

Multi Input Wide Band Video Interface with I²C Control

■ GENERAL DESCRIPTION

NJW1325 is a multi input wide band video interface IC with I²C control. Also the **NJW1325** includes 6-input 3 channel video switch for SD, 4-input 3 channel video switch for HD, 11 channel 75-ohm driver for SD, 3-channel buffer for SD and 12 channel 75-ohm driver for HD.

■ PACKAGE OUTLINE

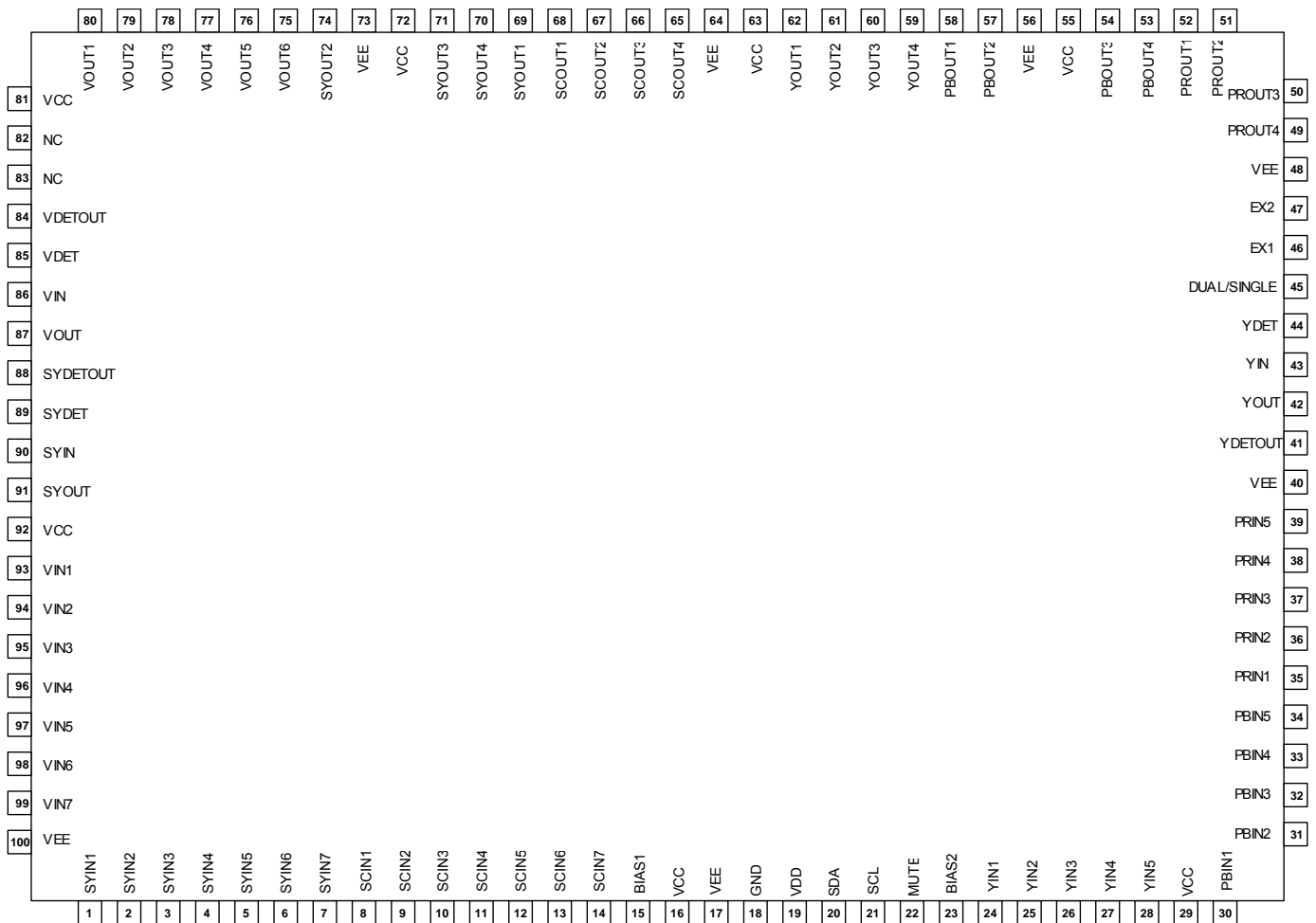


