

M52770ASP

NTSC/PAL TV Signal Processor

REJ03F0182-0201
Rev.2.01
Mar 31, 2008

Description

The M52770ASP is a single chip CTV processor with 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

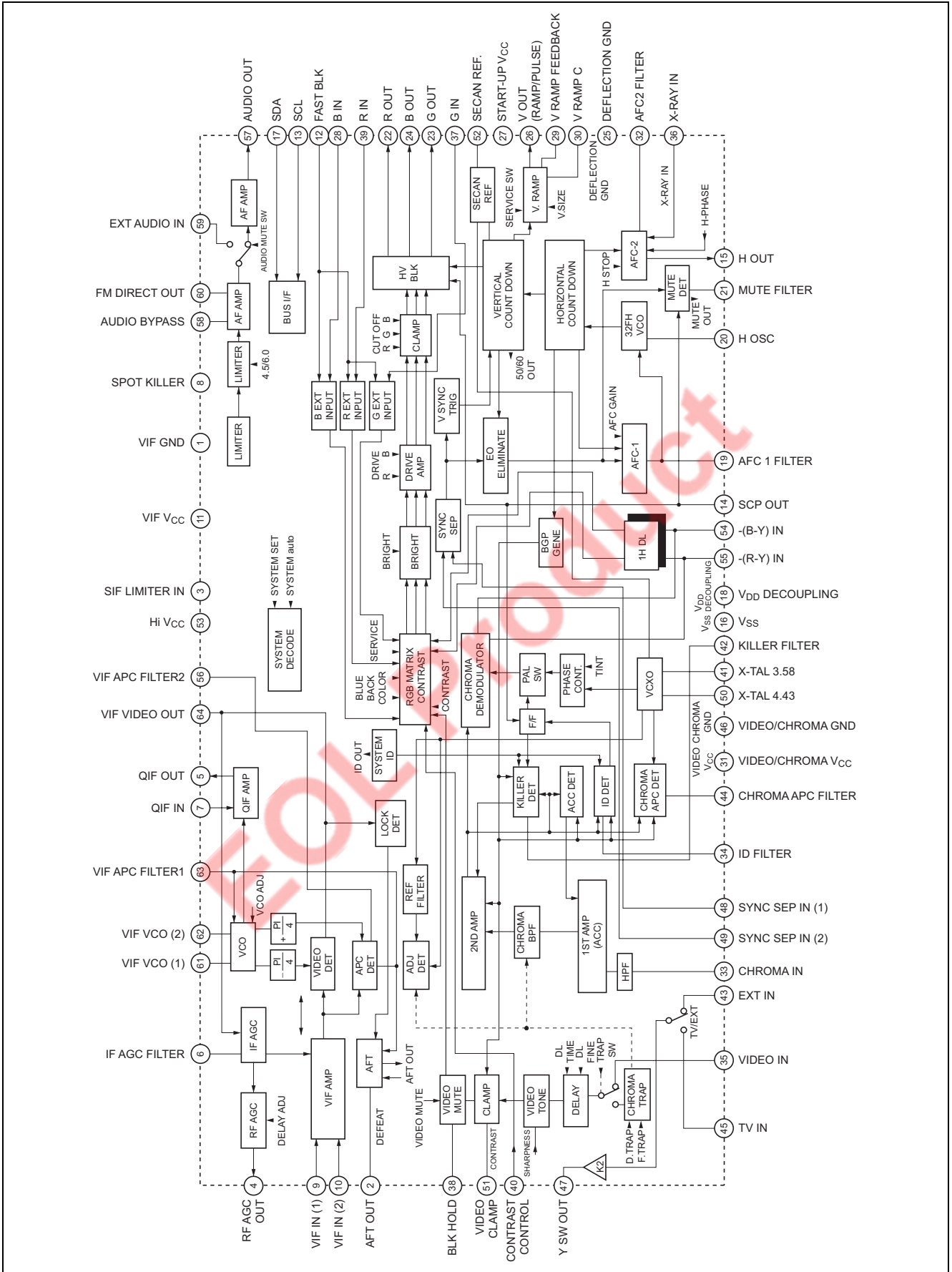
NTSC/PAL Television

Quick Reference Data

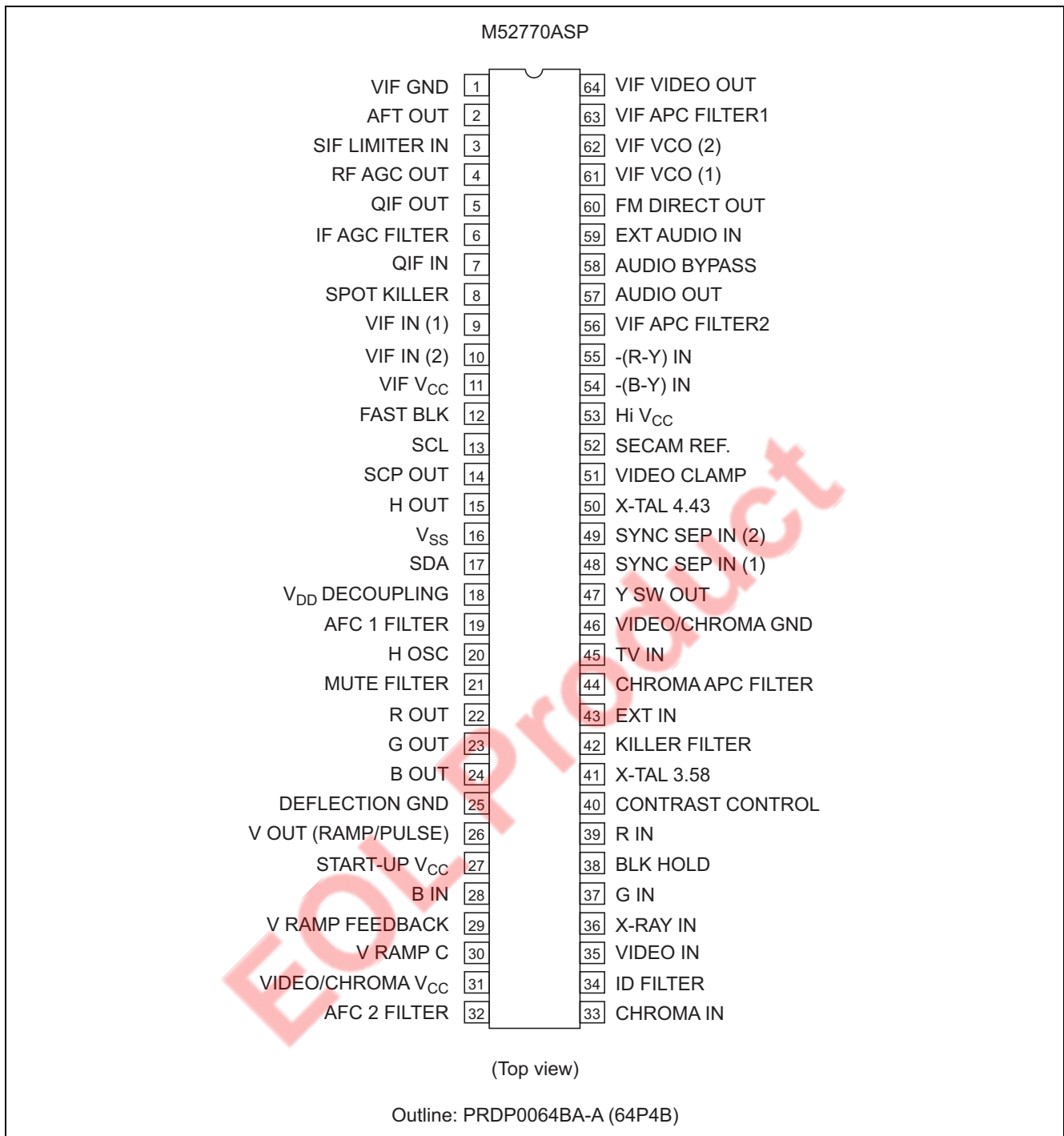
• Supply voltage	pin11 (VIF), pin31 (video/chroma)	5.0 V	
	pin27 (Start-up), pin53 (Output Stage)	9.0 V	
• Supply current	pin11 and pin31	107 mA	
	pin27 and pin53	56 mA	
• Input signals	VIF input sensitivity	47 dB μ	
	SIF limiting sensitivity	40 dB μ	
	External audio input	1 Vp-p	
	External CVBS/Y inputs	1 Vp-p	
	External chroma input (burst amplitude)	0.3 Vp-p	
	External RGB inputs	0.7 Vp-p	
	Fast blanking	Internal TV	0 to 0.8 V
		External RGB	1.2 to 3.3 V
		Half Tone	3.7 to 5 V
	- (R-Y) input	1.05 Vp-p	
	- (B-Y) input	1.33 Vp-p	
	• Output signals	VIF CVBS det out	2.2 Vp-p
		RF AGC output range	0.3 to 8.7 V
		Video switch out	2.1 Vp-p
RGB output		Pedestal voltage	2.2 V
		amplitude	4.2 Vp-p
Horizontal output amplitude		4.0 Vp-p	
Vertical ramp amplitude		2.0 Vp-p	

