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NTE15004 Integrated Circuit Remote Control Preamplifier

Description:

This NTE15004 is a silicon monolithic integrated circuit in an 8-Lead SIP type package designed for a remote control preamplifier of infrared signals. This device features low power, high sensitivity and wide supply voltage.

Features:

- Wide Operation Voltage: $V_{CC} = 6V$ to $14.4V$
- Low Power Consumption: $I_{CC} = 2.5mA$ typ.
- High Input Sensitivity: $50\mu V_{p-p}$ typ.
- Peak Detector
- Small Size Package – 8-Lead SIP
- Minimum Number of External Parts Required

Absolute Maximum Ratings: ($T_A = +25^\circ C$ unless otherwise specified)

Supply Voltage, V_{CC} 15V
 Power Dissipation, P_D 270mW
 Operating Temperature Range, T_{opr} -20° to $+75^\circ C$
 Storage Temperature Range, T_{stg} -40° to $+125^\circ C$

Recommended Operating Conditions:

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Power Supply	V_{CC}		6.0	8.5	14.4	V
Input Frequency	f_{in}		30	–	50	kHz

Electrical Characteristics: ($T_A = +25^\circ C$, $V_{CC} = 8.5V$, $f_{in} = 40kHz$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_{CC}		1.5	2.5	3.5	mA
Input Terminal Voltage	V_{IN1}		2.1	2.6	3.1	V
	V_{IN2}	$I_{IN} = 70\mu A$	3.4	4.1	4.9	V
1 st Stage Voltage Gain	A_{VL}	Pin7 – Pin4, $V_{OUT} = 500mV_{P-P}$	–	60	–	dB
Detection Input Voltage	V_{IN}		–	50	100	μV
Input Impedance	r_{in}		40	60	80	k Ω
Output Voltage	V_{OL}	$I_{OL} = 0.1mA$, $V_{IN} = 1mV_{P-P}$	–	–	0.5	V
Output Leakage Current	I_{OH}	$V_{OH} = 14.4V$	–	–	2	μA
Noise		Input Open	Output Pin is Not Fall			

Pin Connection Diagram (Front View)

