

PRELIMINARY SPECIFICATION

LINEAR INTEGRATED CIRCUITS

DESCRIPTION

The MC1310/MC1310E are integrated FM stereo demodulators using phase locked loop technology to regenerate the 38KHz Subcarrier. The device features a wide operating voltage, 8–16Vdc and a low external parts count.

FEATURES

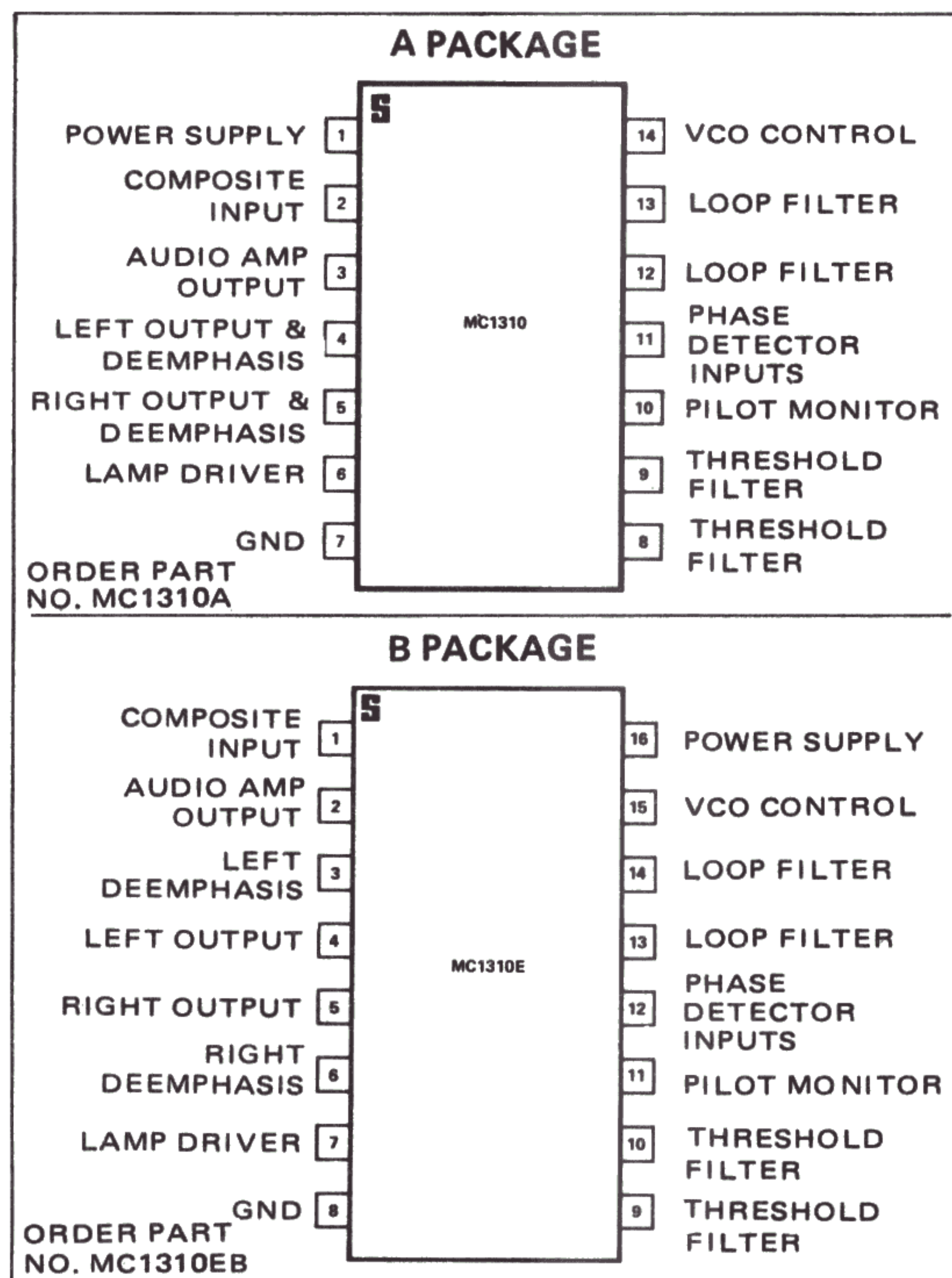
- NO INDUCTORS REQUIRED
- INTEGRAL STEREO/MONAUROAL SWITCH
- 75mA LAMP DRIVING CAPABILITY
- EXCELLENT SCA REJECTION
- WIDE SUPPLY RANGE: 8-16Vdc
- EXCELLENT CHANNEL SEPARATION
- EMITTER FOLLOWER OUTPUTS (MC1310E)

