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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°C unless otherwise specified)

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

Electrical Characteristics: (V_{CC} = 5V, T_A = +25°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	υ_8	Pin12 High, Video Input $1V_{P–P}$	0.4	–	0.8	$V_{P–P}$
AGC Control Sensitivity	$\Delta\upsilon_8$	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 = 12kΩ	2.9	–	3.9	MHz
FM Output 2nd High Frequency	$2f_o$		–	–	–33	dB
FM Oscillation Output Amplification	υ_{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 15kΩ	11.4	–	14.5	kHz/μA

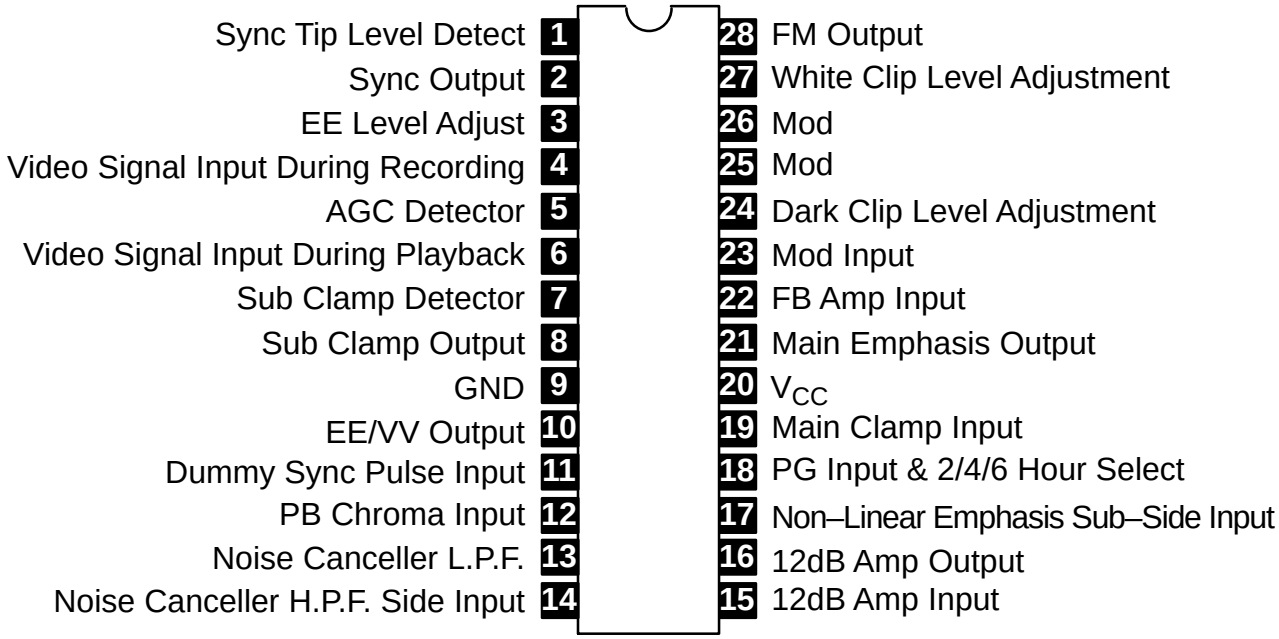
Note 1. Operating Supply Voltage Range: V_{CC} = 4.5V to 5.5V.

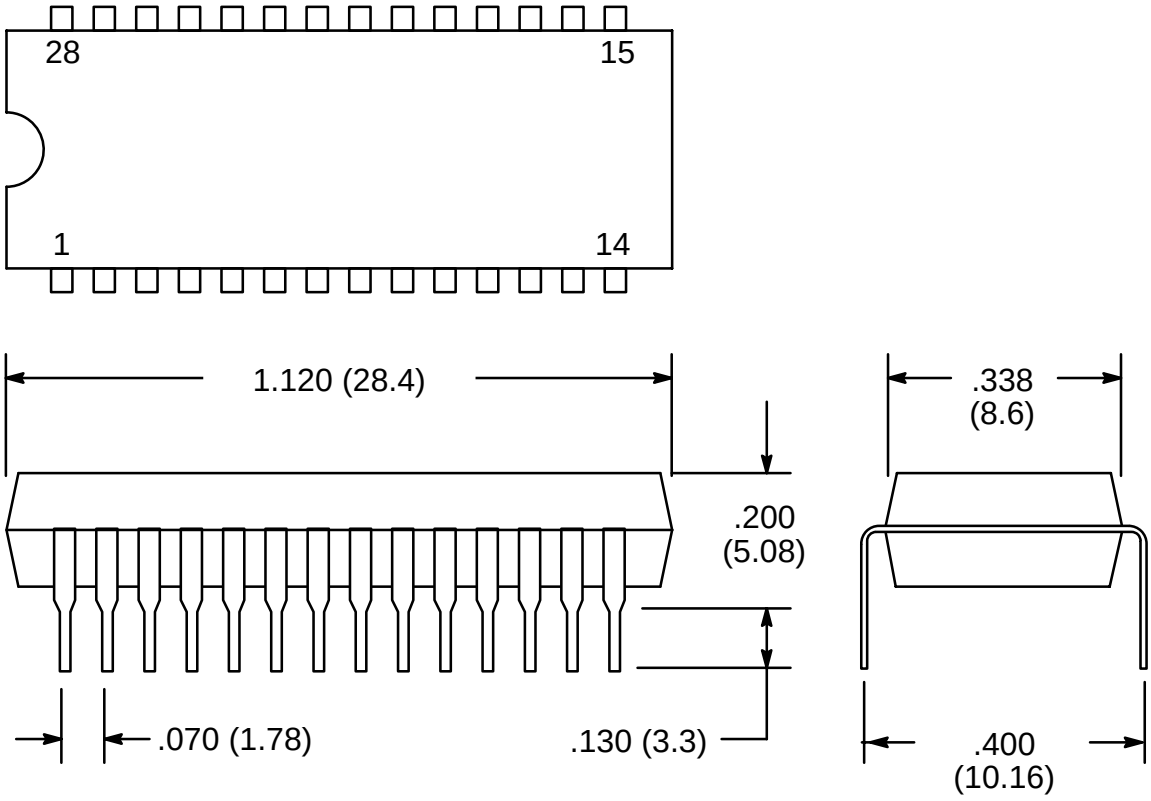
Electrical Characteristics (Cont'd): (V_{CC} = 5V, T_A = +25°C unless otherwise specified)

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	υ_2	Video Input V/S = 5/2	4.3	–	–	V_{P-P}
NL Limiter Gain	υ_{17-21}	Pin12 High	20	–	40	mV_{P-P}
NL Limiter Output Amplification	υ_{21}	Pin12 High	26	–	64	mV_{P-P}
		Pin12 High, Pin18 Low	6.0	–	2.6	mV_{P-P}
NC Limiter Gain	υ_{14-10}	Pin12 Open	30	–	70	mV_{P-P}
NC Limiter Output Amplification	υ_{10}	Pin12 Open	65	–	125	mV_{P-P}
EE Amp Gain	G_{8-10}	Pin12 High	9.7	–	11.6	dB
VV Amp Gain	υ_{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_0	Pin12 High	5.9	–	9.9	kHz
V Offset	$\Delta\upsilon_{19-10}$	Pin12 Low	30	–	110	mV

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

Pin Connection Diagram




28
15
1
14
1.120 (28.4)
.200
(5.08)
.338
(8.6)
.070 (1.78)
.130 (3.3)
.400
(10.16)