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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

- 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

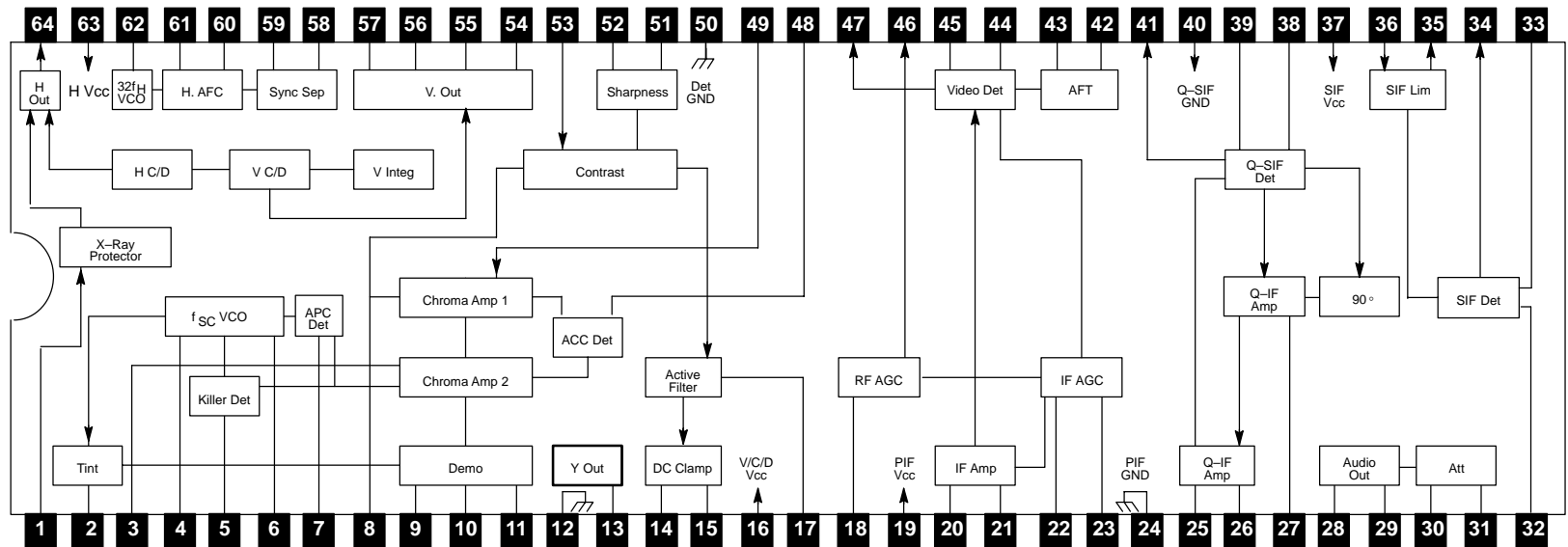
Deflection Section

- 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

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

