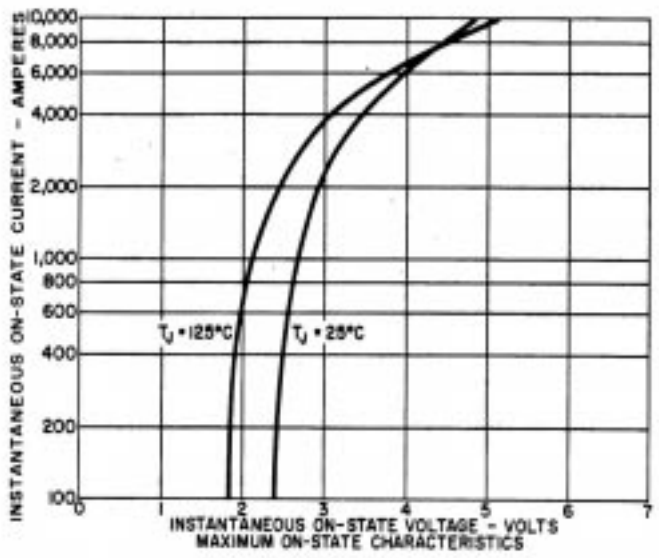
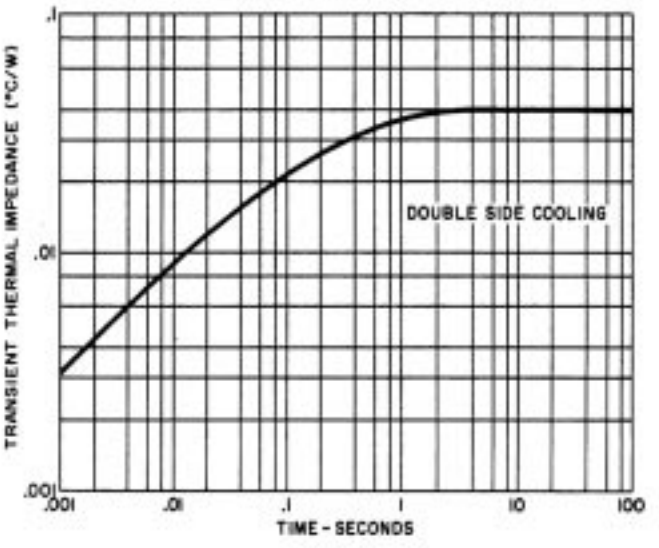
INVERTER THYRISTOR
C448
40mm / 1400V / 700A/ 25us

Type C448 reverse blocking thyristor is suitable for inverter applications. The silicon junction is manufactured by the all-diffused process and utilizes the field-proven, interdigitated amplifying 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 CHARACTERISTICS



THERMAL IMPEDANCE

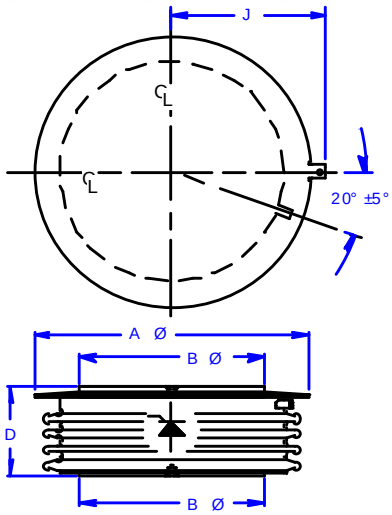


MODEL	V_{DRM} / V_{RRM} 0 to +125°C	@ -40°C
	volts	
C448PD	1400	1300
C448PB	1200	1100
C448P	1000	900

Gate Drive Requirements:
- 20 V / 10 ohms / 0.5us risetime
- 10 - 20 us minimum duration

External Clamping Force
- 3000 - 3500 lbs.
- 13.3 - 15.5 kN

MECHANICAL OUTLINE



AΦ = 2.30 in (58.0 mm)
BΦ= 1.35 in (34.3 mm)
D= 1.04 in (26.4 mm)

175 GREAT VALLEY PKWY. MALVERN, PA 19355
USA

6/14/2000

LIMITING CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	LIMIT	UNITS
Repetitive peak off-state & reverse voltage	V_{DRM}/V_{RRM}	T_J = -40 to +125°C	up to 1400V	volts
Off-state & reverse current	I_{DRM}/I_{RRM}	T_J = 125°C	35	ma
Peak half cycle non-repetitive surge current	I_{TSM}	60Hz (8.3ms) 50Hz (10ms)	10 9.1	kA
For fusing	I^2t	8.3ms	415	kA^2s
On-state voltage	V_{TM}	I_T = 2000A t_P = 8.3ms T_J = 125°C	2.45	volts
Critical rate of rise of on-state current	di/dt_{rep}	V_D = 60%V_{DRM} 60Hz Tj=125°C see gate drive	400	A/us
Critical rate of rise of off-state voltage	dv/dt	V_{DCRIT} = 80%V_{DRM} T_j = 125°C	500	v/us
Reverse recovery charge	Q_{RR}	I_T = 1000A, T_J = 125°C @ 10A/us @ 50A/us @ 100 A/us	 80 230 320	 uC
Circuit commutated turn-off time	t_Q	400V/us to 80% V_{DRM} Vr = > 50 V	25	us