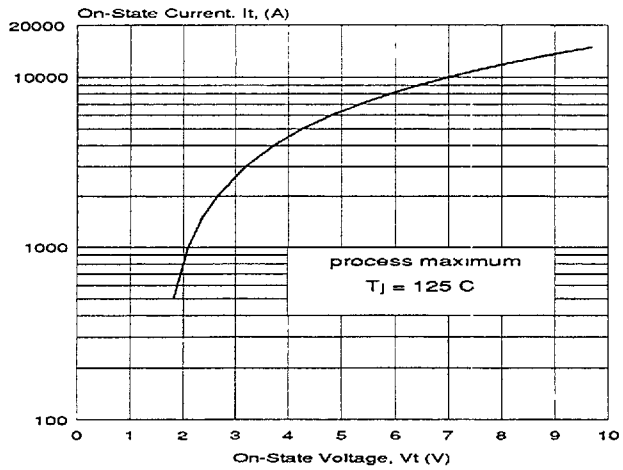
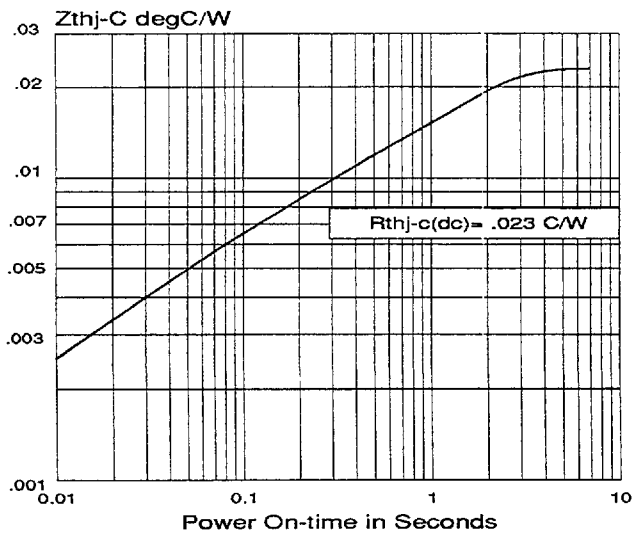
INVERTER THYRISTOR
C714
53mm / 2100V / 40us

Type C714 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

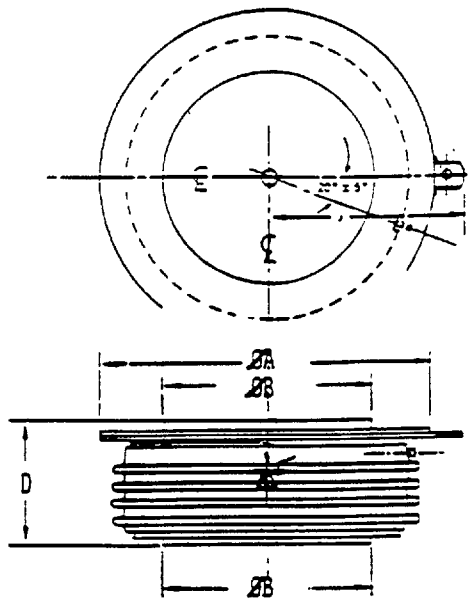


THERMAL IMPEDANCE



MODEL	V_{DRM} / V_{RRM} -40 to +125°C
C714LA	2100 Volts
C714L	2000
C714PT	1900
C714PN	1800
C714PS	1700

Gate Drive Requirements:
20 - 30V / 10 ohms / 0.5us risetime
10 - 20 us minimum duration
External Clamping Force
3500 - 4200 lbs.
15.6 - 18.7 kN



MAXIMUM DIMENSIONS
ØA = 2.96 in (75.18 mm)
ØB=1.900 in (48.26 mm)
D=1.07 in (27.18 mm)

