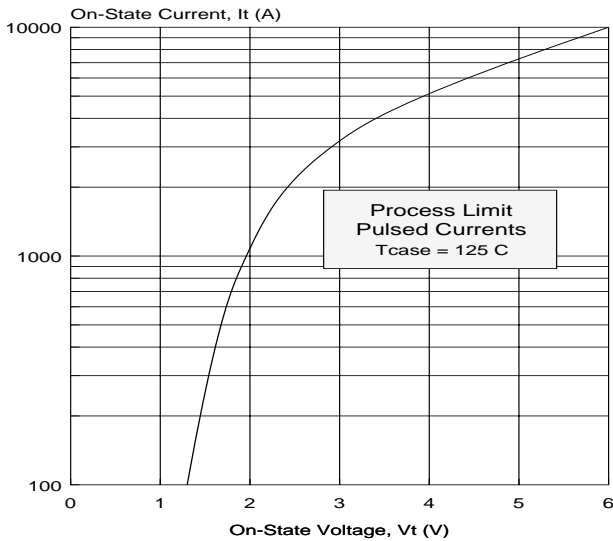


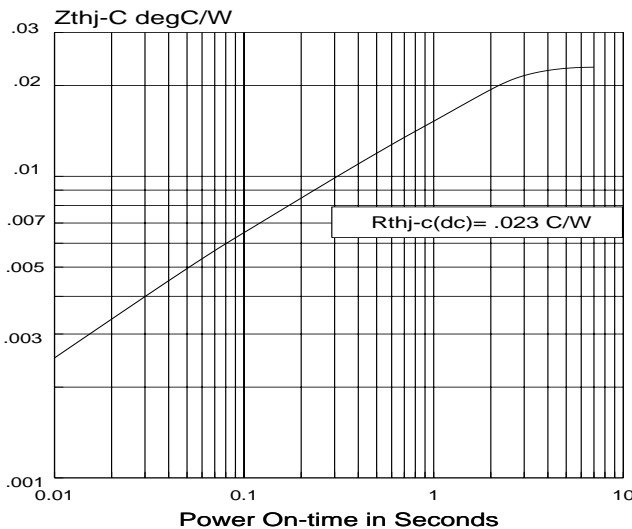
Type C714 reverse blocking thyristor is suitable for inverter applications which do not employ an inverse parallel free wheeling diode and for which reverse recovery losses at elevated frequencies can be significant. The silicon junction is manufactured by the proven multi-diffusion process and utilizes 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**

