



**ELECTRONICS, INC.**  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089

## 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,  $T_{opr}$  .....  $-20^{\circ}$  to  $+70^{\circ}C$   
 Storage Temperature Range,  $T_{stg}$  .....  $-55^{\circ}$  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	$\Delta v_8$	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 <sup>nd</sup> High Frequency	$2f_o$		-	-	-33	dB
FM Oscillation Output Amplification	$v_{28}$		0.65	-	1.35	$V_{P-P}$
Frequency Control Sensitivity FM Oscillation	$\beta_{28}$	Pin12 High, $C_O = 39pF$ , $R_O = 8.2$ to $15k\Omega$	11.4	-	14.5	kHz/ $\mu A$

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	$\Delta f_o$	Pin12 High	5.9	–	9.9	kHz
V Offset	$\Delta v_{19-10}$	Pin12 Low	30	–	110	mV

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

**Pin Connection Diagram**



