



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

NTE7058

Integrated Circuit

Single Chip TV NTSC System

Description:

The NTE7058 combines all the functions required for an NTSC color TV system in a 64-Lead DIP type plastic package. This device is designed to offer a wide capability of applications from fundamental CTV to high-end MPX CTV with a quasi-parallel SIF system, requiring minimal external parts and adjustments. A quasi-parallel SIF system assures buzz-free sound reproduction.

Features:

PIF Section

- 3-Stage Variable Gain PIF Amplifier
- High-Speed Peak AGC with Dual Time Constants
- Single-End AFT Output with Defeat Function
- Delayed RF AGC Output (Reverse AGC)
- Sync Positive-Detected Video Output Polarity
- Internal Black/White Noise Inverter

Quasi-Parallel Intercarrier Detector

- 3-Stage Variable Gain Intercarrier IF Amplifier
- Independent Peak AGC
- Intercarrier Detector with 90° Carrier Shift

SIF Section

- 3-Stage Limiter Amplifier
- Differential Peak Detector
- Separated Detector Output and Electronic Attenuator Input for Multiplex TV Sound Reception
- Excellent Electronic Attenuator
- Preamplifier with NF Terminal

Video Section

- 2nd Order Picture Sharpness (DC Control)
- Contrast Control with Unicolor Function
- Brightness Control with Pedestal Clamping Circuit (Adjustable DC Restoration Ratio)
- Internal Vertical Blanking

Features (Cont'd):

Chroma Section

- ACC Circuit
- Color Control Circuit
- Unicolor Control Circuit
- Adjustment-Free APC Circuit
- Tint Control Circuit with Sync Pulse Output
- Color Differential Outputs

