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NTE1056
Integrated Circuit
FM Stereo Multiplex Demodulator

Description:

The NTE1056 is a monolithic integrated circuit FM multiplex stereo demodulator designed for use in FM stereos, phonographs and radio receivers. A multiplex stereo demodulator circuit generally consists of four main circuits, a composite signal amplifier, 19KHz pilot signal filter, 38KHz subcarrier generator and either a matrix or a switching circuit which seperates the composite signal into the right and left audio channels. In addition to these circuits, an automatic stereo–monaural switching circuit, stereo signal indicator circuit, muting circuit, separation control circuit and SCA circuit are also included as supplemental circuits. The NTE 1056 is designed to include both main stereo demodulator circuits and supplemental circuits on a common monolithic substrate, and is supplied in a 14 lead DIP.

Features:

- Separation Control
- On, Off Level Control
- Monoaural Muting
- Either Positive or Negative Grounding are Available

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Supply Voltage, V_{2-12} 12V
Total Current Consumption, I_{tot} 25mA
Total Power Dissipation ($T_A \leq 75°C$), P_T 250mW
Operating Temperature Range, T_{opr} . . . . . –20° to +75°C
Storage Temperature Range, T_{stg} . . . . . –65° to +150°C

Electrical Characteristics: (T_A = +25°C, V_{CC} = 9V, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage	V_{2-12}		6	9	12	V
Circuit Current Stereo	I_{tot}	V_{IN} = 300mV	6	9	13	mA
Monoaural			6	9	13	mA
Channel Seperation f = 1kHz		V_{IN} = 300mV	35	45	–	dB
f = 10kHz			25	29	–	dB
Channel Balance	ch. B	V_{IN} = 300mV	–	–	2	dB
Voltage Gain	G_V		–2.5	–1.5	–0.5	dB

Electrical Characteristics (Cont'd): (T_A = +25°C, V_{CC} = 9V, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Resistance	V_{10-12}	I_{10-12} = 100μA	–	3.8	–	kΩ
Collector–Base Voltage (T_1)	V_{13-14}		18	30	–	V
Emitter–Base Voltage (T_2)	V_{1-2}		5	–	–	V

Pin Connection Diagram
(Front View)