



# ECG719, ECG722

## STEREO PROCESSING

PHILIPS E C G INC

17E D

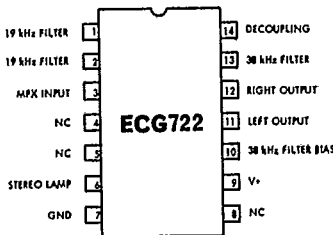
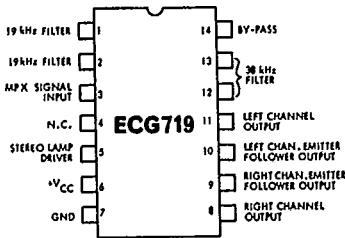
T-74-05-01

### DESCRIPTION

The Types ECG719 and ECG722 perform the standard stereo processing functions of a 19 kHz amplifier, frequency doubler, stereo indicator lamp driver, and stereo demodulator. The Type ECG719 also includes emitter follower outputs.

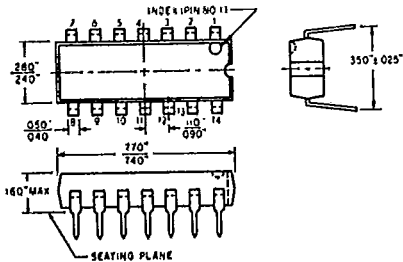
### ABSOLUTE MAXIMUM RATINGS

Supply Current ( $I_{CC}$ ) ..... 40 mA  
 Power Supply Voltage ( $V_{CC}$ ) ..... +24 V  
 Power Dissipation ( $P_D$ ) ..... 1 watt  
 derate 8mW/°C above 25°C  
 Operating Temperature ( $T_A$ ) ..... -30°C to +85°C  
 Storage Temperature ( $T_S$ ) ..... -65°C to +150°C



Performance features include:

- Reduced switching transients
- Improved ultrasonic attenuation
- Better low level separation



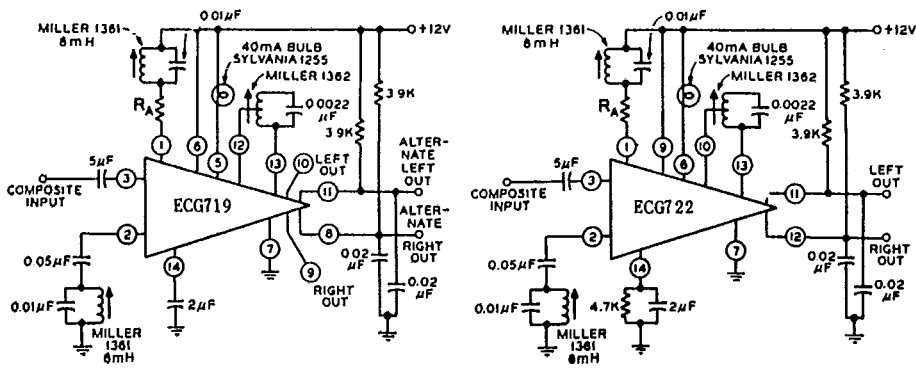
### ELECTRICAL SPECIFICATIONS

Operating Conditions:  $V_{CC} = +12V$ ,  $T_A = 25^\circ C$ , de-emphasis = 75  $\mu S$  Composite Input = 200mVrms

Parameter	Symbol	Pin	Test Conditions	Limits			Units	Notes
				Min.	Typ.	Max.		
Stereo Channel Separation								
10 kHz	$\Delta_{RL}$	8, 11*			30		dB	
1 kHz	$\Delta_{RL}$	8, 11*			45		dB	
0.1 kHz	$\Delta_{RL}$	8, 11*			30		dB	
Channel Gain Balance	$G_{RL}$	8, 11*			0.5	1	dB	
Total Harmonic Distortion	$T_{HD}$	8, 11*			0.5		%	
Ultrasonic Frequency Rejection	$A_{UJ}$	8, 11*	$f = 38kHz$		30		dB	
SCA Rejection	$A_{SCA}$	8, 11*			50		dB	
Stereo Indicator Driver								
Minimum 19 kHz for lamp-on	$S_H$	3			17	20	mV	RA = 120!!
Maximum 19 kHz for lamp-off	$S_L$	3		6	13		rms	
Power Supply Current	$I_{CC}$	6†			14	21	mA	
Power Dissipation	$P_D$	6†	$V_{CC} 10V$ with lamp		180	250	mW	
L-R D-C Offset	$V_{RL}$	8, 11*				100	mV	
Input Resistance	$R_{IN}$	3		15	20		K $\Omega$	

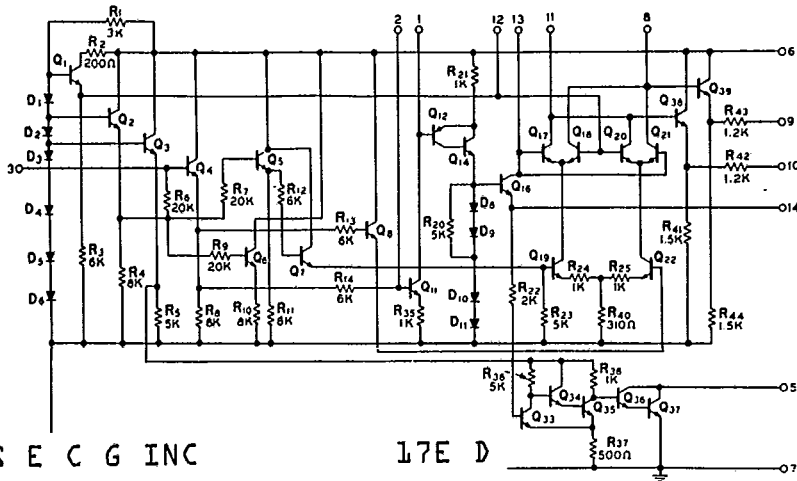
\* ECG719, for ECG722 use pins 11,12.

