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NTE7235 Integrated Circuit AM Tuner & Stereo Decoder for Car Audio

Description:

The NTE7235 is an integrated circuit in a 16-Lead staggered SIP type package designed for use as an AM tuner and stereo decoder in car radio applications.

Function:

- RF Amplifier
- Mixer
- Local OSG
- IF Amplifier
- Detector
- AGC

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

Supply Voltage, V_{CC}	16V
Power Dissipation, P_D	675mW
Derate Above 25°C	5.4mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-30° to $+75^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+150^\circ\text{C}$

Electrical Characteristics: ($V_{CC} = 9V$, $f_S = 1\text{Mhz}$, $f_M = 400\text{Hz}$, Mode = 30%, IF = 455kHz, $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Supply Current	I_{CC}	Pin6 Open	9	13	20	mA	
Recovered Output Voltage	V_{OD}	$V_N = 74\text{dB V}$	65	90	115	mV _{rms}	
Maximum Sensitivity	MS	$V_{OD} = 20\text{mV}_{rms}$	-	9	-	dB V	
Quieting Sensitivity	QS	S/N = 20dB	-	24	30	dB V	
Signal-to-Noise Ratio	S/N	$V_N = 74\text{dB V}$	46.0	52.5	-	dB	
Total Harmonic Distortion	THD	$V_N = 74\text{dB V}$	-	0.3	3.0	%	
		Mod = 80%	-	0.6	-	%	
		$V_N = 120\text{dB V}$	-	0.5	-	%	
Tweet	Tweet	$V_N = 74\text{dB V}$, Max. Point	2IF	-	-37	-	dB
		3IF	-	-50	-	dB	

Electrical Characteristics (Cont'd): ($V_{CC} = 9V$, $f_S = 1MHz$, $f_M = 400Hz$, Mode = 30%, IF = 455kHz, $T_A = +25^\circ C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Pin15 Input Impedance Parallel Input Resistance	R_{ip15}	f – 1000kHz	–	6.6	–	k°
Parallel Input Capacitance	C_{ip15}		–	3	–	pF
Pin13 Output Impedance Parallel Output Resistance	R_{op13}	f – 1000kHz	–	100	–	k°
Parallel Output Capacitance	C_{op13}		–	1.4	–	pF
Pin11 Input Impedance Parallel Input Resistance	R_{ip11}	f – 1000kHz	–	1.1	–	k°
Parallel Input Capacitance	C_{ip11}		–	7.5	–	pF
Pin9 Output Impedance Parallel Output Resistance	R_{op9}	f – 455kHz	–	100	–	k°
Parallel Output Capacitance	C_{op9}		–	3.5	–	pF
Pin7 Input Impedance Parallel Input Resistance	R_{ip7}	f – 455kHz	–	3.5	–	k°
Parallel Input Capacitance	C_{ip7}		–	8.0	–	pF
IF Output Voltage	V_{IF}	$V_N = 34dB V$	–	14	–	mV _{rms}
		$V_N = 74dB V$	–	76	–	mV _{rms}

Pin Connection Diagram
(Front View)



