

NTE1003 Integrated Circuit FM/AM IF Amplifier

Description:

The NTE1003 monolithic integrated circuit is a high grade FM/AM intermediate frequency amplifier in a 14-Lead DIP type package composed of four individual amplifiers and a voltage regulator.

Features:

- Composed of Four Individual Amplifiers
- Low Power Consumption
- High Gain
- Superior AGC Characteristics

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

Maximum Supply Voltage (Pin14), $V_{CC\text{max}}$ 10V
Maximum Supply Voltage (Pin8, Pin13), V_8, V_{13} 10V
Operating Temperature Range, T_{opr} -20° to $+75^\circ\text{C}$
Storage Temperature range, T_{stg} -40° to $+125^\circ\text{C}$

Recommended Operating Conditions: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Recommended Supply Voltage, V_{CC} 6V

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

Parameter	Symbol	Test Conditions	AM (455kHz)			FM (10.7MHz)			Unit
			Min	Typ	Max	Min	Typ	Max	
Quiescent Current	I_{CCO}		2.4	4.2	6.3	4.5	6.8	9.0	mA
AM Detected Output	V_O	Input 60dB	70	115	160	—	—	—	mV
Total Harmonic Distortion	THD	Input 60dB	—	0.8	2.0	—	—	—	%
Distortion factor at Large Signal	KF2	Input 80dB	—	1.8	3.0	—	—	—	%
Current Drain of Differential Amplifier	I_{13}	Pin13	—	—	—	0.75	1.0	1.35	mA
Regulated Output Voltage	V_2	Pin2	2.7	3.0	3.3	2.7	3.0	3.3	V
Total Gain	VG	AM: 20dB, FM: 50dB	70	—	87	82	—	98	dB

Pin Connection Diagram

