

NTE714 Integrated Circuit Chroma Subcarrier Regeneration

Features:

- DC Hue Control
- Phase Locked Oscillator
- Keyed APC and ACC Detector
- Internal Shunt Voltage Regulator
- 16-Pin Dual In-Line Plastic Package

Absolute Maximum Ratings:

Operating Temperature Range, T_A -40°C to $+85^{\circ}\text{C}$

Storage Temperature Range, T_S -65°C to $+150^{\circ}\text{C}$

Maximum Voltage and Current Ratings ($T_A = +25^{\circ}\text{C}$) See Table

Pin #	Voltage Range in Volts	Current in mA	
		Input	Output
1	0 to +10	20	1.0
2	0 to +16	—	—
3	0 to +16	—	—
4	6.0 to 0 (Note 1)	20	1.0
5	reference	1.0	50
6	0 to +5.0	—	—
7	0 to V_{REG}	—	—
8	0 to V_{REG}	—	—
9	No Connection	—	—
10	Note 2	50	1.0
11	0 to V_{REG}	—	—
12	0 to V_{REG}	—	—
13	0 to V_{REG}	20	1.0
14	0 to V_{REG}	20	1.0
15	0 to +16	—	—
16	0 to -16	—	—

Note 1. Limited by input current

Note 2. Dependent on value of external current limiting resistor, 0 to 11V at 0Ω

Static Electrical Characteristics: ($T_A = +25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Test Pins	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Regulator Voltage	10	$I_{CC} = 25\text{mA}$	11.3	–	12.9	V
Oscillator Current	2 to 3	Sw1: Low; Sw2: High	4.1	–	7.6	mA
ACC Leakage	15 to 16	Sw1: High; Sw2: Low, Ref Pin10	–	5	30	mV
APC Leakage	11 to 12	Sw1: High; Sw2: Low, Ref Pin10	–	40	80	mV
ACC Balance	15 to 16	Sw1: High; Sw2: High, Pin16 = –DVM	–330	–	+300	mV
APC Balance	11 to 12	Sw1: High; Sw2: High, Pin12 = –DVM	–375	–	+375	mV
Oscillator Balance	7 to 8	Sw1: High; Sw2: Low, Pin8 = –DVM	–330	–	+330	mV
Dynamic Characteristics						
Frequency Pull-In Range	11 to 12	Burst = $0.4V_{P-P}$ Note 1	+200	–	–	Hz
Subcarrier Output Level and Hue Control	3 to 2	R1: High, Pin2 = DVM	+350	–	–	mV
		R1: Low, Pin2 = DVM	–350	–	–	mV
ACC Output Level	15 to 16	Burst = $0.4V_{P-P}$ Note 2	120	150	–	mV
Free Running Oscillator Frequency	2 or 3	Snort Pin11 to Pin12	3.579 245	–	3.579 845	MHz

Note 1. Limited by input current

Note 2. Dependent on value of external current limiting resistor, 0 to 11V at 0Ω **Pin Connection Diagram**