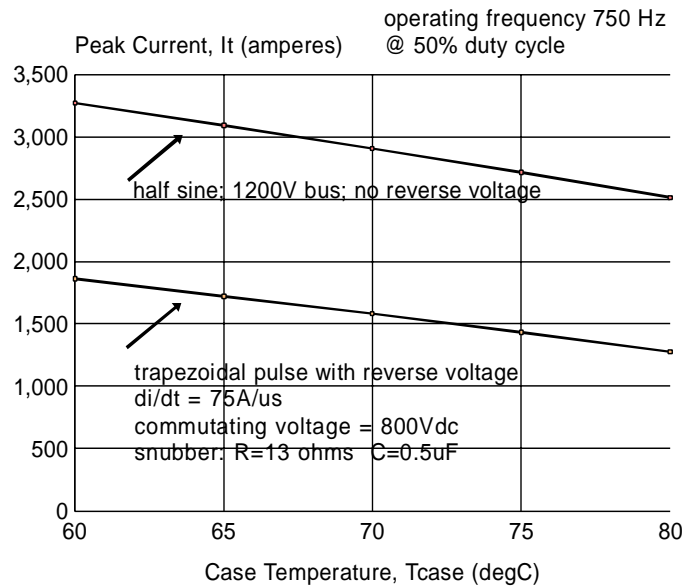


V845onst

**THERMAL IMPEDANCE**

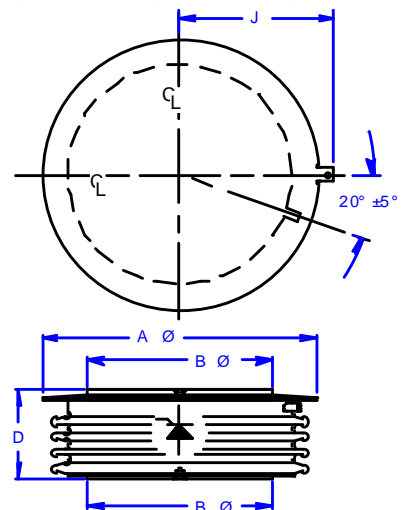


MODEL	$V_{DRM} / V_{RRM}$
C714L	-40 to +125°C 2000 Volts



45tc

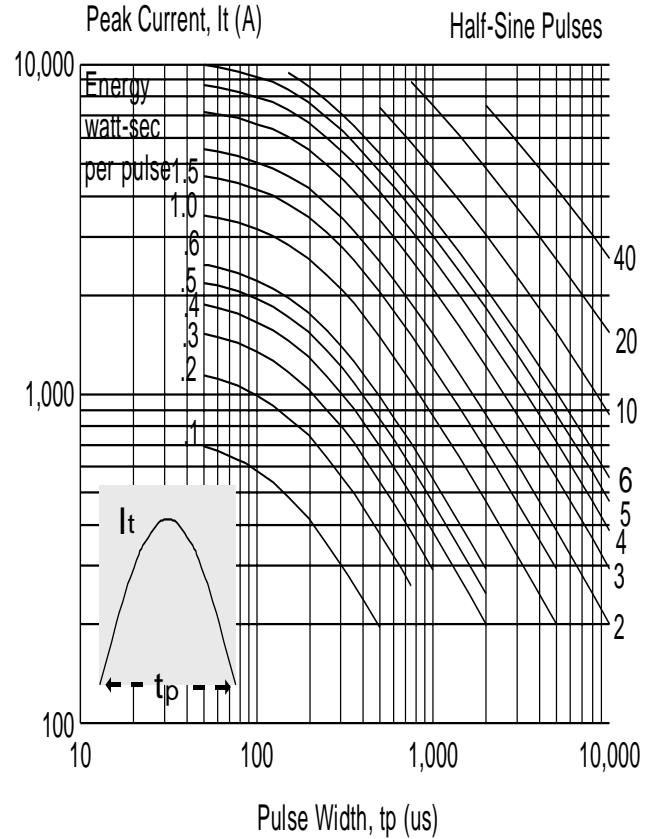
**MECHANICAL OUTLINE**



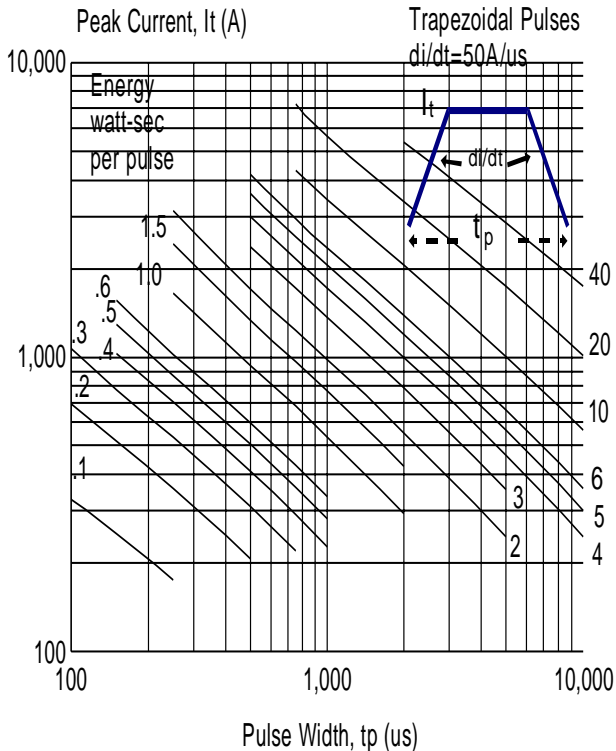
**AΦ = 2.96 in (75.2 mm)**  
**BΦ = 1.90 in (48.3 mm)**  
**D = 1.07 in (27.2 mm)**

