M52771ASP

NTSC/PAL TV Signal Processor

REJ03F0183-0201
Rev.2.01
Mar 31, 2008

Description

The M52771ASP 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 I^2C 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
- I^2C Bus control of various functions
- Easy interfacing with SECAM decoder for multistandard applications
- Small amount of peripheral components
- 52 pin shrink DIP

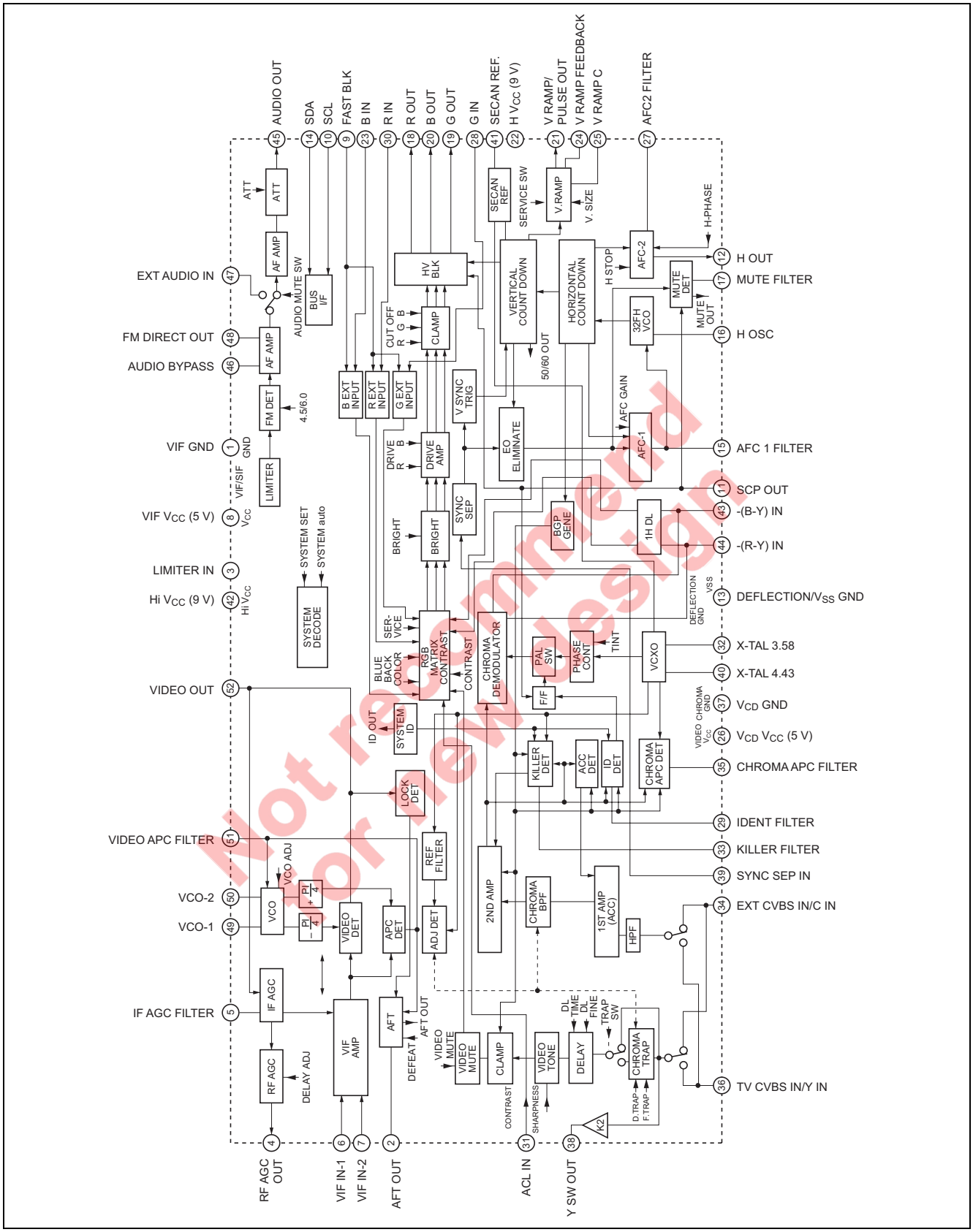