NJW1325FC2

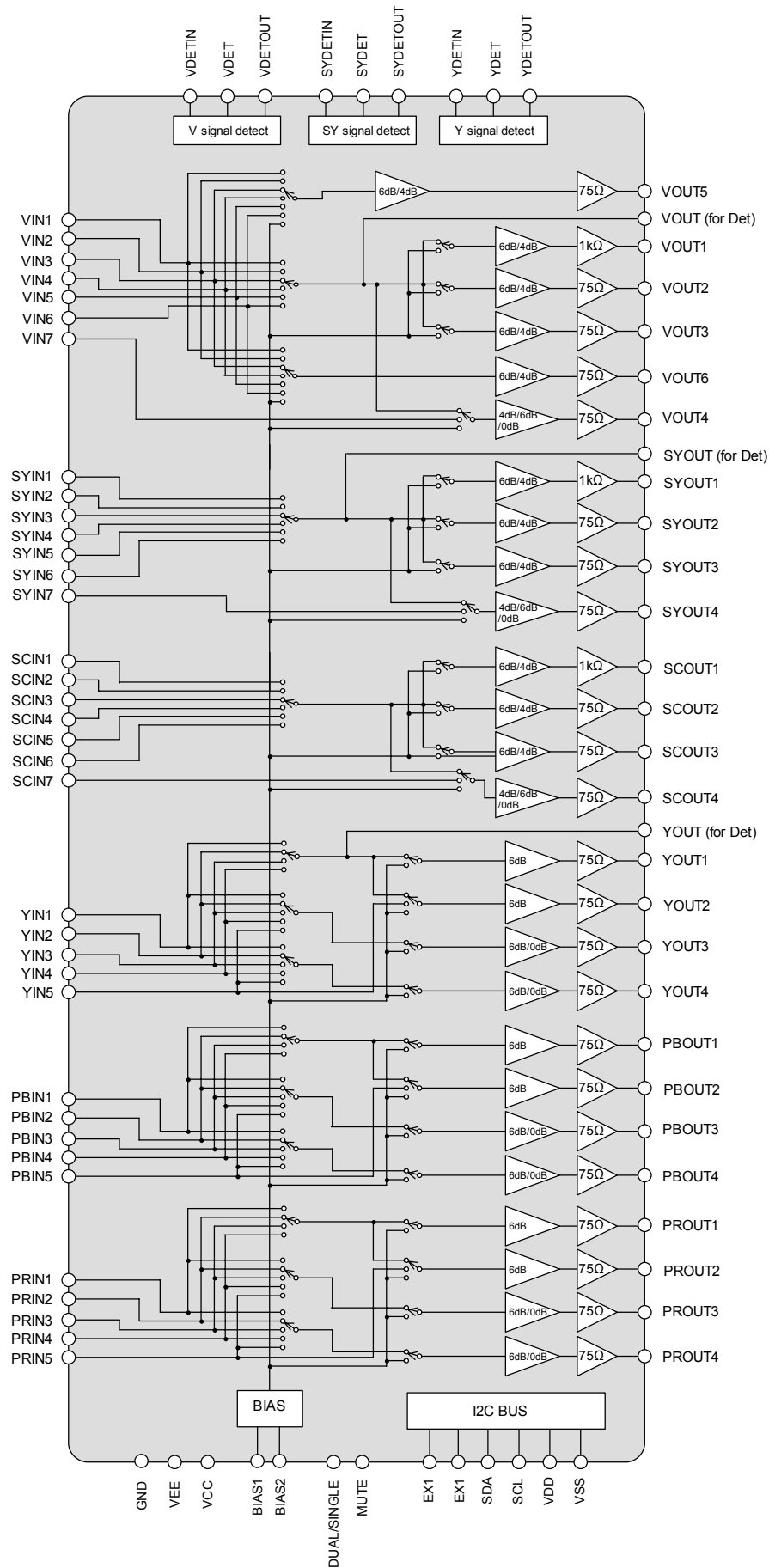
■ FEATURES

- Operating Voltage Single Supply/Dual Supply
Single supply mode 4.5 to 5.5V
Dual supply mode ±3.0 to ±3.45V
- 6-input 3 channel video switch for SD
- 4-input 3 channel video switch for HD
- 11 channel 75-ohm driver for SD
- 3 channel buffer for SD
- 12 channel 75-ohm driver for HD
- Signal detector
- I²C BUS control
- QFP100

