

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

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 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 synchronization 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

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.....47dB_P
SIF limiting sensitivity.....40dB_P
External audio input.....1V_{P-P}
External CVBS/Y inputs.....1V_{P-P}
External chroma input (burst amplitude).....0.3V_{P-P}
External RGB inputs.....0.7V_{P-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.....1.05V_{P-P}
-(B-Y) input.....1.33V_{P-P}

P

PIN CONFIGURATION (TOP VIEW)

VIF GND	1	64	VIF VIDEO OUT
AFT OUT	2	63	VIF APC FILTER1
SIF LIMITER IN	3	62	VIF VCO (2)
RF AGC OUT	4	61	VIF VCO (1)
QIF OUT	5	60	FM DIRECT OUT
IF AGC FILTER	6	59	EXT AUDIO IN
QIF IN	7	58	AUDIO BYPASS
SPOT KILLER	8	57	AUDIO OUT
VIF IN(1)	9	56	VIF APC FILTER2
VIF IN(2)	10	55	-(R-Y) IN
VIF VCC	11	54	-(B-Y) IN
FAST BLK	12	53	Hi VCC
SCL	13	52	SECAM REF.
SCP OUT	14	51	VIDEO CLAMP
H OUT	15	50	X-TAL 4.43
VSS	16	49	SYNC SEP IN(2)
SDA	17	48	SYNC SEP IN(1)
VDD DECOUPLING	18	47	Y SW OUT
AFC 1 FILTER	19	46	VIDEO/CHROMA GND
H OSC	20	45	TV IN
MUTE FILTER	21	44	CHROMA APC FILTER
R OUT	22	43	EXT IN
G OUT	23	42	KILLER FILTER
B OUT	24	41	X-TAL 3.58
DEFLECTION GND	25	40	CONTRAST CONTROL
V OUT(RAMP/PULSE)	26	39	R IN
START-UP VCC	27	38	BLK HOLD
B IN	28	37	G IN
V RAMP FEEDBACK	29	36	X-RAY IN
V RAMP C	30	35	VIDEO IN
VIDEO/CHROMA VCC	31	34	ID FILTER
AFC 2 FILTER	32	33	CHROMA IN

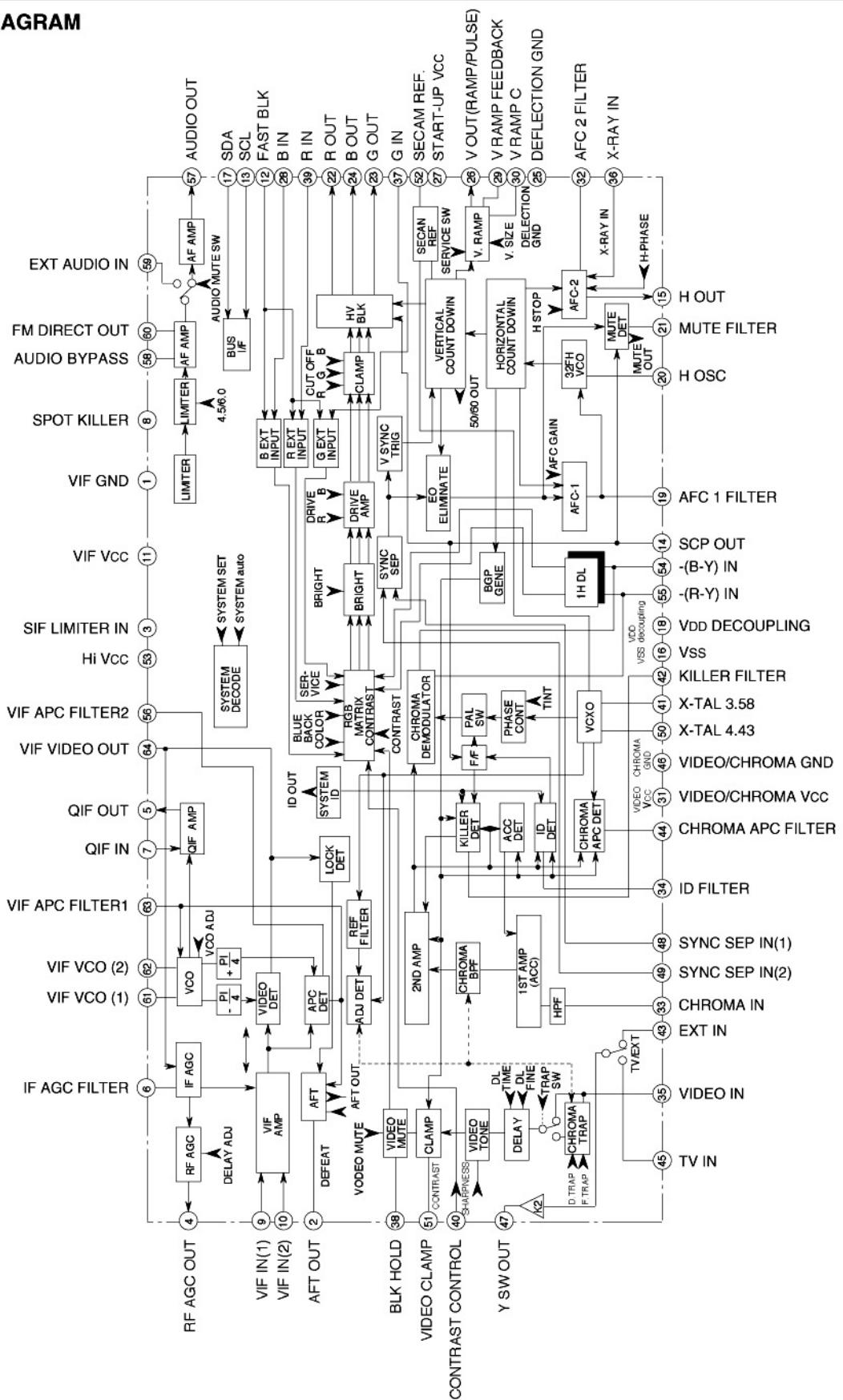
M52770ASP

Outline 64P4B

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

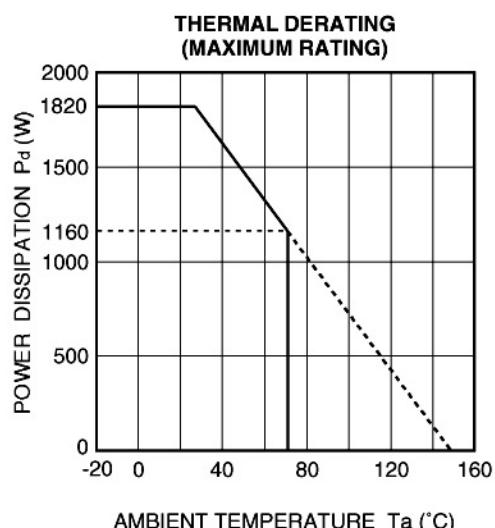
NTSC/PAL TV SIGNAL PROCESSOR

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Ratings	Unit
V _{CC}	Supply voltage	0.0, 10.0	V
P _d	Power dissipation	1815	mW
K _θ	Thermal derating	14.52	mW/°C
T _{opr}	Operating temperature	-20 to +70	°C
T _{stg}	Storage temperature	-40 to +125	°C

TYPICAL CHARACTERISTICS

APPLICATION EXAMPLE

