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## 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°C  
 Storage Temperature Range,  $T_{stg}$  ..... -40° to +125°C

**Electrical Characteristics:** ( $V_{CC} = 5V$ ,  $T_A = +25°C \pm 2°C$  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 <sub>p-p</sub>	0.5	-	0.95	V <sub>p-p</sub>
Sensitivity of AGC Control	$\Delta v_{O22}$	Video Input 0.25 to 1.0V <sub>p-p</sub>	-	-	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	$f_{O11}$	$C_O = 39pF$ , $R_O = 13k\Omega$	2.9	-	3.9	MHz
Warp of FM Modulator Oscillating Output	$D_2f_{11}$	$C_O = 39pF$ , $R_O = 13k\Omega$	-	-	-35	dB
Warp of FM Modulator Oscillating Output Second High Frequency	$v_{O11}$	$C_O = 39pF$ , $R_O = 13k\Omega$	0.6	-	1.2	V <sub>p-p</sub>
Sensitivity of FM Modulator Frequency Control	$\beta_{11}$	$C_O = 39pF$ , $R_O = 8.2$ to $15k\Omega$	12	-	19	kHz/ $\mu A$

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

### Pin Connection Diagram

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

