New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

Model C106

PRODUCT FEATURES

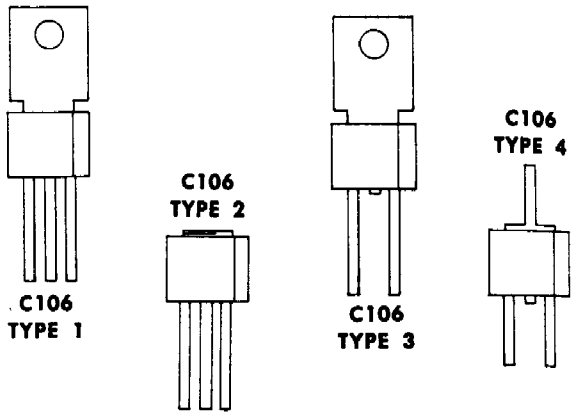
The Type C106 Silicon Controlled Rectifier (SCR) has the following outstanding features:

LOW COST

SENSITIVE Operates directly from low signal sensors such as thermistors, photo-conductive cells, etc.

VERSATILE Designed for a variety of mount-down methods—printed circuit, plug-in socket, screws, or point-to-point soldering

RUGGED, COMPACT Uses a solid plastic encapsulant in rectangular shape for high density packaging



(FULL SIZE)

TYPICAL APPLICATIONS

MOTOR CONTROL	Electric Model Trains Sewing Machines Movie Projectors Food Mixers Electric Fans Slot Racing Cars
LIGHT	Flame Detectors Moving-Light Signs (Chasers) Driver for Computer Readout Lights Harbor Buoy Flashers Automotive Warning Systems Nixie & Neon Drivers
TEMPERATURE	Range Surface Unit (Hybrid) Chemical Processing (Photographic, etc.) Food Warmer Tray Bearing Temperature Sensor Electric Blanket Control
PRESSURE	Auto Oil Pressure Gage Hot Water Boiler Safety Monitor
TIME	Photo Darkroom Exposure Oven Timer Vending Machine Logic Industrial Process Control
LIQUID LEVEL	Basement Sump Pump Automatic Coffee Maker Automatic Shutoff for Vending Machines
REMOTE CONTROL	Armchair TV Control Master Switching Stations for Home Garage Door Openers Power Switch
DRYNESS	Clothes Dryness Sensor
PROXIMITY	Burglar Alarm Touch Switch Electric Door Openers
COUNTING	Low Speed Ring Counters Shift Registers
SWITCHING	Relay Replacement Solenoid Drivers Latching Relay Replacement Power Flip Flops Low Power Inverters Thyratron Tube Replacement
AMPLIFIERS	Gate Amplifier for Larger SCR's, Triacs —Blenders —Hand Tools
IGNITION	Small Gas Engines Gas Appliances
DETECTION	Voltage (Battery Charger) Current (Crowbar)

New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (201) 376-2922
(212) 227-6005
FAX: (201) 376-8960

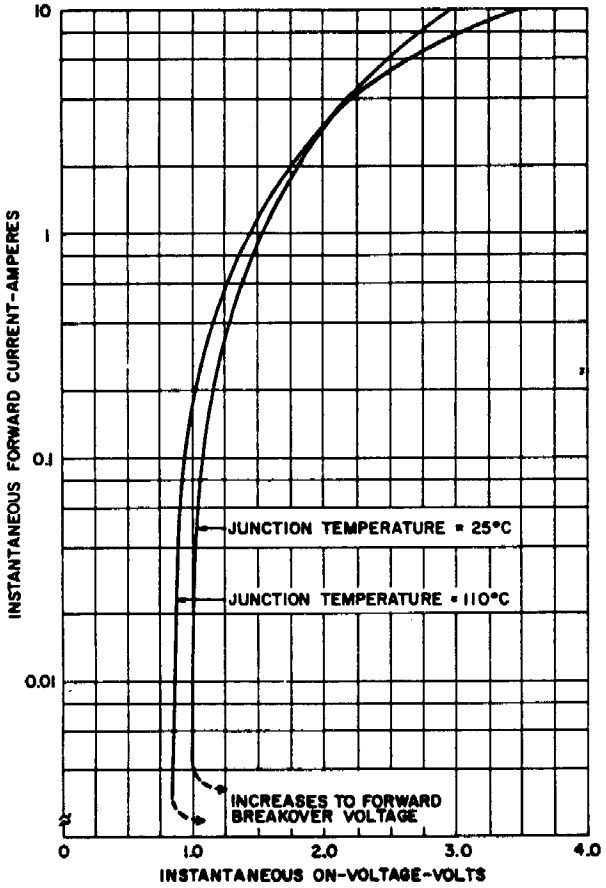
MAXIMUM ALLOWABLE RATINGS

C106

Type	Repetitive Peak Forward Blocking Voltage, V_{FXM} R_{GK} = 1000 Ohms T_J = -40°C to +110°C	Working and Repetitive Peak Reverse Voltage, $V_{ROM(wkg)}$ and $V_{ROM(rep)}$ T_J = -40°C to +110°C
C106Q1, C106Q2, C106Q3, C106Q4	15 Volts	15 Volts
C106Y1, C106Y2, C106Y3, C106Y4	30 Volts	30 Volts
C106F1, C106F2, C106F3, C106F4	50 Volts	50 Volts
C106A1, C106A2, C106A3, C106A4	100 Volts	100 Volts
C106B1, C106B2, C106B3, C106B4	200 Volts	200 Volts
C106C1, C106C2, C106C3, C106C4	300 Volts	300 Volts
C106D1, C106D2, C106D3, C106D4	400 Volts	400 Volts
C106E1, C106E2, C106E3, C106E4	500 Volts	500 Volts
C106M1, C106M2, C106M3, C106M4	600 Volts	600 Volts

RMS Forward Current, On-State ____ 4 Amperes
Rate of Rise of Forward Current (non-repetitive), di/dt (See Chart 9) ____ 50 Amperes/Microsecond
Peak Forward Current, On-State (repetitive) ____ 75 Amperes*
Peak One Cycle Surge Forward Current, Non-Repetitive, I_{FM} (surge) ____ 20 Amperes
I^2t (for fusing) ____ 0.5 Ampere^2 seconds (for times > 1.5 Milliseconds
Peak Gate Power, P_{GM} ____ 0.5 Watt
Average Gate Power, $P_{G(AV)}$ ____ 0.1 Watt
Peak Gate Current, I_{GFM} ____ 0.2 Amperes
Peak Reverse Gate Voltage, V_{GRM} ____ 6 Volts
Storage Temperature, T_{stg} ____ −40°C to +150°C
Operating Temperature ____ −40°C to +110°C

*This rating applies for operation at 60 Hz, 75°C maximum tab (or anode) lead temperature, switching from 80 volts peak, sinusoidal current pulse width 10 μsec. minimum, 15 μsec. maximum.



1. Maximum Forward Characteristics, On State