**LIMITING CHARACTERISTICS**

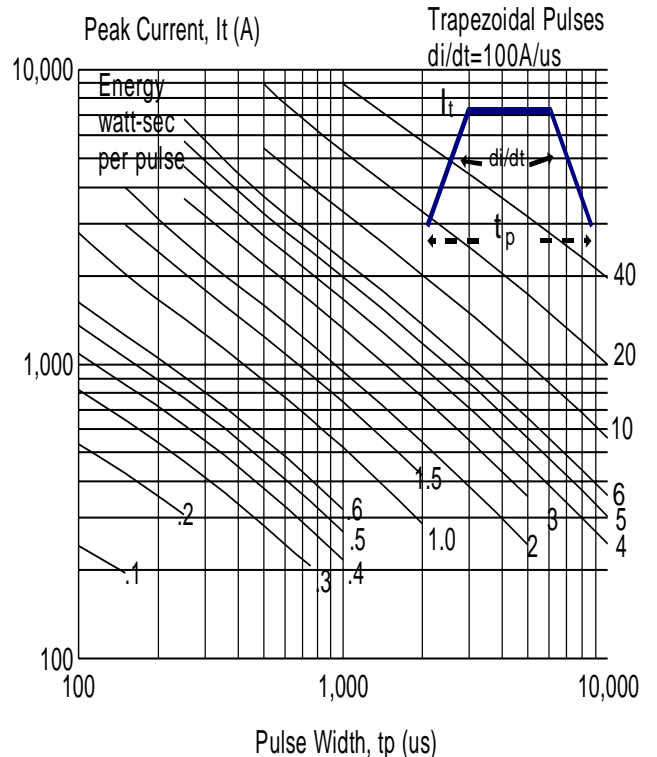
PARAMETER	SYMBOL	TEST CONDITIONS	LIMIT	UNITS
Average on-state current	$I_{T(av)}$	$T_{case} = 70^{\circ}C$ 750 Hz with FWD	925	A
Repetitive peak off-state & reverse voltage	$V_{DRM}/V_{RRM}$	$T_j = -40$ to $+125^{\circ}C$	2000	volts
Off-state & reverse current	$I_{DRM}/I_{RRM}$	$T_j = 125^{\circ}C$	60	ma
Peak half cycle non-repetitive surge current	$I_{TSM}$	60Hz (8.3ms) 50Hz (10ms)	16 14.7	kA)
On-state voltage	$V_{TM}$	$I_T = 1000A$ $t_p = 8.3ms$ $T_j = 125^{\circ}C$	1.95	volts
Critical rate of rise of on-state current	$di/dt_{rep}$ $di/dt_{non-rep}$	$V_D = 1500V$ $T_j = 125^{\circ}C$ see gate drive	200 800	A/us
Critical rate of rise of off-state voltage	$dv/dt$	$V_{DCRIT} = 80\% V_{DRM}$ $T_j = 125^{\circ}C$	500	v/us
Peak recovery current	$I_{RM}$	$T_j = 125^{\circ}C$ @ 10A/us @ 50A/us @ 100 A/us	56 214 368	A
Circuit commutated turn-off time	$t_Q$	400 V/us to 70% $V_{DRM}$ $V_r = > 50V$ $V_r = 2 V$	40 45	us



