

To all our customers

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## **Regarding the change of names mentioned in the document, such as Mitsubishi Electric and Mitsubishi XX, to Renesas Technology Corp.**

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The semiconductor operations of Hitachi and Mitsubishi Electric were transferred to Renesas Technology Corporation on April 1st 2003. These operations include microcomputer, logic, analog and discrete devices, and memory chips other than DRAMs (flash memory, SRAMs etc.) Accordingly, although Mitsubishi Electric, Mitsubishi Electric Corporation, Mitsubishi Semiconductors, and other Mitsubishi brand names are mentioned in the document, these names have in fact all been changed to Renesas Technology Corp. Thank you for your understanding. Except for our corporate trademark, logo and corporate statement, no changes whatsoever have been made to the contents of the document, and these changes do not constitute any alteration to the contents of the document itself.

Note : Mitsubishi Electric will continue the business operations of high frequency & optical devices and power devices.

Renesas Technology Corp.  
Customer Support Dept.  
April 1, 2003

## DESCRIPTION

The M52770ASP is a single chip CTV processor which has VIF/SIF, luminance, chrominance, mono sound, OSD display, RGB interface, and deflection.

And it is possible to control each parameters by I<sup>2</sup>C bus. A baseband 1H delay line is built-in, and conjunction with SECAM decoder M52325AP simplifies multi system CTV chassis.

## FEATURES

- Built-in 1H Delay Line using Bi-CMOS technology
- Multistandard PLL demodulator for IF
- Alignment - free sound demodulator
- Flexible source selection with internal CVBS and external CVBS or Y/C input signal
- Audio switch integrated
- Integrated chroma trap and bandpass filters with auto-calibration
- Luminance delay line integrated
- RGB control circuit with cut-off and drive
- Linear RGB inputs and fast blanking
- Horizontal synchronaization with two control loops and alignment-free H-oscillator
- Vertical count-down circuit
- Vertical saw tooth generator integrated
- I<sup>2</sup>C Bus control of various functions
- Easy interfacing with SECAM decoder for multistandard applications
- Small amount of peripheral components

