

3875081 G E SOLID STATE  
Silicon Controlled Rectifiers

01E 17704 D T-25-13

## C106 Series

File Number 1005

## 4-A Sensitive-Gate Silicon Controlled Rectifiers

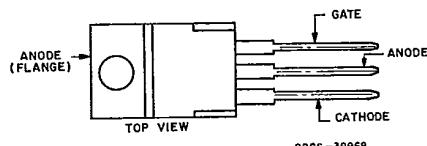
For Power-Switching and Control Application

**Features:**

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

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

**TERMINAL DESIGNATIONS**

JEDEC TO-220AB

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