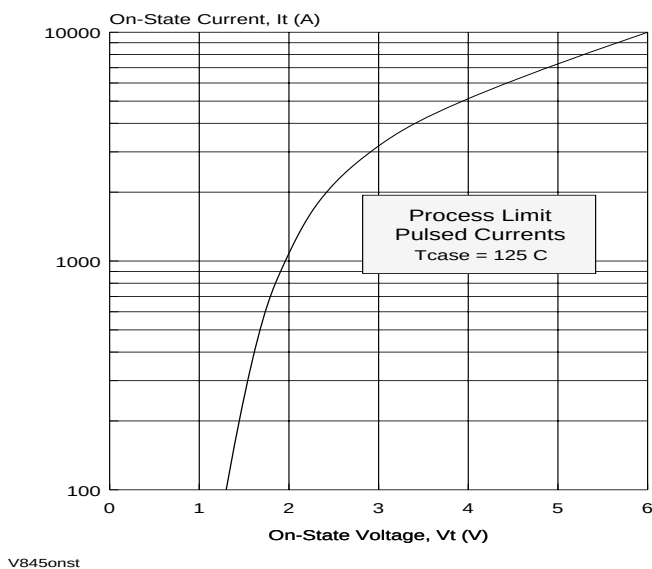
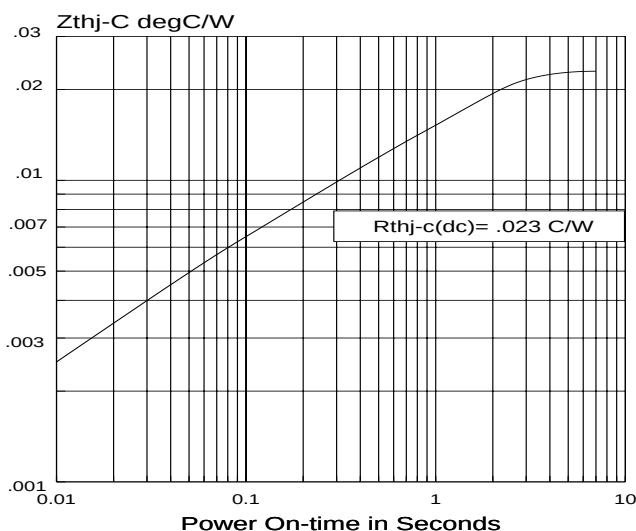


Type C714 reverse blocking thyristor is suitable for inverter applications which do not employ an inverse parallel free wheeling diode and for which reverse recovery losses at elevated frequencies can be significant. The silicon junction is manufactured by the proven multi-diffusion process and utilizes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