ABSOLUTE MAXIMUM RATINGS

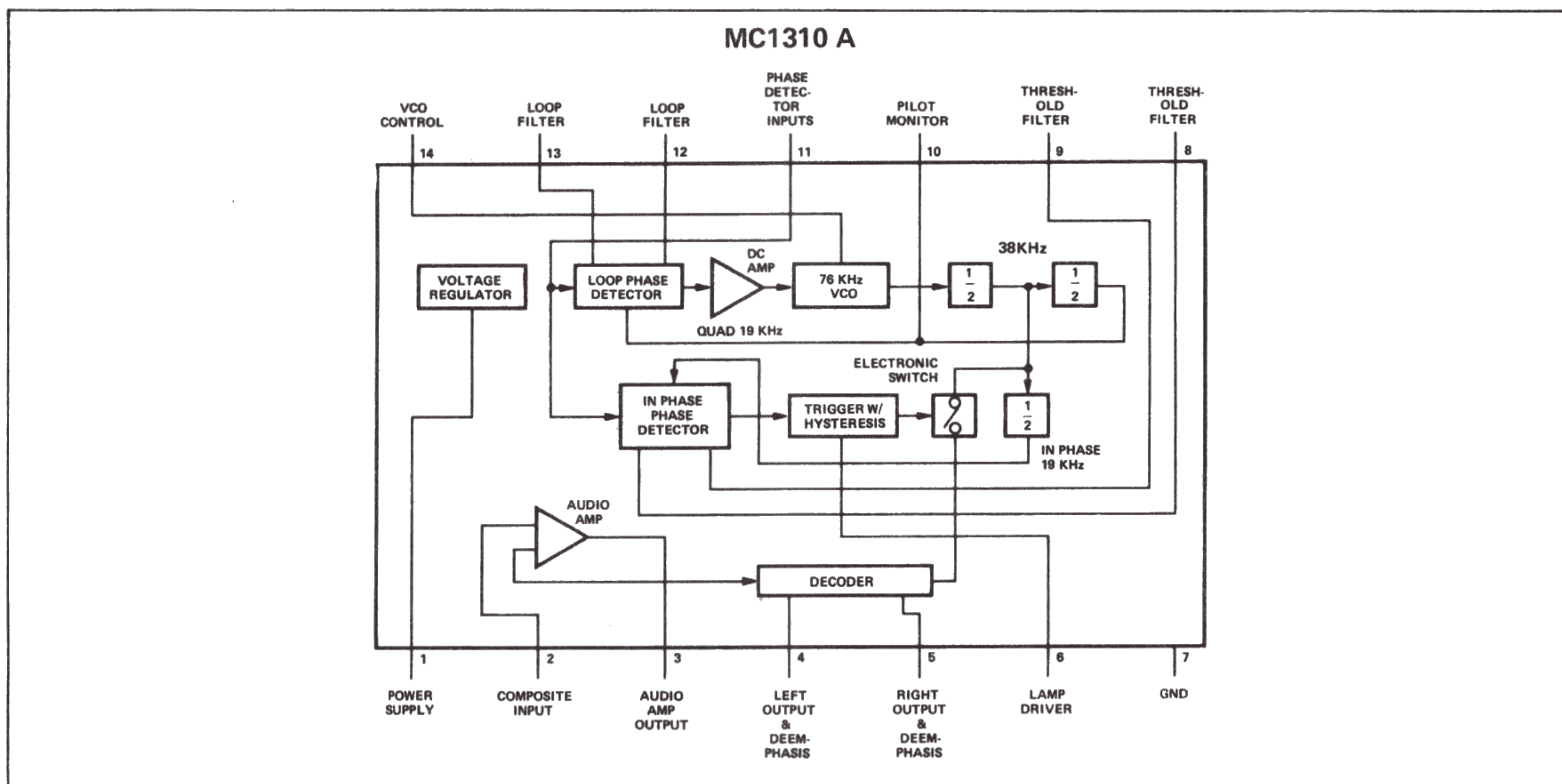
Supply Voltage	16 Volts
Lamp Current (12V lamp)	75 mA
Power Dissipation*	625 mW
Operating temperature range	-30°C to +85°C
Storage temperature range	-65°C to +150°C

