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NTE7067 Integrated Circuit Audio IF Detector for High Quality Multi-Channel TV & VCR

Description:

The NTE7067 is a 4.5MHz to 6.5MHz intercarrier audio IF detector for high-quality multi-channel TV and VCR sound systems. It is designed for use in quasi-parallel configurations to eliminate audio buzz and minimize other side-effects present in conventional detection circuits.

This device includes a 3-stage IF amplifier, IF AGC circuit, and transistor intercarrier audio detection circuit. The NTE7067 operates from a single 8 to 10V power supply and is available in a 9-Lead SIP type package.

Features:

- Compact Package
- Excellent Audio S/N Characteristics
- Coil-less Circuit

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

Maximum Supply Voltage	
V_{CCmax}	12V
V_{3max} ($V_{CC} = 12V$)	12V
Allowable Power Dissipation ($T_A \leq +65^\circ\text{C}$), P_dmax	540mW
Maximum Output Current, I_{6max}	3mA
Operating Temperature Range, T_{opr}	-10° to $+65^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$

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

Recommended Supply Voltage, V_7	9V
Operating Voltage Range, V_{7op}	8 to 10V

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 9\text{V}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	I_7	V_3 (IF AGC) = 4V	17	22	32	mA
Input Sensitivity	V_I	IF input level for $0.35V_{P-P}$ detector output with 40% modulation	34	42	50	dB μ
AGC Range	GR	(Maximum input for $V_O = 0.35V_{P-P}$) - V_i	60	70	-	dB
Maximum Input Level	$V_{i\text{max}}$	IF input level for detector output increase of 1dB	100	200	-	dB μ
Detector Output Amplitude	V_{O6}	4.5MHz output level, P/S = 13dB	90	130	180	mVrms
Audio S/N	S/N	$f_p = 58.75\text{MHz}$, 87.5% staircase modulation, $f_s = 54.25\text{MHz}$, (S: FM $\pm 25\text{kHz}$, $f_m = 400\text{Hz}$ N: Non-modulation) P/S = 13dB	50	56	-	dB

Pin Connection Diagram
(Front View)