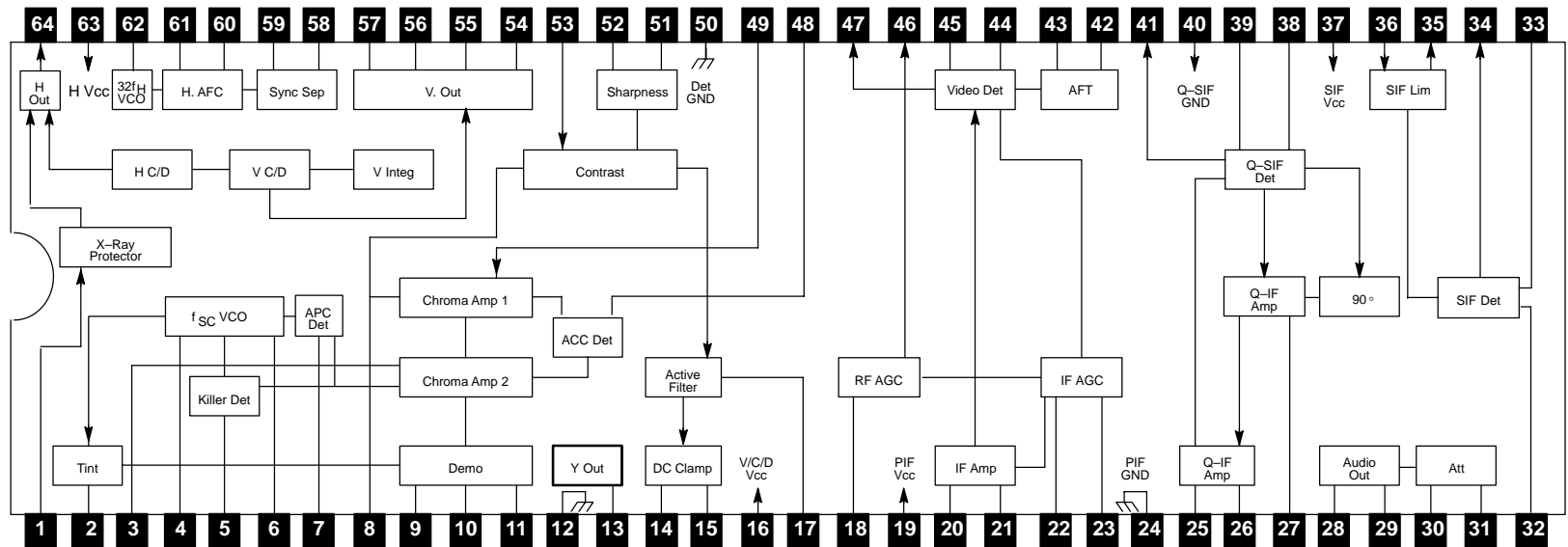
Deflection Section

- Excellent Sync Separator
- Adjustment-Free Countdown System
- Stable Vertical Synchronization
- Sawtooth-Type AFC
- Horizontal Predriver
- X-Ray Protector
- Vertical Drive Amplifier

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

Power Supply Voltage, V_{CC}	12V
Input Signal Voltage, e_{in}	5V _{P-P}
RF AGC Voltage, $V_{RF\ AGC}$	15V
Horizontal Section Supply Voltage, V_{CCH}	12V
Power Dissipation, P_D	2660mW
Derate Above $T_A = +25^\circ\text{C}$	21.2mW/ $^\circ\text{C}$
Operating Temperature Range, T_{opr}	-20° to +65°C
Storage Temperature Range, T_{stg}	-55° to +150°C

Block Diagram



Pin Connection Diagram

<p>X-Ray Protect 1</p> <p>Tint Control 2</p> <p>Color Control 3</p> <p>f_{SC} VCO 4</p> <p>Killer Filter 5</p> <p>f_{SC} VCO 6</p> <p>APC Filter 7</p> <p>Contrast Control 8</p> <p>R-Y Output 9</p> <p>G-Y Output 10</p> <p>B-Y Output 11</p> <p>GND 12</p> <p>-Y Output 13</p> <p>Pedestal Clamp 14</p> <p>Brightness 15</p> <p>9V V_{CC} V/C/D Bypass 16</p> <p>RF AGC Delay 17</p> <p>9V V_{CC} PIF 18</p> <p>PIF Input 19</p> <p>PIF Input 20</p> <p>PIF Input 21</p> <p>PIF AGC Time Constant 22</p> <p>PIF AGC Time Constant 23</p> <p>GND 24</p> <p>QIF Input 25</p> <p>QIF Input 26</p> <p>QIF AGC Time Constant 27</p> <p>Preamp Output 28</p> <p>NFB 29</p> <p>Volume Control 30</p> <p>Audio Input 31</p> <p>FM Detector Tank 32</p>	<p>64 Horizontal Driver Output</p> <p>63 H V_{CC}</p> <p>62 32 f_H OSC</p> <p>61 H AFC Time Constant</p> <p>60 Flyback Pulse Input</p> <p>59 Sync Sep Input</p> <p>58 Sync Sep Time Constant (Filter)</p> <p>57 Vertical NFB</p> <p>56 Vertical Size</p> <p>55 Vertical Ramp</p> <p>54 Vertical Output</p> <p>53 Video Input</p> <p>52 Differential Input</p> <p>51 Picture Sharpness</p> <p>50 GND</p> <p>49 Chroma Input</p> <p>48 ACC Filter</p> <p>47 Video Output</p> <p>46 RF AGC Output</p> <p>45 Video Detector Tank</p> <p>44 Video Detector Tank</p> <p>43 AFT Tank/Defeat</p> <p>42 AFT Output</p> <p>41 4.5MHz Output</p> <p>40 GND</p> <p>39 I/C Detector</p> <p>38 I/C Detector</p> <p>37 9V V_{CC} Q-SIF</p> <p>36 SIF Input</p> <p>35 SIF Bias</p> <p>34 Detector Output</p> <p>33 FM Detector Tank</p>
--	---