Application

NTSC/PAL Television

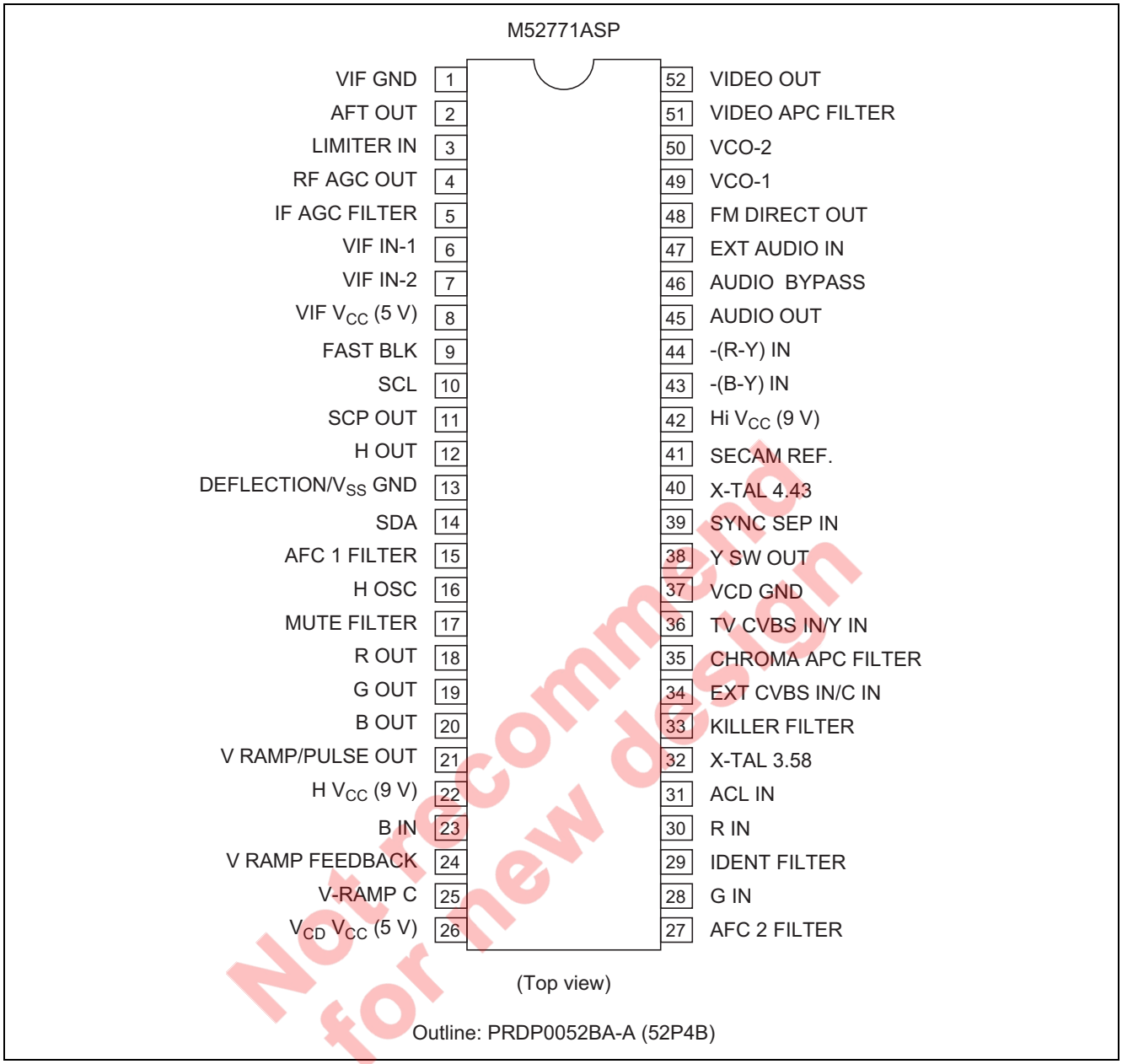
Quick Reference Data

• Supply voltage	pin8 (VIF), pin26 (video/chroma)		5.0 V
	pin22 (Start-up), pin42 (Output Stage)		9.0 V
• Supply current	pin8 and pin26		107 mA
	pin22 and pin42		56 mA
• Input signals	VIF input sensitivity		47 dBμ
	SIF limiting sensitivity		40 dBμ
	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

