

NTE1714M Integrated Circuit Remote Control Amplifier/Detector

Description:

The NTE1714M is an integrated circuit in an 8-Lead DIP type package designed for use in infrared remote control applications. It provides the high gain and pulse shaping needed to couple the signal from an IR receiver diode to the tuning control system logic.

Features:

- High Gain Pre-Amp
- Envelope Detector for PCM Demodulation
- Simple Interface to Microcomputer Remote Control Decoder
- May be Used with Tuned Circuit for Narrow Bandwidth, Lower Noise Operation
- Small Package Size
- Minimum External Components
- Wide Operating Supply Voltage Range
- Low Current Drain

Absolute Maximum Ratings:

Supply Voltage, V_{CC} 15V
 Power Dissipation, Package Rating P_D 1.25Watts
 Derate above 25°C. 10mW/°C
 Operating Temperature Range, T_A 0° to +75°C
 Storage Temperature Range, T_{stg} -55° to +125°C
 Junction Temperature, T_J +150°C

Recommended Operating Conditions:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Voltage	V_{CC}	$T_A = +25^\circ\text{C}$	4.75	—	15.0	V
		$T_A = 0^\circ\text{C}$	5.0	—	15.0	V
Input Frequency	f_{in}		30	40	80	kHz

Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 5\text{V}$, $f_{in} = 40\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply Current	I_{CC}		1.5	2.5	3.5	mA
Input Terminal Voltage	V (Pin7)		2.4	2.8	3.0	V
Input Voltage Threshold	V_{in}		–	50	100	μV_{P-P}
Input Amplifier Voltage Gain	A_V	V (Pin3) = 500mV_{P-P}	–	60	–	dB
Input Impedance	r_{in}		40	60	80	$\text{k}\Omega$
Output Voltage	V_{OL}	$V_{in} = 1\text{mV}_{P-P}$	–	–	0.5	V
	V_{OH}	Input Open	–	–	5.0	V
Output Leakage Current	I_{OH}	$V_{CC} = V_{OH} = 15\text{V}$	–	–	2.0	μA

Pin Connection Diagram