*Derate at 5 mW/°C above 25°C

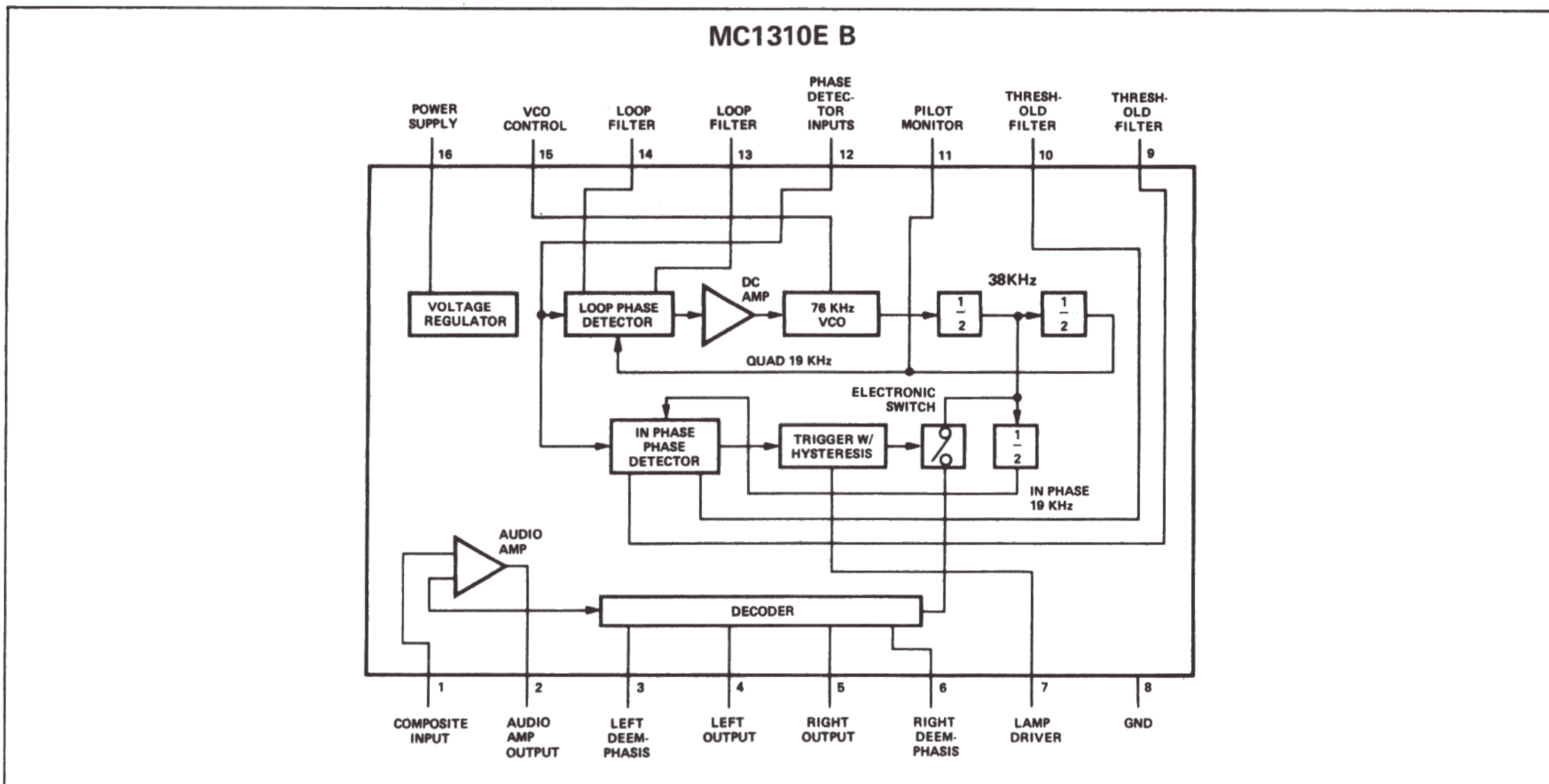
PIN CONFIGURATIONS (Top View)



BLOCK DIAGRAMS



BLOCK DIAGRAMS (Cont'd.)