Block Diagram



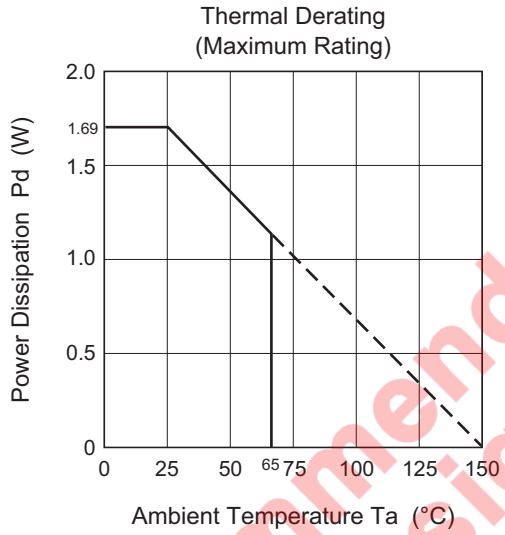
Pin Arrangement



Outline: PRDP0052BA-A (52P4B)

Absolute Maximum Ratings

Item	Symbol	Ratings	Unit
Supply voltage	V_{CC}	6.0, 10.0	V
Power dissipation	Pd	1690	mW
Thermal derating	Kθ	15	mW/°C
Operating temperature	Topr	–20 to +65	°C
Storage temperature	Tstg	–40 to +125	°C

