To all our customers

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

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

M52771ASP

PRELIMINARY

Notice:This is not a final specification.
Some parametric limits are subject to change.

NTSC/PAL TV SIGNAL PROCESSOR

DESCRIPTION

The M52771ASP 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 I²C 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
I²C Bus control of various functions
Easy interfacing with SECAM decoder for multistandard applications
Small amount of peripheral components
52 pin shrink DIP

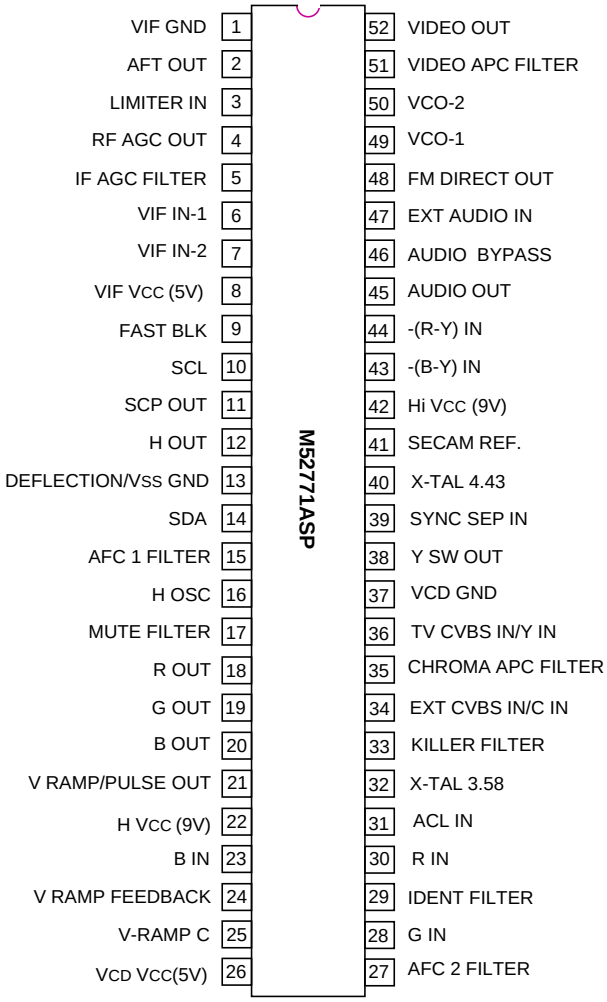
APPLICATION

NTSC/PAL TELEVISION

QUICK REFERENCE DATA

Supply voltage	pin8(VIF), pin26(video/chroma)	5.0V
	pin22(Start-up), pin42(Output Stage)	9.0V
Supply current	pin8 and pin26	107mA
	pin22 and pin42	56mA
Input signals	VIF input sensitivity	47dBμ
	SIF limiting sensitivity	40dBμ
	External audio input	1Vp-p
	External CVBS/Y inputs	1Vp-p
	External chroma input (burst amplitude)	0.3Vp-p
	External RGB inputs	0.7Vp-p
	Fast blanking Internal TV	0 to 0.8V
	External RGB	1.2 to 3.3V
	Harf Tone	3.7 to 5V
	-(R-Y) input	1.05Vp-p
	-(B-Y) input	1.33Vp-p
Output signals	VIF CVBS det out	2.2Vp-p
	RF AGC output range	0.3 to 8.7V
	Video switch out	2.1Vp-p
	RGB output Pedestal voltage	2.2V
	amplitude	4.2Vp-p
	Horizontal output amplitude	4.0Vp-p
	Vertical ramp amplitude	2.0Vp-p

PIN CONFIGURATION (TOP VIEW)



