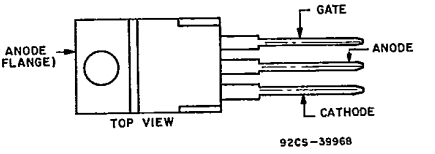
4-A Sensitive-Gate Silicon Controlled Rectifiers

For Power-Switching and Control Application

Features:

- *3.5-A(rms) on-state current ratings*
- *20-A peak surge capability*
- *Glass-passivated chip for stability*
- *Formed-lead options available*

TERMINAL DESIGNATIONS



JEDEC TO-220AB

The RCA-C106 series of sensitive-gate silicon controlled rectifiers are designed for switching ac and dc currents. The types within the series differ in their voltage ratings; the voltage ratings are identified by suffix letters in type designations.

These SCR's have microampere gate-current requirements which permit operation with low-level logic circuits. They can be used for lighting, power-switching, and motor-speed controls, and for gate-current amplification for driving large SCR's.

All types in the series utilize the JEDEC-TO-202AB (RCA VERSATAB) plastic package.

MAXIMUM RATINGS, *Absolute-Maximum Values:*

	C106F	C106A	C106B	C106C	C106D	C106E	C106M	C106S	C106N	
V_{RRM}: R_{GK} = 1000 Ω, T_C = -40 to 110°C ..... V_{DRM} R_{GK} = 1000 Ω, T_C = -40 to 110°C	50	100	200	300	400	500	600	700	800	V
$I_{T(AV)}$ (T_C = 45°C)					2.2					A
$I_{T(RMS)}$ (T_C = 45°C)					3.5					A
$I_{T(DC)}$ (T_C = 70°C)					2.6					A
I_{TSM}: For one cycle of applied principal voltage, T_C = 45°C										
60 Hz (sinusoidal)					20					A
50 Hz (sinusoidal)					18.5					A
I_{GM} (t = 10 μs)					0.2					A
V_{GRM}					6					V
di/dt: V_{DM} = V_{DRM}, I_G = 1 mA, t_r = 0.5 μs, T_C = 110°C					100					A/μs
I^2t [At T_C shown for $I_{T(RMS)}$]: t = 10 ms					1.77					A^2s
8.33 ms					1.67					A^2s
1 ms					0.82					A^2s
P_{GM} (For 10 μs max.)					0.5					W
$P_{G(AV)}$ (Averaging time = 10 ms max.)					0.1					W
T_{stg}					-40 to +150					°C
T_C					-40 to +110					°C
T_T (During soldering for 10 s max.)					250					°C