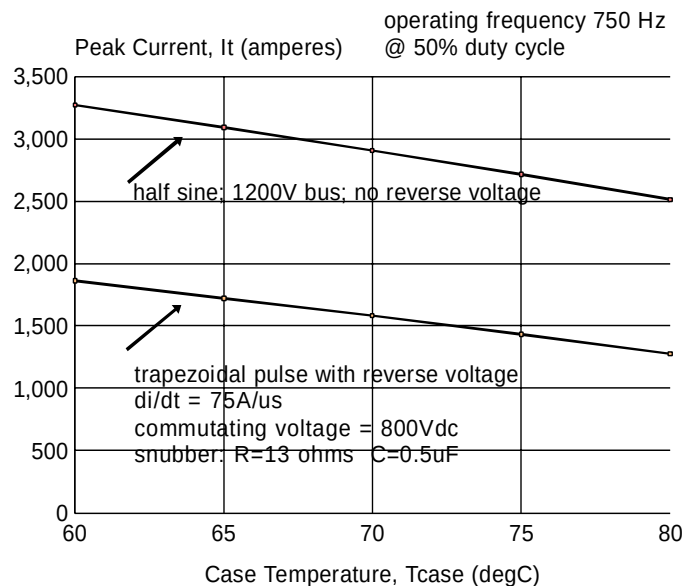
ON-STATE CHARACTERISTIC



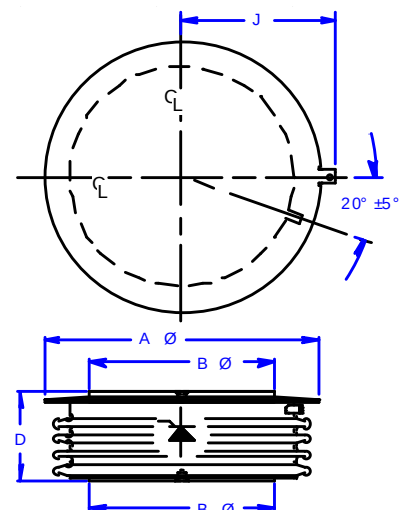
THERMAL IMPEDANCE



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



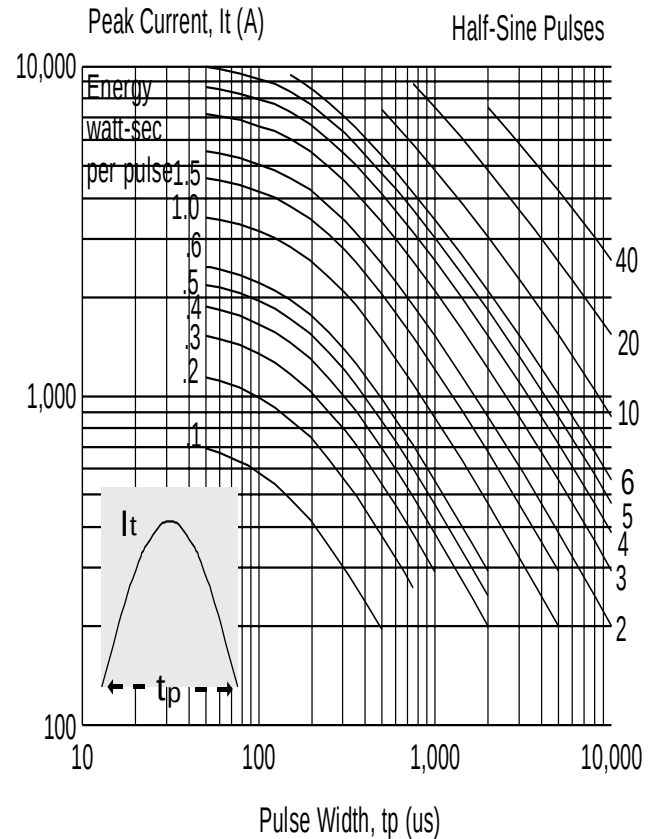
MECHANICAL OUTLINE



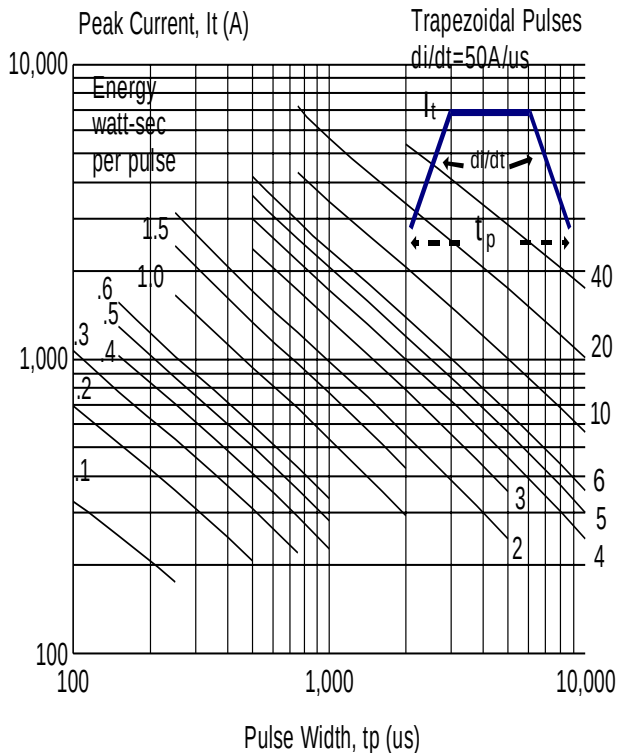
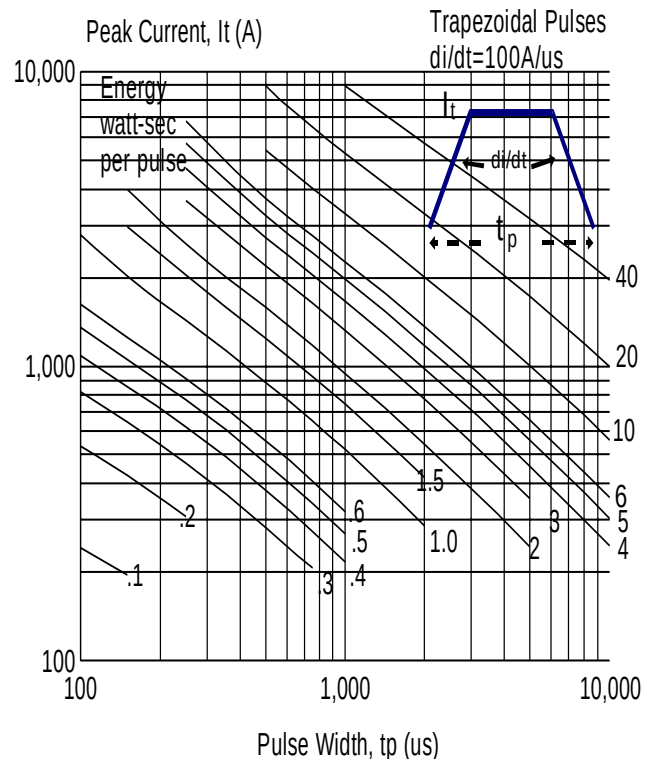
$A \Phi = 2.96\text{ in (75.2 mm)}$
 $B \Phi = 1.99\text{ in (48.3 mm)}$
 $D = 1.07\text{ in (27.2 mm)}$