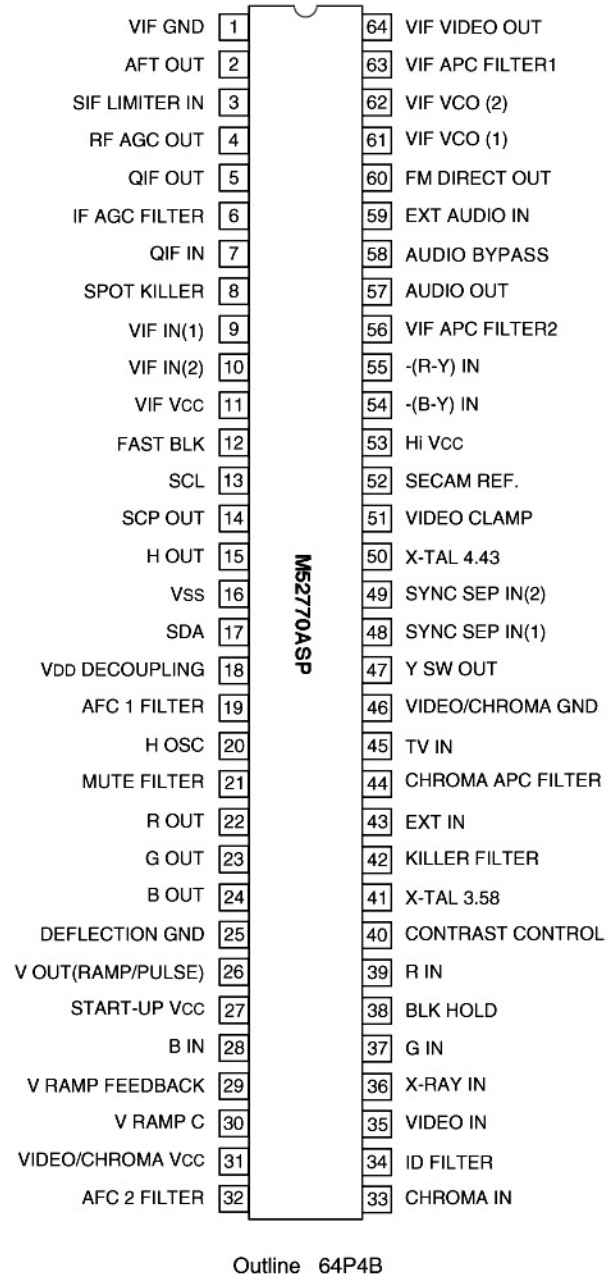
## APPLICATION

NTSC/PAL TELEVISION

## QUICK REFERENCE DATA

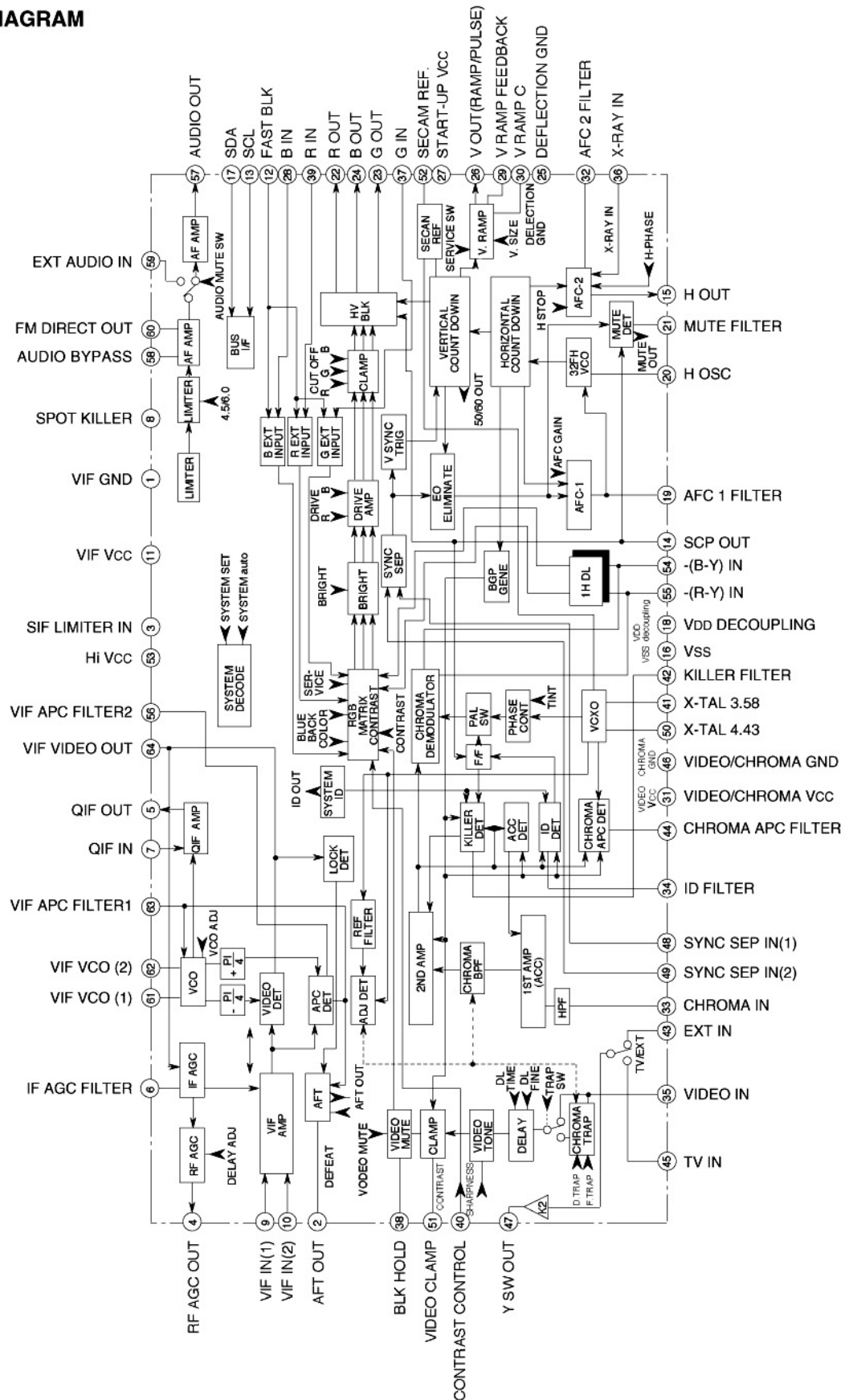
- Supply voltage pin11(VIF), pin31(video/chroma)..... 5.0V  
pin27(Start-up), pin53(Output Stage)..... 9.0V
- Supply current pin11 and pin31..... 107mA  
pin27 and pin53..... 56mA
- Input signals VIF input sensitivity..... 47dBμ  
SIF limiting sensitivity..... 40dBμ  
External audio input..... 1V<sub>P-P</sub>  
External CVBS/Y inputs..... 1V<sub>P-P</sub>  
External chroma input (burst amplitude)..... 0.3V<sub>P-P</sub>  
External RGB inputs..... 0.7V<sub>P-P</sub>  
Fast blanking Internal TV..... 0 to 0.8V  
External RGB..... 1.2 to 3.3V  
Harf Tone..... 3.7 to 5V  
-(R-Y) input..... 1.05V<sub>P-P</sub>  
-(B-Y) input..... 1.33V<sub>P-P</sub>

## PIN CONFIGURATION (TOP VIEW)



- Output signals VIF CVBS det out..... 2.2V<sub>P-P</sub>  
RF AGC output range..... 0.3 to 8.7V  
Video switch out..... 2.1V<sub>P-P</sub>  
RGB output Pedestal voltage..... 2.2V  
amplitude..... 4.2V<sub>P-P</sub>  
Horizontal output amplitude..... 4.0V<sub>P-P</sub>  
Vertical ramp amplitude..... 2.0V<sub>P-P</sub>

BLOCK DIAGRAM



### ABSOLUTE MAXIMUM RATINGS

| Symbol           | Parameter             | Ratings     | Unit  |
|------------------|-----------------------|-------------|-------|
| V <sub>cc</sub>  | Supply voltage        | 0.0, 10.0   | V     |
| P <sub>d</sub>   | Power dissipation     | 1815        | mW    |
| K <sub>θ</sub>   | Thermal derating      | 14.52       | mW/°C |
| T <sub>opr</sub> | Operating temperature | -20 to +70  | °C    |
| T <sub>stg</sub> | Storage temperature   | -40 to +125 | °C    |

### TYPICAL CHARACTERISTICS

