Advanced Information/
Preliminary Data

CA3177

Operational Amplifier/ Comparator

With Shutdown Control and Isolated Transistor

FEATURES:
- *Operates from single power supply*
- *High output current (50 mA max.)*
- *Output sink current or drive current capability*
- *Output disable control*

The RCA-CA3177E* is a multiple-control amplifier/ comparator monolithic integrated circuit intended for use in general purpose applications requiring comparator functions with logic override switching and control. An op-amp with differential inputs drives an output transistor with high current capability. An isolated transistor is also available for optional use.

The CA3177E is supplied in the 8-lead dual-in-line plastic (Mini-DIP) package.

*Formerly RCA Dev. Type No. TA10387.

Applications:
- *Comparator*
- *Switching and gating control*
- *Power switch/amplifier*
- *Switching regulator*
- *Pulse width modulator*
- *TV horizontal drive amplifier*

MAXIMUM RATINGS, *Absolute-Maximum Values:*

DC SUPPLY VOLTAGE:
V1, V5, V5 ..... +15 V
INPUT CURRENT:
13, 14, 17, 18 ..... ± 1 mA
OUTPUT CURRENT:
I1 ..... 50 mA
I6 ..... 10 mA
DEVICE DISSIPATION, (Including Q14):
At $T_A \leq 25°C$ ..... 625 mW
At $T_A > 25°C$ ..... Derate linearly 5 mW/°C
Q14 DISSIPATION:
At $T_A \leq 25°C$ ..... 150 mW
At $T_A > 25°C$ ..... Derate linearly 1.2 mW/°C
AMBIENT TEMPERATURE RANGE:
Operating ..... 0 to +70°C
Storage ..... -65 to +150°C
LEAD TEMPERATURE (DURING SOLDERING):
At distance 1/16 ± 1/32 inch (1.59 ± 0.79 mm) from case for 10 s max. ..... 265°C

File Number **1235**

CA3177

ELECTRICAL CHARACTERISTICS *at T_A = 25°C, V+ (V5) = 15 V, except as noted*

CHARACTERISTIC	CONDITIONS	LIMITS		UNITS
		Min.	Max.	
Operational Amplifier				
Input Offset Voltage, V_{IO}		—	100	mV
Input Bias Current, I_{IB}		—	15	μA
Common-Mode Input Voltage Range, V_{ICR}		2	12	V
Amplifier Supply Current, I5		3	10	mA
Q14 Amplifier				
DC Forward-Current Transfer Ratio, h_{FE}	V_{CE} = 10 V, I_8 = 0.1 mA V_{CE} = 10 V, I_6 = 2 mA	45 45	— —	
Collector-to-Emitter Saturation Voltage, V_{CE}(sat)	I_7 = 0.2 mA, I_8 = 2 mA	—	0.6	V
Q1 Amplifier				
Collector-to-Emitter Saturation Voltage, V_{CE}(sat)	I_8 = 0.15 mA, I_1 = 30 mA	—	0.4	V

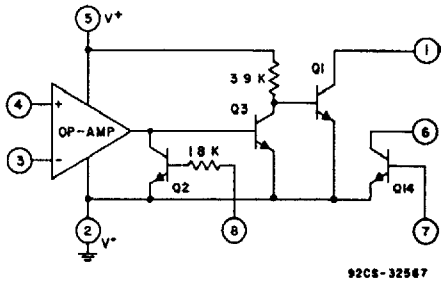
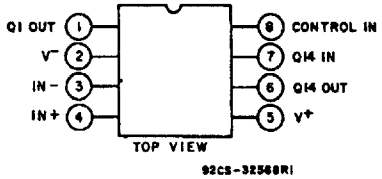


Fig. 1—Functional diagram for CA3177E.



TOP VIEW
TERMINAL ASSIGNMENT