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} $V_r = > 50V$ $V_r = 2V$	40 45	us



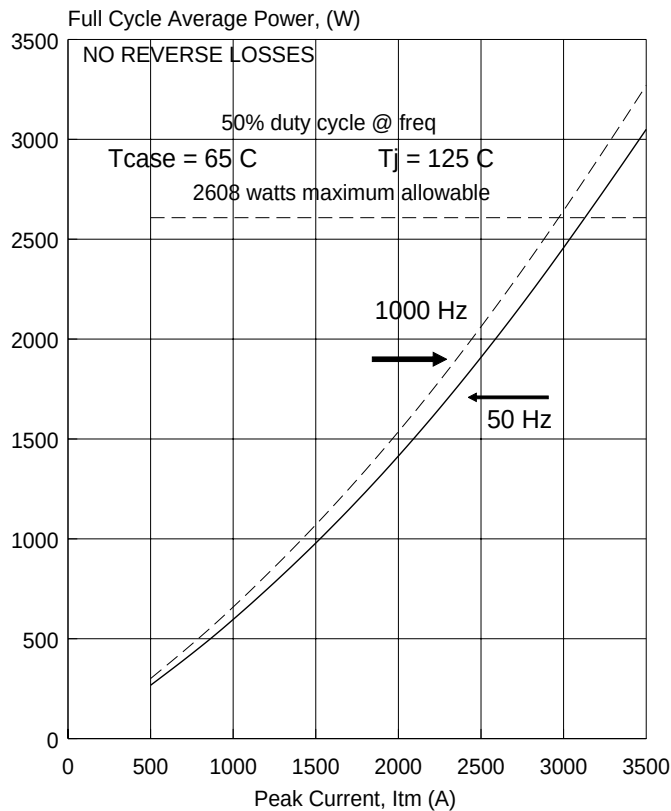
v845sne.ch3



v845tre2.ch3

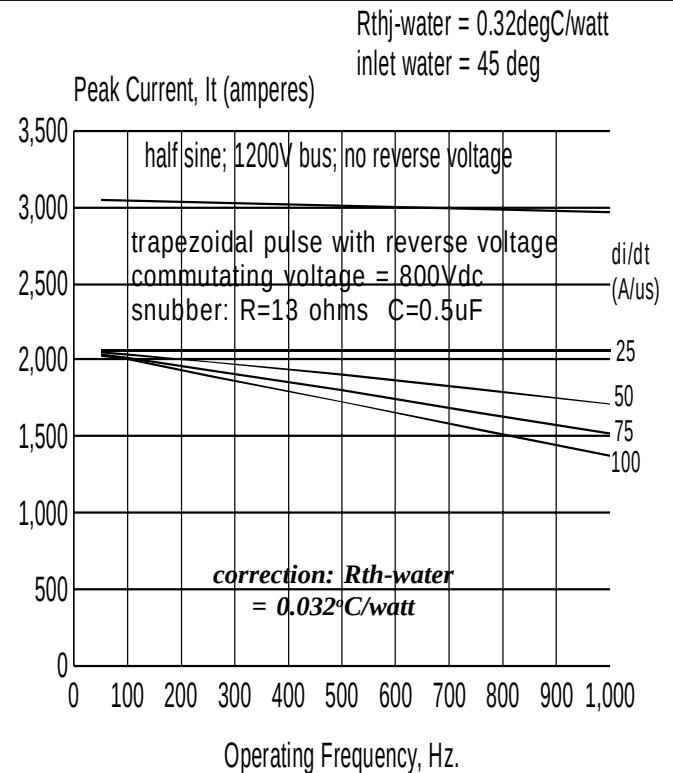
v845tre1.ch3

AVERAGE POWER LOSS half sine wave



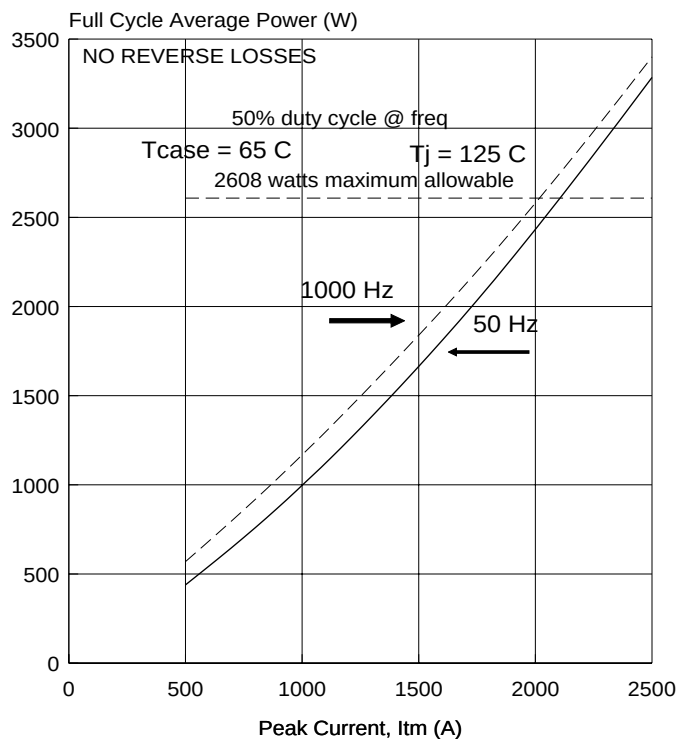