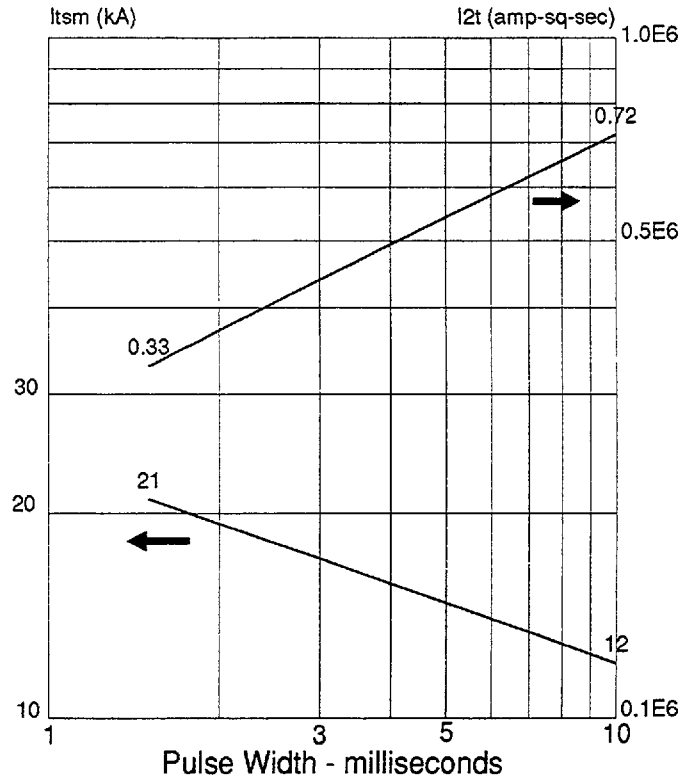
SILICON POWER CORPORATION
175 GREAT VALLEY PKWY., MALVERN, PA 19355
USA

6/3/93

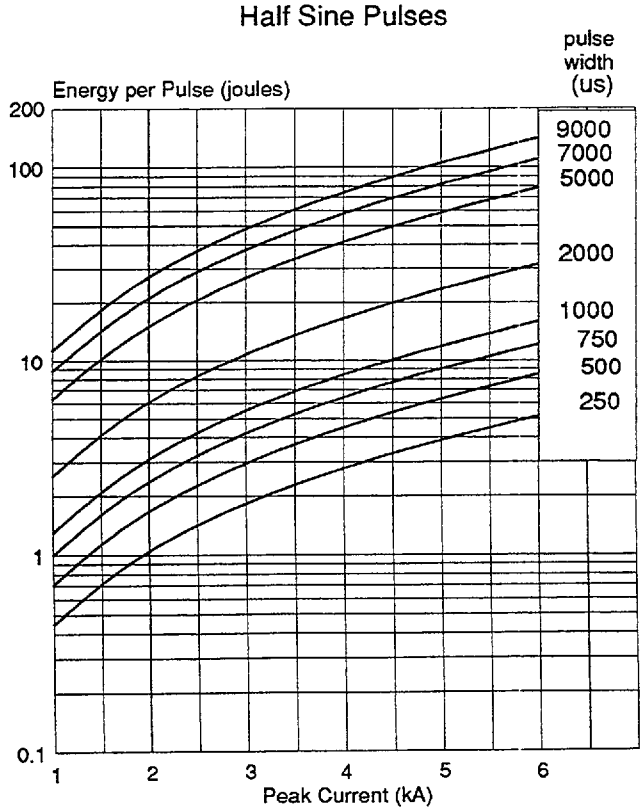
LIMITING CHARACTERISTICS

PARAMETER	SYMBOL	TEST CONDITIONS	LIMIT	UNITS
Repetitive peak off-state & reverse voltage	V_{DRM}/V_{RRM}	T_J = -40 to +125°C	up to 2100V	volts
Off-state & reverse current	I_{DRM}/I_{RRM}	T_J = 125°C	60	ma
Peak half cycle non-repetitive surge current	I_{TSM}	60Hz (8.3ms 50Hz (10ms)	13 12	kA)
On-state voltage	V_{TM}	I_T = 1000A t_P = 8.3ms T_J = 125°C	2.10	volts
Critical rate of rise of on-state current	di/dt_{rep}	V_D = 1500V 60Hz Tj=125°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°C	500	v/us
Peak recovery current	I_{RM}	T_J = 125°C @ 10A/us @ 50A/us @ 100 A/us	 56 220 350	 A
Circuit commutated turn-off time	t_Q	400V/us to 80% V_{DRM} Vr = > 50 V Vr = 2 V	 40 45	 us

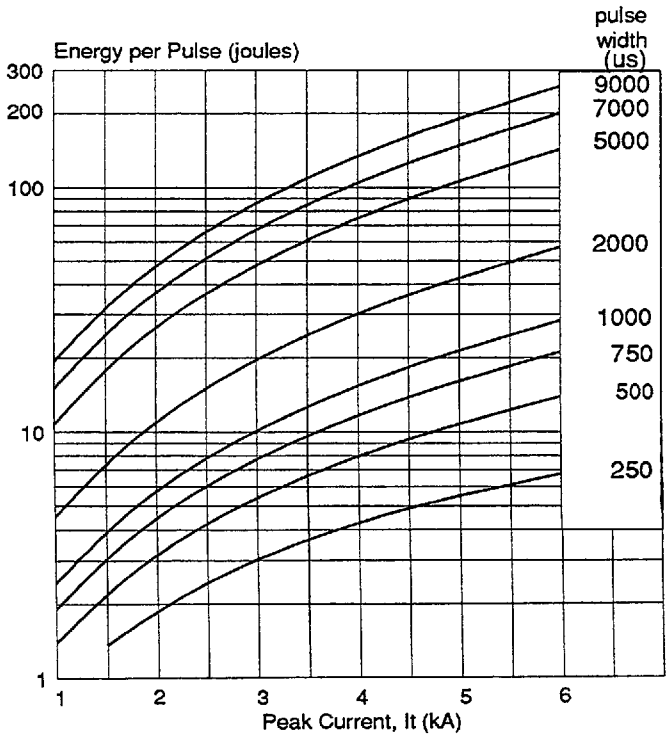
Non-Repetitive Half-Cycle Peak Surge Current & I2t



ON-STATE ENERGY Half Sine Pulses



ON-STATE ENERGY Trapezoidal Wave di/dt = 100 A/us



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