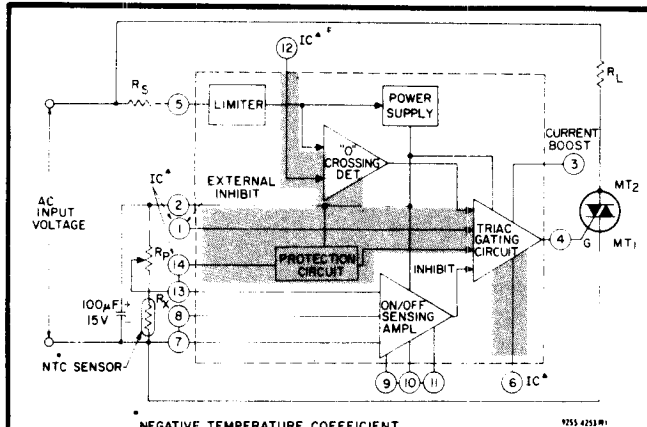


Zero-Voltage Switch

CA3058
CA3059
CA3079



NOTE:

Circuitry, within shaded areas, not included in CA3079

▲ IC = Internal Connection -- DO NOT USE (Terminal Restriction applies only to CA3079).

Package	Suffix	T _A (°C)
14-Lead DIP (CA3059, CA3079)	None	-55 to 125
14-Lead DIL (CA3058)	None	
Chip (CA3059)	H	

File No. 490 (compatible thyristors File No. 406)
ICAN-6182*

Applications

Relay control, Valve control, Heater control, and Lamp control
Synchronous switching of flashing lights, On-off motor switching,
DC differential comparator with self-contained power supply for
industrial applications, Photosensitive control, Power one-shot
control

Features

	CA3058	CA3059	CA3079
24V, 120V, 208/230V, 277V @ 50, 60, or 400 Hz operation	✓	✓	✓
Differential Input	✓	✓	✓
Low Balance Input Current (max.)— μ A	1	1	2
Built-in Protection Circuit for opened or shorted sensor (Term. 14)	✓	✓	
Sensor Range (R _X)—k Ω	2 - 100	2 - 100	2 - 50
DC Mode (Term. 12)	✓	✓	
External Trigger (Term. 6)	✓	✓	
External Inhibit (Term. 1)	✓	✓	
DC Supply Volts (max.)	14	14	10

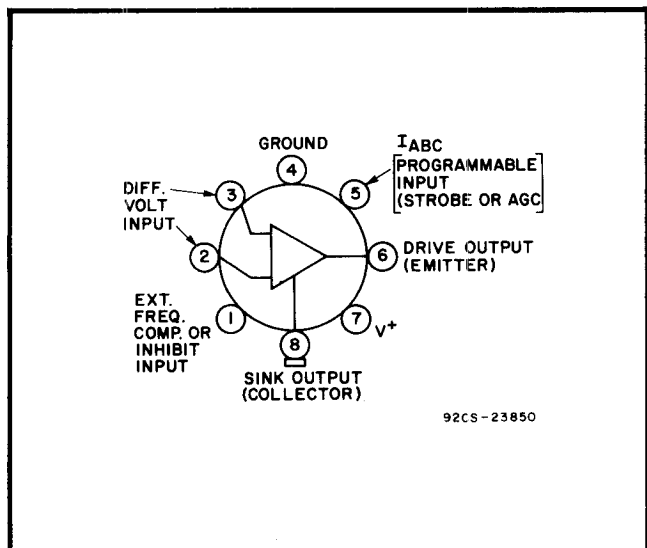
Typical Electrical Characteristics at T_A = 25°C

Peak Output Current @ V_{GT}=0 & Terms. 2 & 3 connected . . . 124 mA
Output Leakage Current 10 μ A
Sensitivity (for 1% change when sensor resist. = 5 k Ω) 6 mV

Programmable Power Switch/Amplifier

CA3094
CA3094A
CA3094B

CA3094T: Operation to 24V;
CA3094AT: Operation to 36V;
CA3094BT: Operation to 44V



Applications and Features

Programmable: strobing, gating,
squenching, agc capabilities
Error signal detector:
Temperature control with
thermistors; speed
control for shunt-wound
DC motor
Wide frequency range oscillator
Analog timer
Level detector
Alarm systems
Over-current, over-voltage, over-
temperature protector
Dual tracking power supply with
CA3085
Ramp-voltage generator
High-power comparator
Voltage follower

Delivers 3W avg. or 10W peak to
load (switching mode)
Single or dual power supply
High current capability:
100 mA avg., 300 mA peak
Sensitivity controlled by varying
bias current
Output "sink" and "drive" capability
THD: 1.4% typ. at 0.6W (class A)
High-power, single-ended class A
amplifier: P_O = 0.6W avg.
P_D (to T_A = 55°C) = 630 mW (with-
out heat sink), 1.6W (with heat
sink)

Typical Electrical Characteristics

at T_A = 25°C, V⁺ = 30V (single supply) or V⁺ = $\pm$ 15V

Common-Mode Input-Voltage Range

(Single Supply 30V) from + 1V to +27V
Typical Open Loop Bandwidth (3dB Point) 4 kHz
Typical Slew Rate:
Open Loop:
Positive Slope 500 V/ μ s
Negative Slope 50 V/ μ s
Unity Gain
(Non Inverting) 0.7 V/ μ s

Package	Suffix	T _A (°C)
8-Lead TO-5	T	-55 to 125
8-Lead "MINI-DIP" (CA3094)	E	
8-Lead TO-5 DIL-CAN	S	
Chip (CA3094)	H	Page 59

File No. 598; ICAN-6048*
High-Reliability Versions, See Page 41

*Refer to indicated File No. for data bulletin and where given to indicated ICAN No. for application note.