V845snp

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



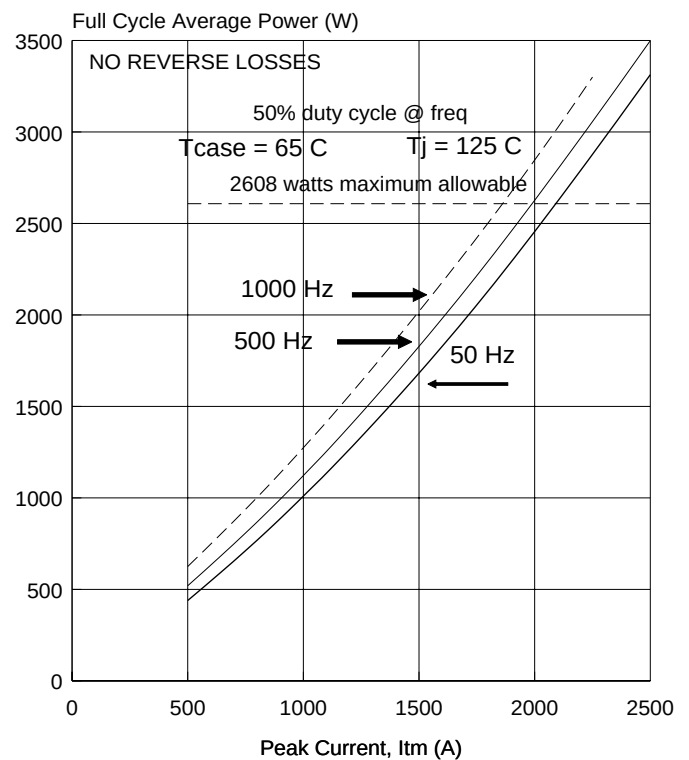
v845tc1

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



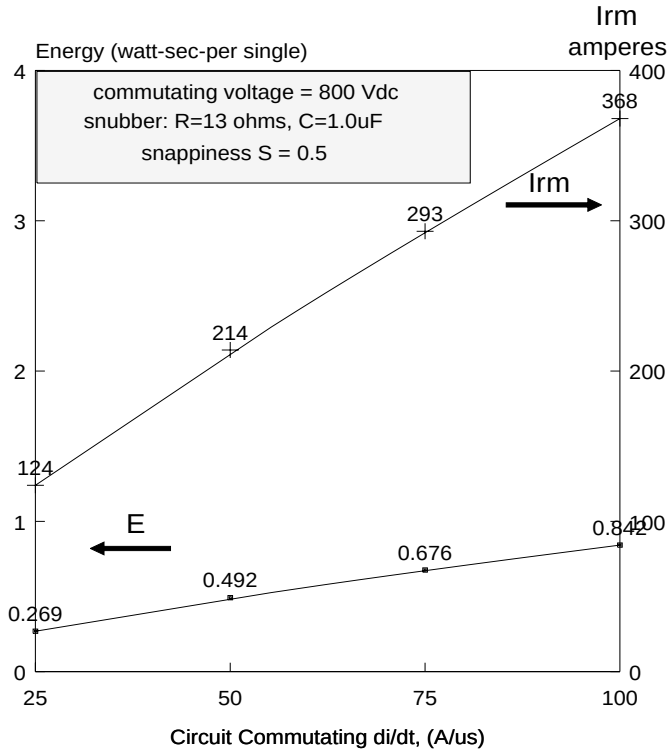
V845Ptr2

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



