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## **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**

- 2<sup>nd</sup> 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

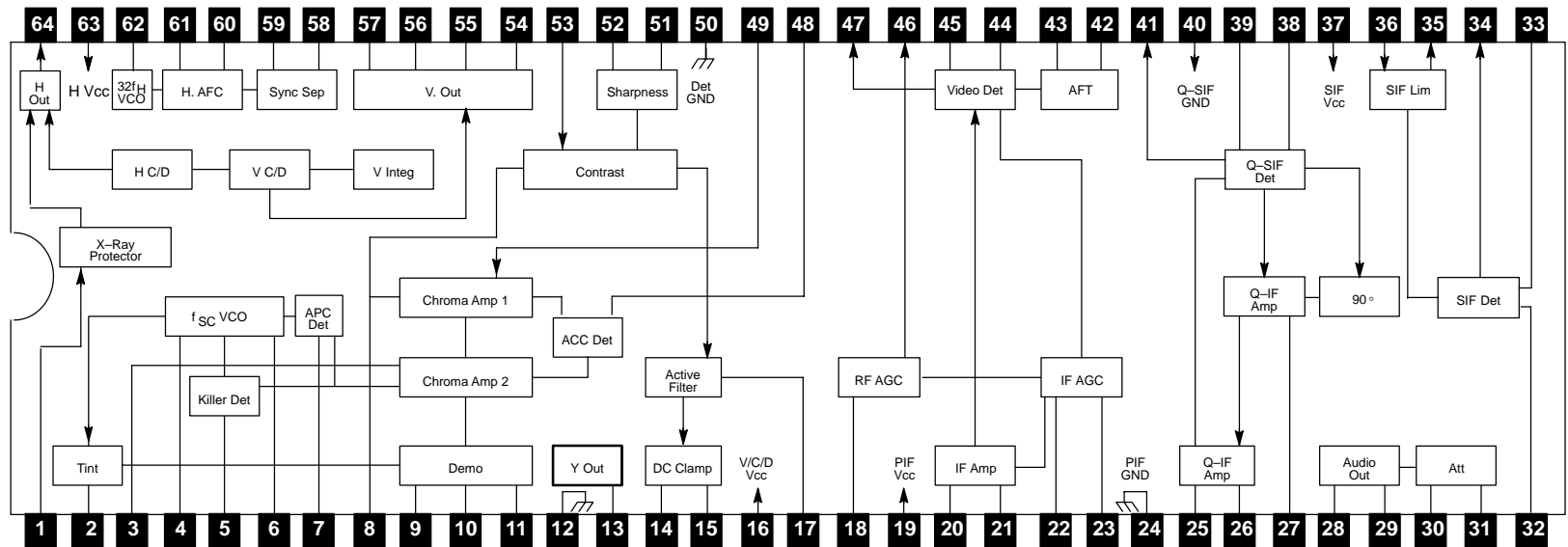
**Deflection Section**

- 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 <sub>P-P</sub>
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

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

