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NTE1805 Integrated Circuit Recording Video Signal Processing Circuit

Description:

The NTE1805 is an integrated circuit in a 28-Lead DIP type package designed for use in VCR recording video signal processing.

Features:

- Dynamic Emphasis Characteristics: 5.5dB (at f = 1MHz, input level = -20dB)
- Built-In Carrier Interleaving Circuit
- Built-In Low Pass Filter (Sync-Separation Circuit)
- Supply Voltage: $V_{CC} = 5V$

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

Supply Voltage, V_{CC} 6V
 Power Dissipation ($T_A = +70^{\circ}C$), P_D 250mW
 Operating Ambient Temperature Range, T_{opr} -20° to $+70^{\circ}C$
 Storage Temperature Range, T_{stg} -55° to $+150^{\circ}C$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_{20}	Pin12 High (Record)	14.5	-	35.5	mA
		Pin12 Open (Playback)	14.5	-	35.5	mA
AGC Output Amplification	v_8	Pin12 High, Video Input $1V_{P-P}$	0.4	-	0.8	V_{P-P}
AGC Control Sensitivity	Δv_8	Pin12 High, Video Input 0.5 to $2V_{P-P}$	-	-	1.5	dB
Playback Amp Gain	G_{6-8}	Pin12 Open	6.8	-	9.9	dB
12dB Amp Gain	G_{15-16}		10.4	-	13.4	dB
FM Oscillation Frequency	f_o	Pin12 High, $C_O = 39pF$, $R_O = 12k\Omega$	2.9	-	3.9	MHz
FM Output 2 nd High Frequency	$2f_o$		-	-	-33	dB
FM Oscillation Output Amplification	v_{28}		0.65	-	1.35	V_{P-P}
Frequency Control Sensitivity FM Oscillation	β_{28}	Pin12 High, $C_O = 39pF$, $R_O = 8.2$ to $15k\Omega$	11.4	-	14.5	kHz/ μA

Note 1. Operating Supply Voltage Range: $V_{CC} = 4.5V$ to $5.5V$.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Sync Separator Input Sensitivity	S_{19}	Video Input V/S = 5/2	0.45	–	–	V_{P-P}
Sync Separator Output Amplification	v_2	Video Input V/S = 5/2	4.3	–	–	V_{P-P}
NL Limiter Gain	v_{17-21}	Pin12 High	20	–	40	mV_{P-P}
NL Limiter Output Amplification	v_{21}	Pin12 High	26	–	64	mV_{P-P}
		Pin12 High, Pin18 Low	6.0	–	2.6	mV_{P-P}
NC Limiter Gain	v_{14-10}	Pin12 Open	30	–	70	mV_{P-P}
NC Limiter Output Amplification	v_{10}	Pin12 Open	65	–	125	mV_{P-P}
EE Amp Gain	G_{8-10}	Pin12 High	9.7	–	11.6	dB
VV Amp Gain	v_{19-10}	Pin12 Open	1.65	–	2.15	V_{P-P}
Chroma Amp Gain	G_{12-10}		5.3	–	8.8	dB
EE/VV Crosstalk	CT_{19-10}	E □ 4V	–	–	–40	dB
Mute Crosstalk	CT'_{19-10}	Pin12 Low, Pin11 High	–	–	–40	dB
EE/VV Changeover Sensitivity	S_{12}		4	–	–	V
FM Oscillation Carrier Interleave	Δf_o	Pin12 High	5.9	–	9.9	kHz
V Offset	Δv_{19-10}	Pin12 Low	30	–	110	mV

Note 1. Operating Supply Voltage Range: $V_{CC} = 4.5V$ to $5.5V$.

Pin Connection Diagram