v845sne.ch3



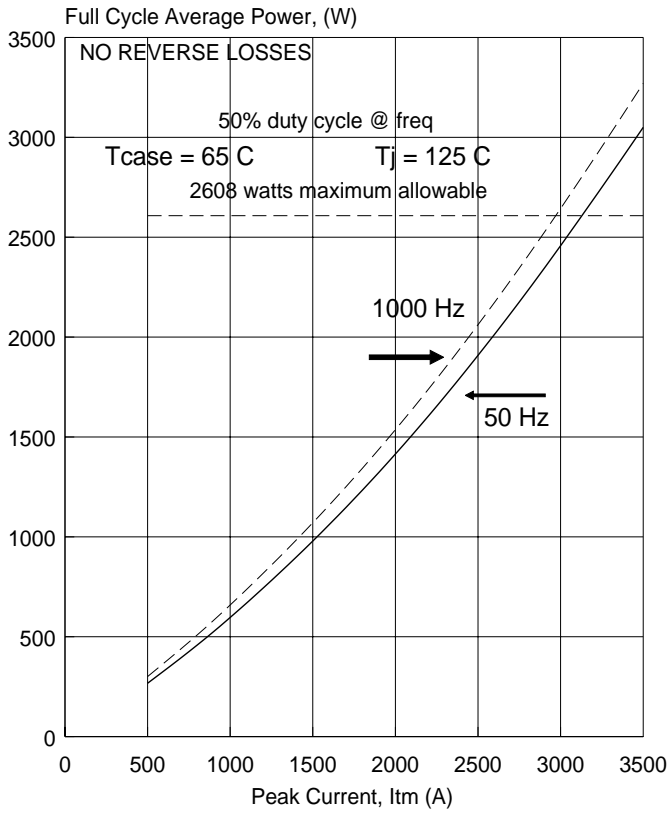
v845tre2.ch3



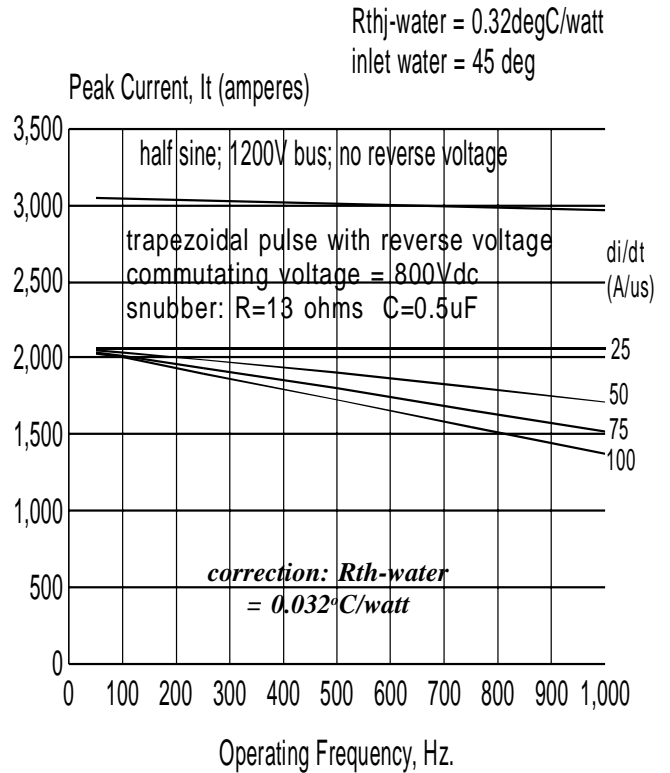
v845tre1.ch3

**AVERAGE POWER LOSS  
half sine wave**

**Peak Current Capability  
versus operating frequency  
half sine & trapezoidal @ 50% duty cycle**



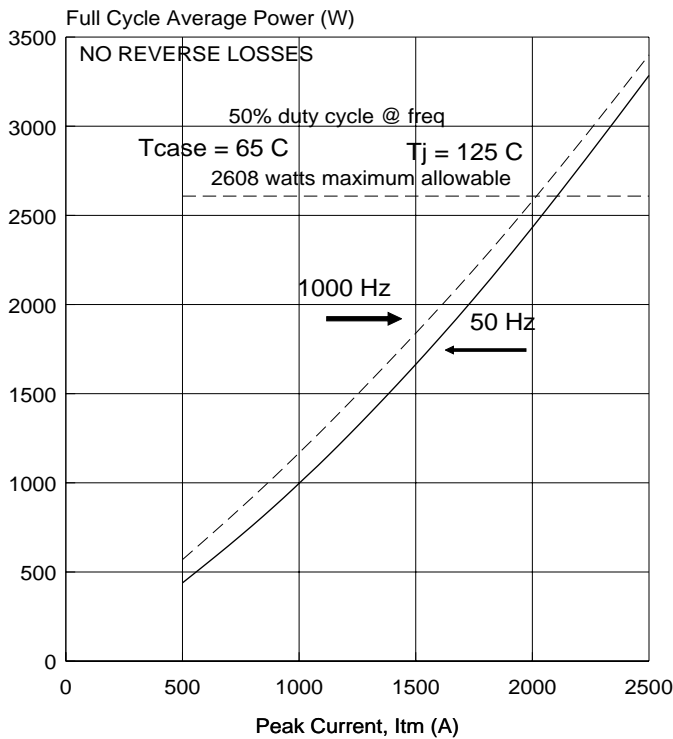
