

## PHASE CONTROL SCRS 850 TO 980 AMPERES

TYPE		C502	C431	C602	C390X550		
Voltage Range		1500-2100	1300-1800	1700-2800	100-400		
IT (RMS)	Max. RMS on-state current (A)	800	1000	940	980		
IT(AV)	Max. average on-state current @180°C conduction (A)@Tc 107°	450	670 @a 77°C	600 @ 65°C	500 @ 72°C		
IT(AV)	Max. average on-state current for 3 Ø conduction (A) @ Tc @ 80°C	350 @ 62°C	525 @ 65°C	510 @ 80°C	-		
ITSM	Max. peak one-cycle, 50HZ non-repetitive surge current (A) 60HZ	7200	7200	9000	7600		
		8000	8000	10,000	8000		
I <sup>2</sup> t	Max. I <sup>2</sup> t for fusing 1.5 msec (A <sup>2</sup> sec)	126,000	265,000	230,000	335,000		
VTM	on-state voltage @ 25°C,180° conduction, rated IT(AV) (V)	1.7	2.3	1.9	1.9		
RθJC	Max. thermal resistance, dc, junction-to-case (°C/W)	.06	.045	.036	.06		
tq	Typical turn-off time (µsec) @ Max. Tj	125	150	125	125		
di/dt	Rate-of-rise of on current (A/us)	100	150	100	500		
Tj	Operating junction temperature (°C)	-40 to 125	-40 to 125	-40 to 125	-40 to 125		
QRR	Max. reverse recovered charge (µC) Tj =25°C	-	-	-	-		
DV/dt	Max. critical rate-of-rise of off-state voltage @ max. rated Tj (V/µs)	500	200	500	200		
IGT	Gate current to trigger @ -40°C (mA) @ + 25°C (mA)	275	300	275	400		
		150	150	150	200		
VGT	Max. required gate voltage to trigger (V) (-40 to + 125 °C)	4.5	5	4.5	5.0		
VF	Peak on-state Voltage @ the following parameters	IMIN(A)	300	300	400	200	
		IMAX(A)	8000	8000	7000	7000	
		A	-1.94	4.2	-3.52	1.36	
		B	.57	-.94	1.09	-.22	
		C	.001	-.0003	.001	.00001	
RθJC	Transient thermal resistance @ the following parameters	D	-.08	.134	-.113	.04	
		TMIN(S)	.01	.001	.01	.001	
		TMAX(S)	.1	.01	.1	.01	
		F	0.67	3.38	.04	.243	
		G	.523	.875	.301	.577	
Package Outline.		TO-200AC	TO200AB2	TO-200AC	TO-200AC		
Maximum Stud Torque (In-Lbs/N-M)		-	-	-	-		
Max. Mounting Force	Lbs	2400	800	4200	2500		
	KN	10.8	3.6	18.7	11.1		