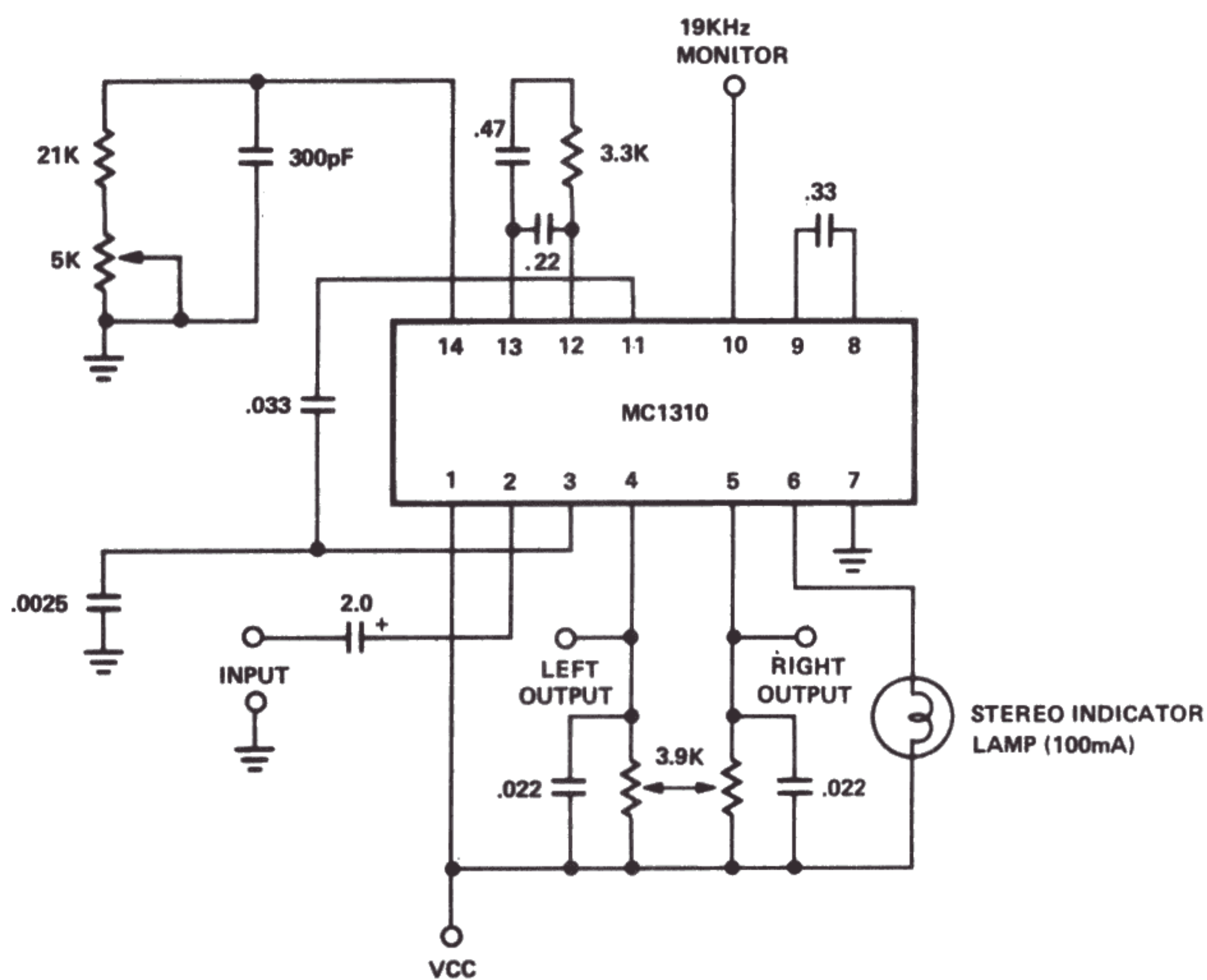


ELECTRICAL CHARACTERISTICS V+ = 12Vdc, TA = 25°C

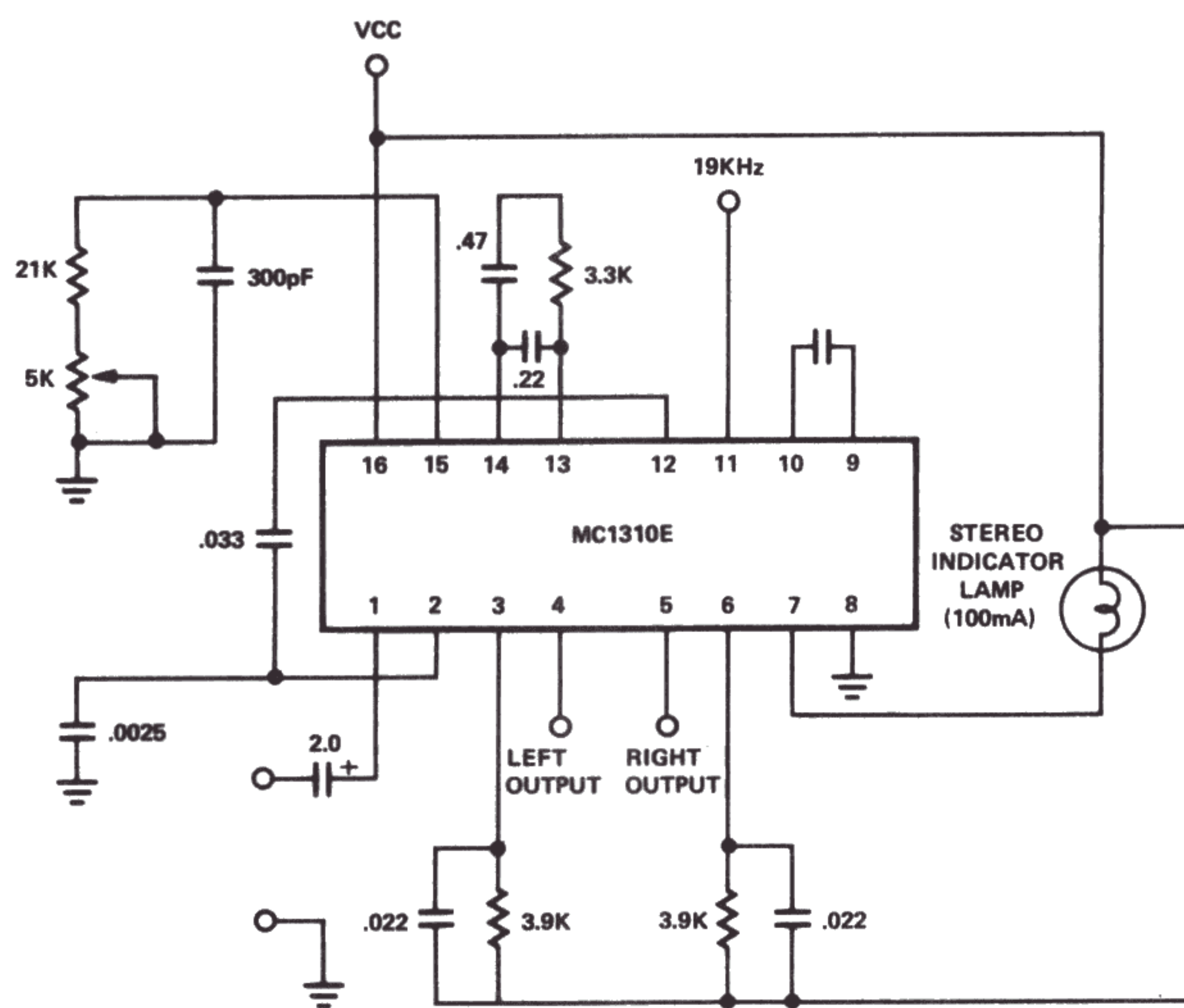
PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Supply Current					
MC1310E	Lamp off		22	30	mA
MC1310	Lamp off		19	30	mA
Maximum Standard Composite Input Signal (0.5% THD)		2.8			V _{p-p}
Maximum Monaural Input Signal (1.0% THD)		2.8			V _{p-p}
Input Impedance			50		kΩ
Stereo Channel Separation (50Hz – 15KHz)		30	40		dB
Audio Output Voltage (Desired Channel)			485		mV RMS
Monaural Channel Balance (Pilot Tone "OFF")				1.5	dB
Total Harmonic Distortion			.3		%
Ultrasonic Frequency Rejection					
19KHz			34.4		dB
38KHz			45		dB
Inherent SCA Rejection (f = 67KHz; 9.0KHz Beat Note Measured With 1.0KHz Modulation Off)			80		dB
Stereo (19KHz Input Level for Lamp "On")		12	16	20	mV RMS
Hysteresis			6		dB
Capture Range			±3		%
Supply Voltage		8		16	Vdc

TYPICAL APPLICATIONS

MC1310



MC1310E



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