V845snp



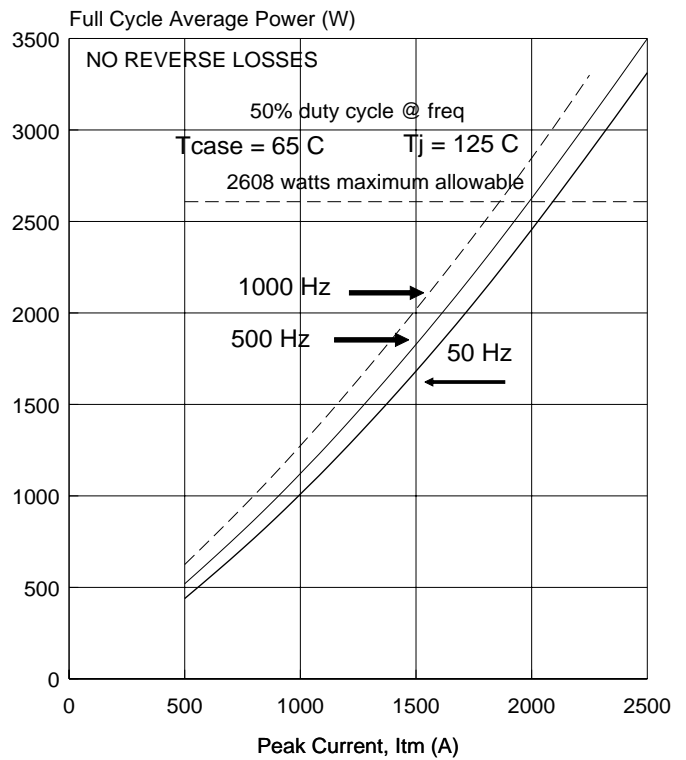
v845tc1

**AVERAGE POWER LOSS  
trapezoidal current wave  
di/dt = 50A/us**

**AVERAGE POWER LOSS  
trapezoidal current wave  
di/dt = 100A/us**

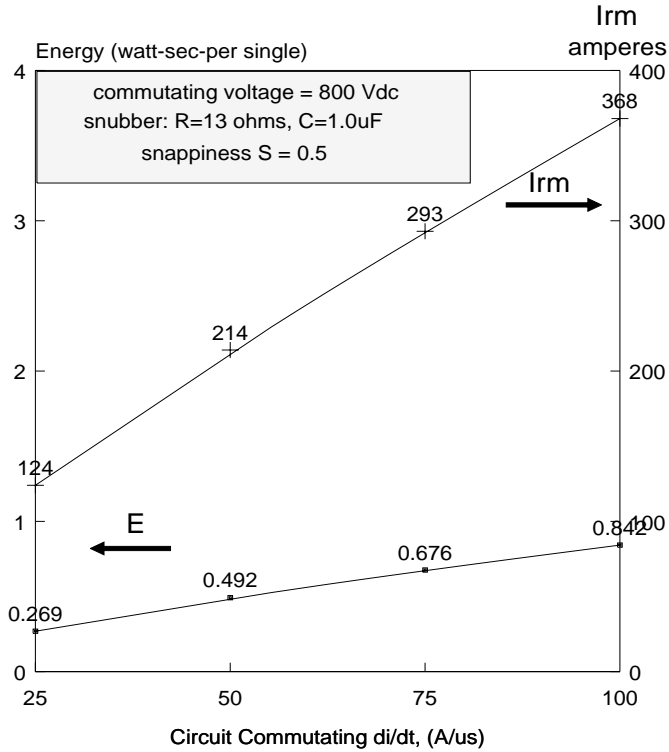


V845Ptr2



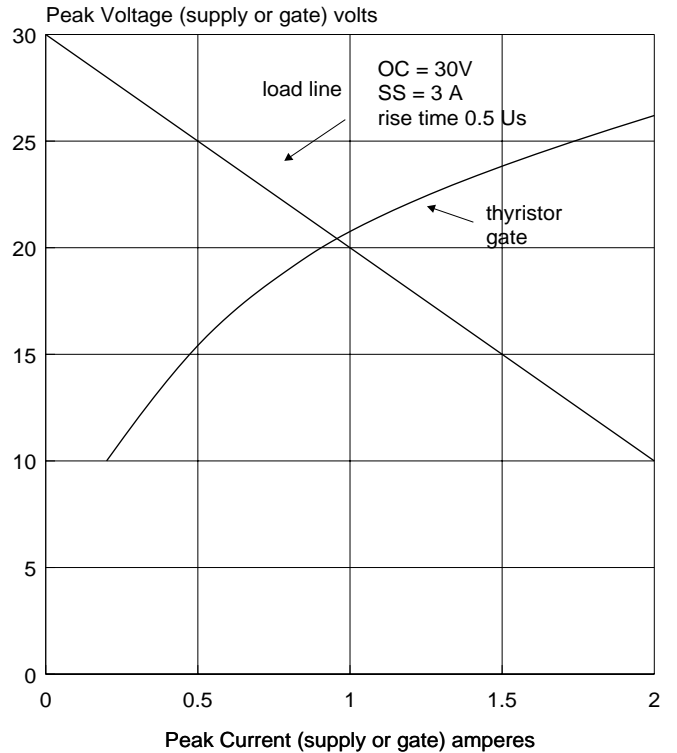
V845Ptr1