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Block Diagram

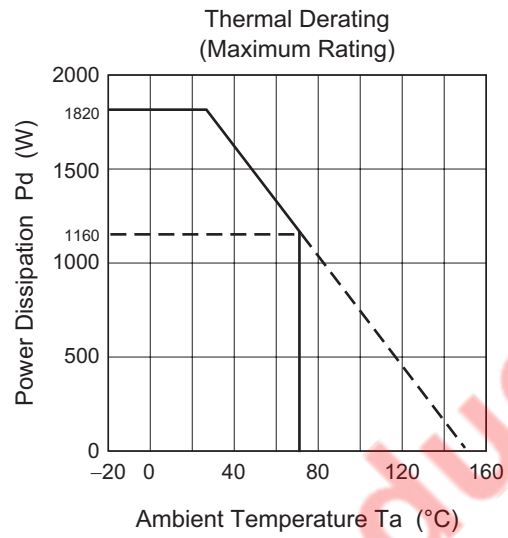


Pin Arrangement



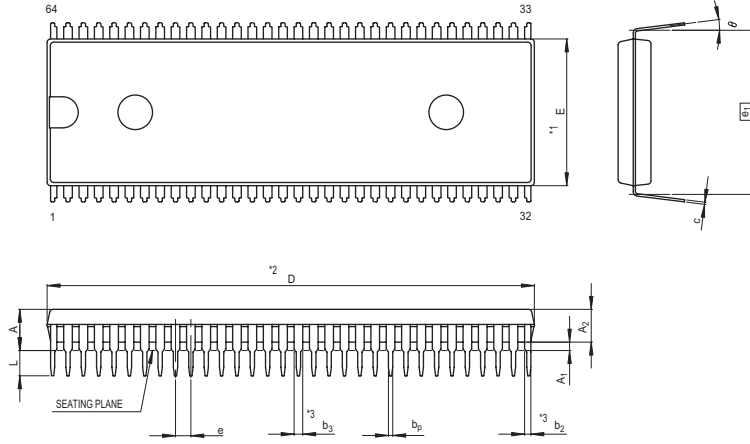
Absolute Maximum Ratings

Item	Symbol	Ratings	Unit
Supply voltage	V_{CC}	0.0, 10.0	V
Power dissipation	P_d	1815	mW
Thermal derating	$K\theta$	14.52	mW/°C
Operating temperature	T_{opr}	-20 to +70	°C
Storage temperature	T_{stg}	-40 to +125	°C



Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
P-SDIP64-17x56.4-1.78	PRDP0064BA-A	64P4B	7.9g



NOTE)
 1. DIMENSIONS $^1 E$ AND $^2 D$ DO NOT INCLUDE MOLD FLASH.
 2. DIMENSION $^3 b_3$ DOES NOT INCLUDE TRIM OFFSET.

Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
E_1	18.75	19.05	19.35
D	56.2	56.4	56.6
E	16.85	17.0	17.15
A	—	—	5.08
A ₁	0.38	—	—
A ₂	—	3.8	—
b _p	0.4	0.5	0.6
b ₂	0.65	0.75	1.05
b ₃	0.9	1.0	1.3
c	0.2	0.25	0.32
θ	0°	—	15°
e	1.528	1.778	2.028
L	2.8	—	—

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Notes:

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