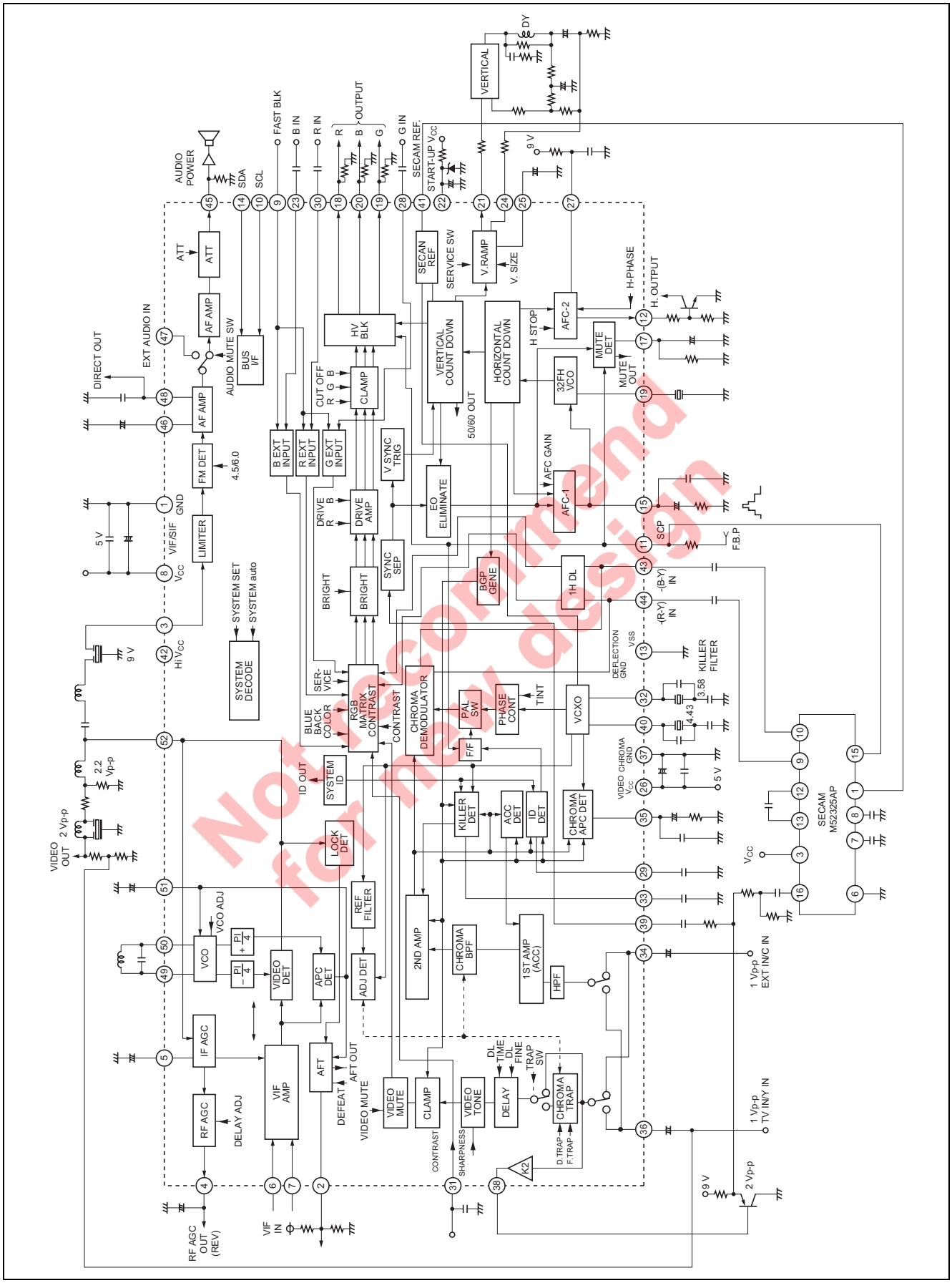


Supply Voltage and GND Terminals List

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

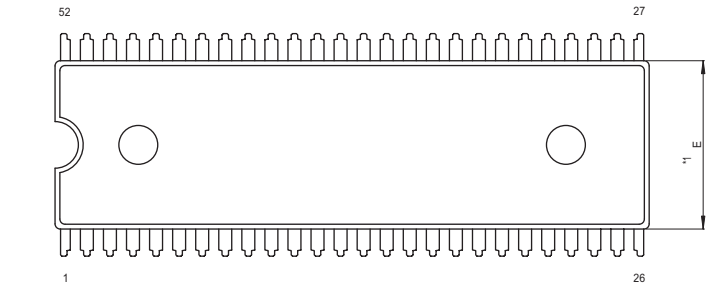
GND Terminals	Blocks
1	VIF/SIF/AF
25	DEFLECTION/CMOS
37	VIDEO/CHROMA RGB 1HDL (analog)

Application Example

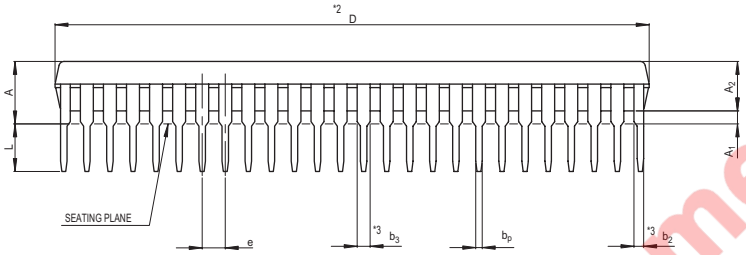


Package Dimensions

JEITA Package Code	RENESAS Code	Previous Code	MASS[Typ.]
P-SDIP52-13x45.85-1.78	PRDP0052BA-A	52P4B	5.1g



NOTE)
1. DIMENSIONS "*1" AND "*2" DO NOT INCLUDE MOLD FLASH.
2. DIMENSION "*3" DOES NOT INCLUDE TRIM OFFSET.



Reference Symbol	Dimension in Millimeters		
	Min	Nom	Max
e1	14.94	15.24	15.54
D	45.65	45.85	16.05
E	12.85	13.0	13.15
A	—	—	5.5
A_1	0.51	—	—
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	0.22	0.27	0.34
θ	0°	—	15°
e	1.528	1.778	2.028
L	3.0	—	—

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Refer to "**http://www.renesas.com/en/network**" for the latest and detailed information.

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