C106 Series

File Number **1005**

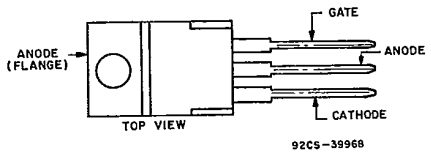
4-A Sensitive-Gate Silicon Controlled Rectifiers

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	50 100 200 300 400 500 600 700 800	V
V_{DRM} R_{GK} = 1000 Ω, T_C = -40 to 110°C		
$I_{T(AV)}$ (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