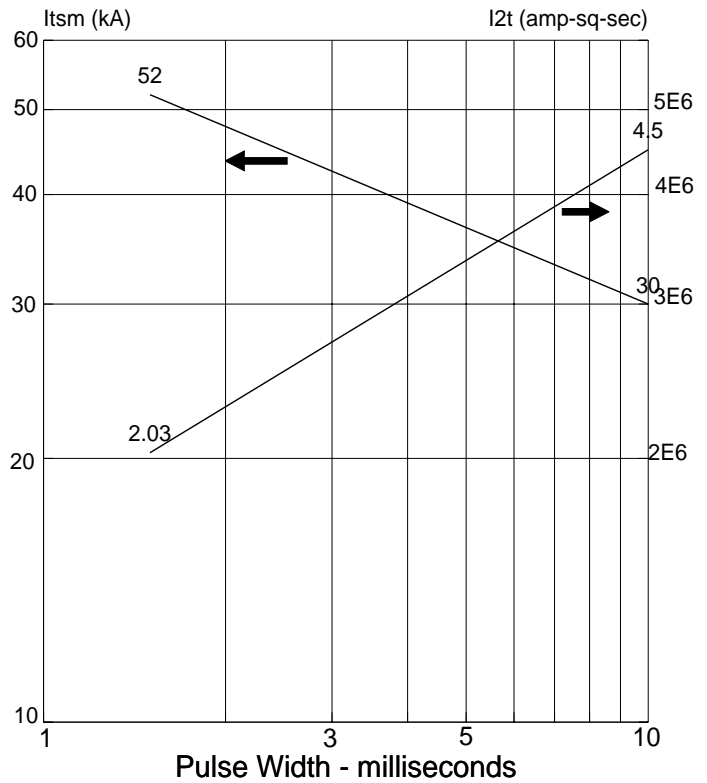


$A\Phi = 4.35$  in (110.5 mm)  
 $B\Phi = 2.88$  in (73.2 mm)  
 $D = 1.45$  in (36.8 mm)

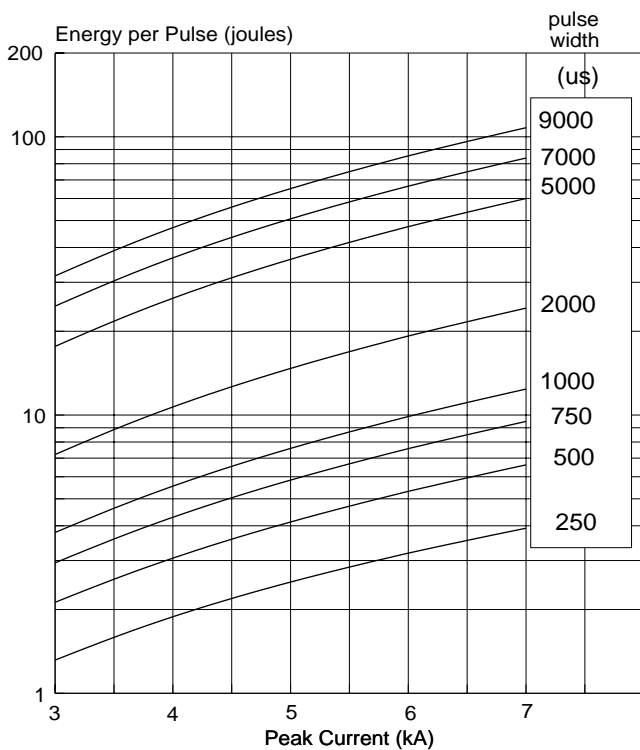
**LIMITING CHARACTERISTICS**

PARAMETER	SYMBOL	TEST CONDITIONS	LIMIT	UNITS
Repetitive peak off-state & reverse voltage	$V_{DRM}/V_{RRM}$	$T_J = -40$ to $+125^\circ\text{C}$	up to 2800V	volts
Off-state & reverse current	$I_{DM}/I_{RM}$	$T_J = 125^\circ\text{C}$ @ $V_{DRM}/V_{RRM}$ code LE @ $80\% V_{DRM}/V_{RRM}$ codes LM & LS	150	ma
Peak half cycle non-repetitive surge current	$I_{TSM}$	60Hz (8.3ms) 50Hz (10ms)	32.5 30	kA)
On-state voltage	$V_{TM}$	$I_T = 2000\text{A}$ $t_p = 8.3\text{ms}$ $T_J = 125^\circ\text{C}$	1.74	volts
Critical rate of rise of on-state current	$di/dt_{rep}$	$V_D = 60\% V_{DRM}$ 60Hz $T_J = 125^\circ\text{C}$ see gate drive	300	A/us
Critical rate of rise of off-state voltage	$dv/dt$	$V_{DCRIT} = 80\% V_{DRM}$ $T_J = 125^\circ\text{C}$	500	v/us
Peak recovery current	$I_{RM}$	$T_J = 125^\circ\text{C}$ @ 10A/us @ 50A/us @ 100 A/us	130 450 750	A
Circuit commutated turn-off time	$t_Q$	400V/us to $80\% V_{DRM}$ $V_r = > 50\text{V}$	100	us

**Non-Repetitive Half-Cycle Peak Surge Current & I2t**



**ON-STATE ENERGY Half Sine Pulses**



**ON-STATE ENERGY Trapezoidal Wave  $di/dt = 100\text{ A/us}$**

