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NTE1422

Integrated Circuit

Playback Video Signal Processor for VCR

Features:

- Drop-out Compensation Circuit
- FM Demodulator
- Noise Canceller Circuit
- Mixer Amplifier Circuit
- Limiter Circuit
- Double Limiter Circuit Can Be Used
- Supply Voltage, Either 9V or 12V

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

Supply Voltage, $V_{3-15,28}$, $V_{21-15,28}$ 14.4V
Power Dissipation, P_D 1.4W
Operating Temperature Range, T_{opg} -20° to $+70^\circ\text{C}$
Storage Temperature Range, T_{stg} -40° to $+150^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$, $V_{CC(\text{opr})} = 8.8\text{V}$ to 13V unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	I_1		60	–	104	mA
Voltage Gain (RF Amp)	G_{V7-10}	$f = 4\text{MHz}$, $V_i = 0.5V_{p-p}$	3.3	–	6.3	dB
Voltage Gain (DOC Amp)	G_{V12-10}	$f = 4\text{MHz}$, $V_i = 0.2V_{p-p}$	9	–	12	dB
Sensitivity DOC Detect ON	$S_{(1)}$	$0\text{dB} = 0.5V_{p-p}$	–25.5	–	–	dB
DOC Detect OFF	$S_{(2)}$		–	–	–17	dB
Sensitivity (Demod Det)	$S_{(3)}$	$f = 3.5\text{MHz}$ to 4.5MHz	270	–	450	mV/MHz
Demod Det	$f_{(\text{lim})}$	$C = 27\text{pF}$, $V_i = 0.7V_{p-p}$	6	–	–	MHz
Carrier Leak (Demod Det)	CL	$f = 4\text{MHz}$, $V_i = 0.7V_{p-p}$	–	–	–25	dB
Voltage Gain Video Amp Color	G_{V25-2}	$f = 100\text{kHz}$, $V_i = 0.5V_{p-p}$	11	–	14	dB
Video Amp B/W	G_{V22-2}	$f = 100\text{kHz}$, $V_i = 0.4V_{p-p}$	12.5	–	15.5	dB
Amplitude (High-Pass Amp Out)	v	$f = 3\text{MHz}$, $V_i = 0.5V_{p-p}$	0.25	–	0.6	V_{p-p}
Voltage Gain (High-Pass Amp)	G_{V25-20}	$f = 3\text{MHz}$, $V_i = 10\text{mV}_{p-p}$	16	–	22	dB
Voltage Gain (Chroma Amp)	G_{V29-2}	$f = 3\text{MHz}$, $V_i = 0.3V_{p-p}$	10.5	–	13.5	dB

Electrical Characteristics (Cont'd): ($T_A = +25^{\circ}\text{C}$, $V_{CC} = 12\text{V}$, $V_{CC(\text{opr})} = 8.8\text{V}$ to 13V unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Voltage Gain (E-E Amp)	G_{V4-2}	$f = 100\text{kHz}$, $V_i = 0.5V_{p-p}$	11	–	14	dB
Sensitivity (E-E/V-VSW) (1)	$S_{(4)}$		–	–	4	V
(2)	$S_{(5)}$		10	–	–	V
Sensitivity (Color/BW SW)	$S_{(6)}$		–	–	1	V
Sensitivity (Muting)	$S_{(7)}$		–	–	1.5	V
Crosstalk Color/BW	$CT_{(1)}$	$f = 3\text{MHz}$, $V_i = 0.5V_{p-p}$	–	–	–40	dB
Muting	$CT_{(2)}$		–	–	–40	dB
E-E/V-V	$CT_{(3)}$		–	–	–40	dB
2nd Harmonic Distortion	D_{2f}		–	–	–40	dB

Pin Connection Diagram