† ECG719, for ECG722 use pin 9

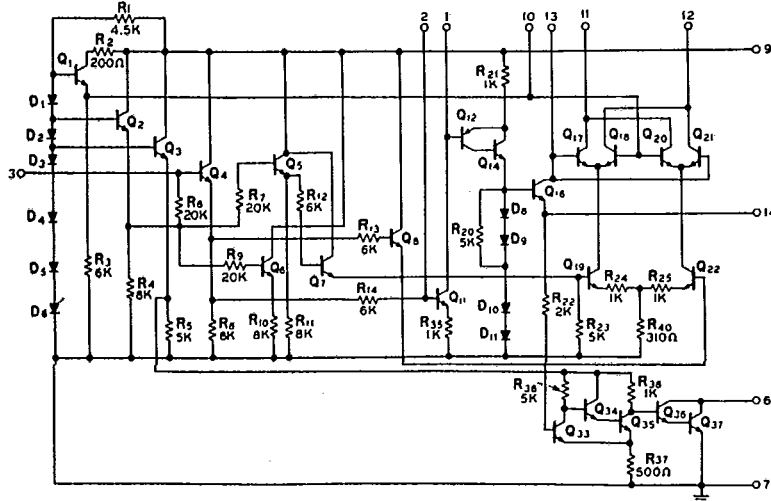


SUGGESTED CIRCUIT CONNECTIONS

ECG719



ECG722



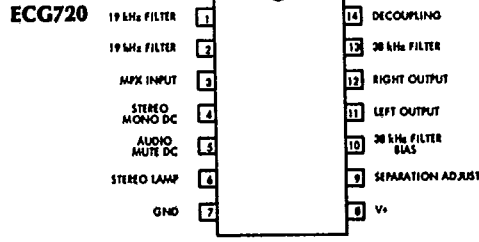
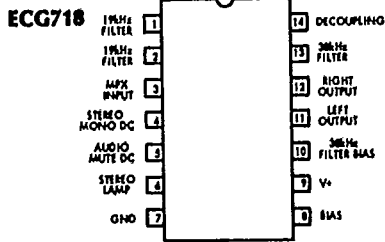
EQUIVALENT CIRCUITS



# ECG718 and ECG720 STEREO PROCESSING

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17E D



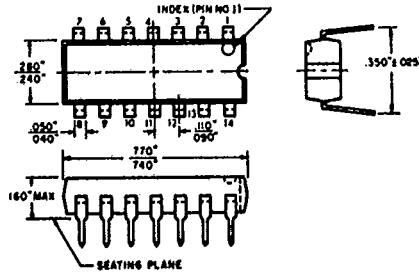
T-74-05-01

## DESCRIPTION

The Type ECG718 and ECG720 perform the standard stereo processing functions of a 19kHz amplifier, frequency doubler, stereo indicator lamp driver, audio mute, stereo/monaural switch, and stereo demodulator. The Type ECG720 permits adjustable stereo channel separation.

Performance features include:

- Reduced switching transients
- Improved ultrasonic attenuation
- Better low level separation



## ABSOLUTE MAXIMUM RATINGS

- Supply Current (I<sub>CC</sub>) ..... 40 mA
- Power Supply Voltage (V<sub>CC</sub>) ..... +24 V
- Power Dissipation (P<sub>D</sub>) ..... 1 watt  
derate 8mW/°C above 25°C
- Operating Temperature (T<sub>A</sub>) .. -30°C to +85°C
- Storage Temperature (T<sub>S</sub>) .. -65°C to +150°C

## ELECTRICAL SPECIFICATIONS

Operating Conditions: V<sub>CC</sub> = +12V,  
T<sub>A</sub> = 25°C, de-emphasis = 75 μS  
Composite Input = 200mVrms

Parameter	Symbol	Pin	Test Conditions	Limits			Units	Notes	
				Min.	Typ.	Max.			
Stereo Channel Separation									
10 kHz		11, 12			30		dB		
1 kHz		11, 12			45		dB		
0.1 kHz		11, 12			30		dB		
Channel Gain Balance	G <sub>M</sub>	11, 12				.5	dB		
Total Harmonic Distortion	T <sub>HD</sub>	11, 12				.5	%		
Ultrasonic Frequency Rejection	A <sub>U</sub>	11, 12	f = 38kHz		30		dB		
SCA Rejection	A <sub>SCA</sub>	11, 12			30		dB		
Stereo Indicator Driver									
Minimum 19 kHz for lamp-on	S <sub>H</sub>	3			6	17	22	mV	R <sub>A</sub> = 120Ω
Maximum 19 kHz for lamp-off	S <sub>L</sub>	3				13		rms	
Audio Muting									
Mute-on (Voltage at pin 5)	M <sub>H</sub>	5					0.7	V	
Mute-off (Voltage at pin 5)	M <sub>L</sub>	5			1.5			V	
Stereo-Mono Switch									
Stereo (Voltage at pin 4)	S <sub>H</sub>	4			1.5			V	
Mono (Voltage at pin 4)	S <sub>L</sub>	4					0.7	V	
Power Supply Current	I <sub>CC</sub>	9*				14	21	mA	
Power Dissipation	P <sub>D</sub>	9*	V <sub>CC</sub> = 10V with lamp			180	250	mW	
L-R D-C Offset	V <sub>M</sub>	11, 12					100	mV	
Input Resistance	R <sub>M</sub>	3			15	20		kΩ	

\*ECG718, for ECG720 use pin 8.