Outline 52P4B

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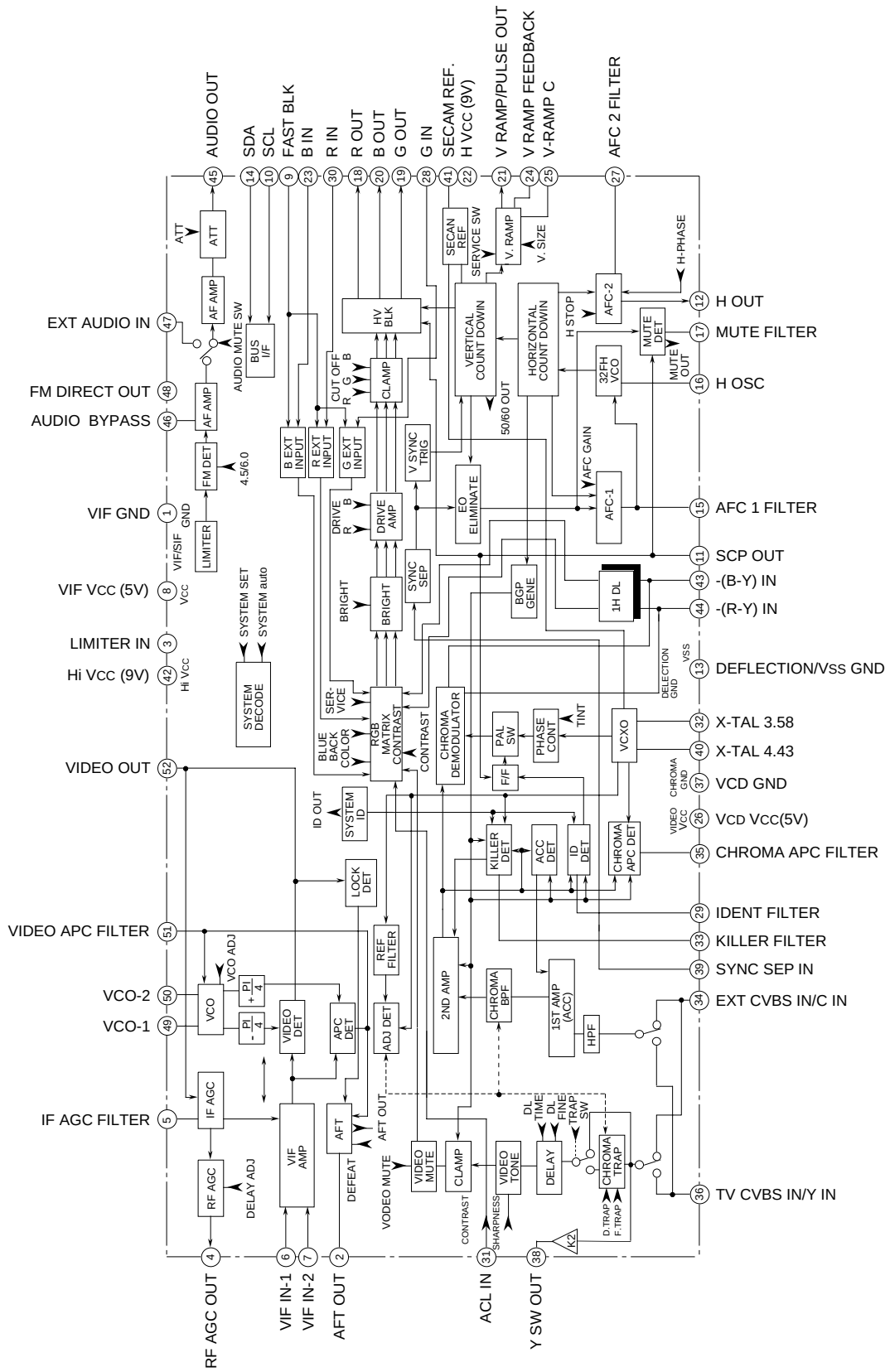
NTSC/PAL TV SIGNAL PROCESSOR

BLOCK DIAGRAM



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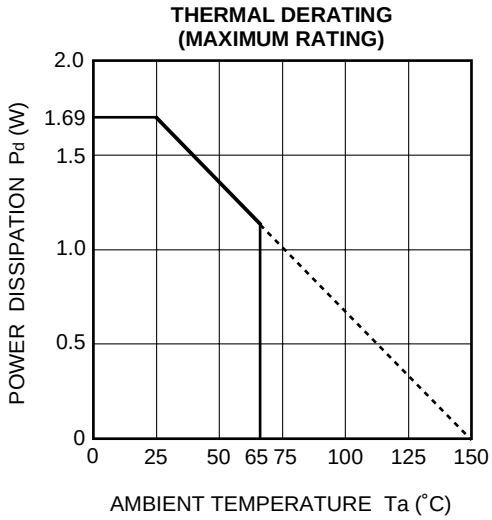
NTSC/PAL TV SIGNAL PROCESSOR

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Ratings	Unit
V_{CC}	Supply voltage	6.0, 10.0	V
P_d	Power dissipation	1690	mW
K	Thermal derating	15	mW/˚C
T_{opr}	Operating temperature	-20 to +65	˚C
T_{stg}	Storage temperature	-40 to +125	˚C

TYPICAL CHARACTERISTICS



SUPPLY VOLTAGE AND GND TERMINALS LIST

Supply Voltage Terminals	Supplying Blocks
8 (5V)	VIF/SIF/AF
22 (9V)	Start up V_{CC} DEFLECTION / CMOS
42 (9V)	VIF(9V operation part), RGB Drive
26 (5V)	VIDEO / CHROMA RGB 1HDL (analog)

GND Terminals	Blocks
1	VIF/SIF/AF
25	DEFLECTION / CMOS
37	VIDEO/CHROMA RGB 1HDL (analog)

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NTSC/PAL TV SIGNAL PROCESSOR

APPLICATION EXAMPLE