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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, $T_{opr}$ .....	$-10^\circ$ to $+65^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ 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	VI	IF input level for $0.35V_{P-P}$ detector output with 40% modulation	34	42	50	dB $\mu$
AGC Range	GR	(Maximum input for $V_O = 0.35V_{P-P}$ ) - $V_i$	60	70	-	dB
Maximum Input Level	$V_{i,max}$	IF input level for detector output increase of 1dB	100	200	-	dB $\mu$
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)