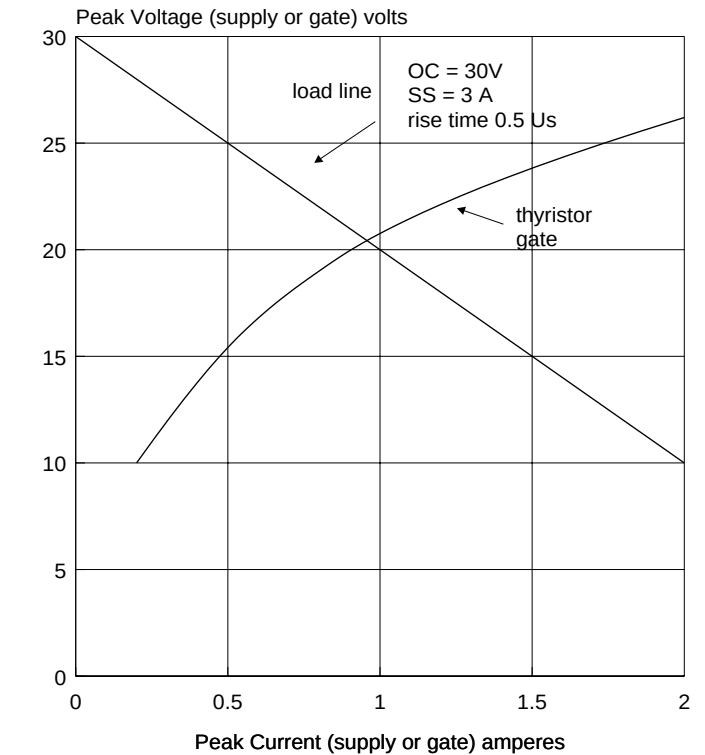
V845Ptr1

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



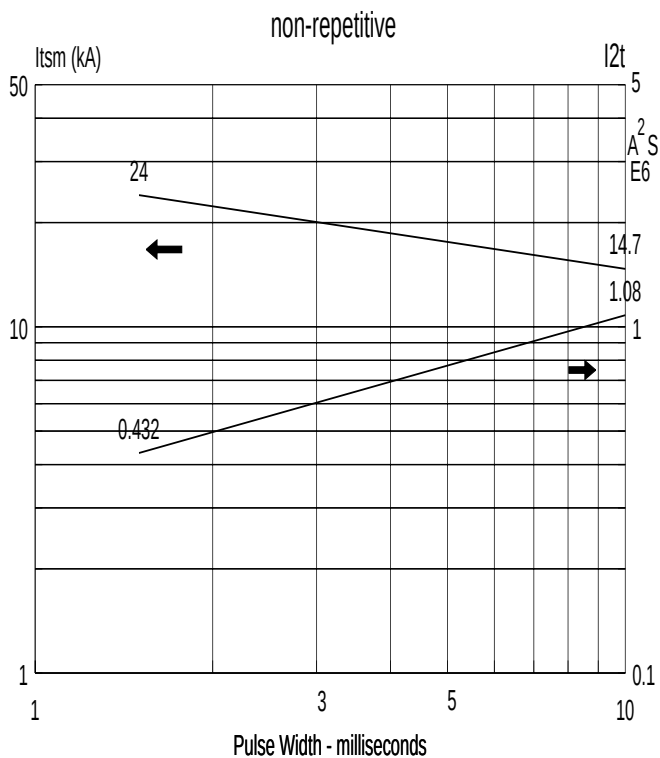
v845re

Recommended Gate Drive



w192: gatedr

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



v845ism

Maximum Repetitive Snubber Discharge

