

NTE1655 Integrated Circuit TV Stereo Decoder

Description:

The NTE1655 is a TV stereo decoder integrated circuit in a 16-Lead DIP type package designed for television stereo. An L–R output is provided to drive further audio processing.

Features:

- Low Impedance L + R and L – R Outputs
- Mono/Stereo Switching and Indication
- Low Distortion – 0.10% typical

Applications:

- Stereo Television Sets
- Stereo Adapters
- Cable Television

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

Power Supply Voltage	16V
Power Dissipation	1800mW
Derate Above 25°C	15mW/ $^\circ\text{C}$
Operating Ambient Temperature Range	-40° to $+85^\circ\text{C}$
Storage Temperature Range	-65° to $+150^\circ\text{C}$
Lamp Drive Voltage Max Voltage at Pin7 with Lamp "Off"	16V
Lamp Current	100mA

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
DC ($V_{IN} = 0$)					
Supply Current	$V_{CC} = 16\text{V}$	15.0	33.5	50.0	mA
Output Voltage	Pin4	1.7	3.5	5.0	V
	Pin5	1.7	3.8	5.0	V
Output Impedance	Pin4, Pin5	–	100	300	W
Lamp Leakage	Lamp OFF, Pin7 Voltage = 16V	–	–	0.1	mA
Lamp Saturation Voltage	Lamp ON, Pin7 Current = 100mA	–	–	2.0	V

Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 12\text{V}$ unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Audio (Composite signal with 38kHz subcarrier and 10% 19kHz pilot, $f_{\text{mod}} = 1\text{kHz}$. Adjust P1 for 19kHz $\pm 10\text{Hz}$.)					
L + R Channel Gain	$V_{\text{IN}} = 2.5\text{V}_{\text{P-P}}$ L = R, Pilot OFF, Pin4	0.8	1.0	1.2	
L + R Channel THD	$V_{\text{IN}} = 2.5\text{V}_{\text{P-P}}$ L = R, Pilot OFF, Pin4	–	0.1	1.0	%
Gain Ratio, L + R Channel to L – R Channel	$V_{\text{IN}} = 2.5\text{V}_{\text{P-P}}$ L Only	–2.0	0.0	2.0	dB
Supply Rejection	100mV _{rms} , 1kHz ON Supply, $V_{\text{IN}} = 0$	30	60	–	dB
DC Output Shift, Mono–to–Stereo	Pilot OFF to ON, Pin4, Pin5	–	–	± 20	mV
Input Impedance	Pin1	15	50	150	k
PLL					
Pilot Level for Lamp ON		12	–	20	mV
Pilot Level for Lamp OFF		3	–	10	mV
Capture Range	Pilot = 25mV _{rms}	± 0.5	–	–	%

Pin Connection Diagram

