

NTE1712 Integrated Circuit Record Video Signal Processor for VCR

Description:

The NTE1712 is an integrated circuit in a 22-Lead DIP type package designed for use in VCR recording video signal processing.

Features:

- Video AGC Circuit
- Pre-Emphasis Circuit
- Dynamic-Emphasis Circuit
- White/Dark Chip
- FM Modulator
- Supply Voltage: 5V

Absolute Maximum Ratings:

Supply Voltage, V_{CC} 6V
 Power Dissipation, P_D 180mW
 Operating Temperature Range, T_{opr} -20° to $+70^{\circ}\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+125^{\circ}\text{C}$

Electrical Characteristics: ($V_{CC} = 5\text{V}$, $T_A = +25^{\circ}\text{C} \pm 2^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_7	$V_{21} = V_{CC}$	7	—	22	mA
AGC Output Amplitude	v_{O22}	Video Input $0.5V_{p-p}$	0.5	—	0.95	V_{p-p}
Sensitivity of AGC Control	Δv_{O22}	Video Input 0.25 to $1.0V_{p-p}$	—	—	2	dB
Video Amplifier Gain	G_{V20-18}		9	—	14	dB
FB Amplifier Gain	$G_{V'20-18}$		16	—	24	dB
PB Amplifier Gain	G_{V1-22}		8	—	15	dB
EE/VV Switching Sensitivity	S_{21}		2.5	—	—	V
Oscillating Frequency for FM Modulator	f_{O11}	$C_O = 39\text{pF}$, $R_O = 13\text{k}\Omega$	2.9	—	3.9	MHz
Warp of FM Modulator Oscillating Output	$D_2 f_{11}$	$C_O = 39\text{pF}$, $R_O = 13\text{k}\Omega$	—	—	-35	dB
Warp of FM Modulator Oscillating Output Second High Frequency	v_{O11}	$C_O = 39\text{pF}$, $R_O = 13\text{k}\Omega$	0.6	—	1.2	V_{p-p}
Sensitivity of FM Modulator Frequency Control	β_{11}	$C_O = 39\text{pF}$, $R_O = 8.2$ to $15\text{k}\Omega$	12	—	19	kHz/ μA

Note 1. Operating Supply Voltage Range: $V_{CC(opr)} = 4.5\text{V}$ to 5.5V

Pin Connection Diagram

PB Video Input	1	22	EE Output
AGC Detector	2	21	Rec/PB Select
Rec Video Input	3	20	Clamp Input
EE Adjust	4	19	GND
H Sync Input	5	18	Video Output
Pulse Timing Delay	6	17	Non-Linear Emph
V _{CC}	7	16	Clamp Input (PB)
FM Modulator	8	15	Main Emph NF Input
FM Modulator	9	14	Main Emph Output
White Clip Adjust	10	13	Dark Clip Adjust
FM Modulator Output	11	12	FM Modulator Input