**Maximum Peak Recovery Current and Reverse Commutation Energy**  
for recommended circuit conditions



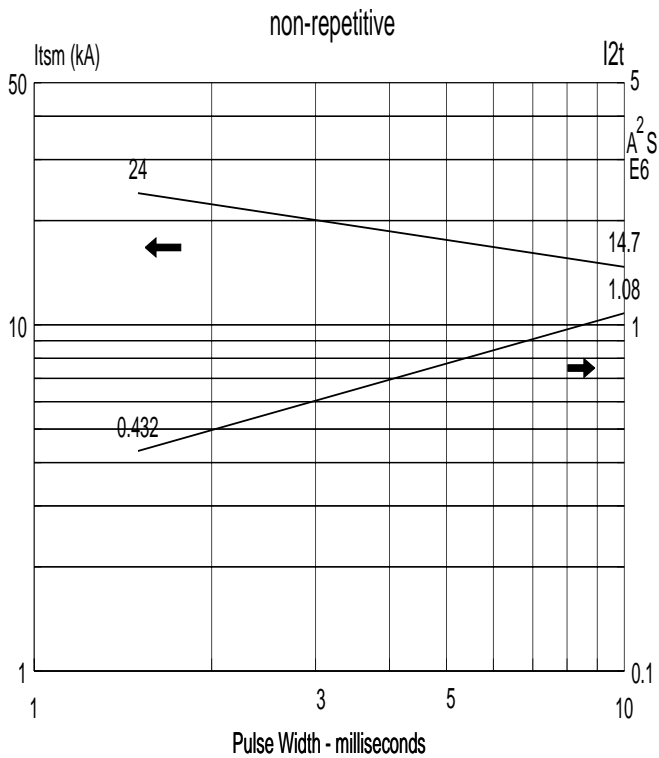
v845re

**Recommended Gate Drive**



w192: gatedr

**Surge On-State Current Peak Half-Sine vs. Pulse Length**  
non-repetitive



v845ism

**Maximum Repetitive Snubber Discharge**