■ PIN CONFIGURATION



■BLOCK DIAGRAM



■ABSOLUTE MAXIMUM RATINGS (Single Supply mode)

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	VCC	7.0	V
Supply Voltage	VDD	7.0	V
Power Dissipation	P _D	TBD ^(NOTE)	mW
Operating Temperature Range	Topr	-25 to +75	°C
Storage Temperature Range	Tstr	-40 to +150	°C

(Note) At on a board of EIA/JDAC specification. (114.3 x 76.2 x 1.6mm Two layers,FR-4)

■ABSOLUTE MAXIMUM RATINGS (Dual Supply mode)

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	VCC	3.5	V
Supply Voltage	VEE	-3.5	V
Power Dissipation	P _D	TBD ^(NOTE)	mW
Operating Temperature Range	Topr	-25 to +75	°C
Storage Temperature Range	Tstr	-40 to +150	°C

(Note) At on a board of EIA/JDAC specification (114.3 x 76.2 x 1.6mm Two layers, FR-4) with a heat sink.

■RECOMMEND OPERATING VOLTAGE (Single Supply mode)

(Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX	UNIT
Operating Voltage1	Vopr1	VCC-GND	4.5	5.0	5.5	V
Operating Voltage2	Vopr2	VDD-GND	4.5	5.0	5.5	V

■RECOMMEND OPERATING VOLTAGE (Dual Supply mode)

(Ta=25°C, VDD=0V)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX	UNIT
Operating Dual Voltages 1d	Vopr1d	VCC-GND	3.0	3.3	3.45	V
Operating Dual Voltages 2d	Vopr2d	VEE-GND	-3.45	-3.3	-3.0	V

■ELECTRICAL CHARACTERISTICS

■DC CHARACTERISTICS (Single Supply mode)

(Ta=25°C, VCC= 5.0V,VDD=5.0V,VEE=0V)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX	UNIT
Operating Current 1	I _{CC}	VCC, No Signal	-	190	270	mA
Operating Current 2	I _{DD}	VDD, No Signal	-	0.2	0.5	mA
Operating Current 1 at power save mode	Isave1	VCC, Power Save Mode	-	1.5	4	mA
Operating Current 2 at power save mode	Isave2	VDD, Power Save Mode	-	0.2	0.5	mA

■DC CHARACTERISTICS (Dual Supply mode)

(VCC =3.3V,VDD=0V, VEE=-3.3V)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX	UNIT
Operating Current 1	I _{CCd}	VCC, No Signal	-	190	270	mA
Operating Current 2	I _{Eed}	VEE, No Signal	-270	190	-	mA
Operating Current 1 at power save mode	Isave1d	VCC, Power Save Mode	-	1.5	5.0	mA
Operating Current 2 at power save mode	Isave2d	VEE, Power Save Mode	-5.0	-1.5	-	mA

■AC CHARACTERISTICS

NJW1325

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX	UNIT
Maximum Output Voltage	Vom	Input sine signal voltage (100kHz), THD=1%	2.4	-	-	Vp-p
Voltage Gain 1	Gv1	Input sine signal voltage (100kHz, 1.0Vp-p), 0dB mode	-0.5	0	0.5	dB
Voltage Gain 2	Gv2	Input sine signal voltage (100kHz, 1.0Vp-p), 4dB mode	3.5	4.0	4.5	dB
Voltage Gain 3	Gv3	Input sine signal voltage (100kHz, 1.0Vp-p), 6dB mode	5.5	6.0	6.5	dB
Frequency Characteristic 1	Gf1	Input sine signal voltage (12MHz/100kHz, 1.0Vp-p), 6dB mode for V/SY/SC input terminal	-3.0	0.0	-	dB
Frequency Characteristic 2	Gf2	Input sine signal voltage (100MHz/100kHz, 1.0Vp-p), 6dB mode for Y/PB/PR input terminal	-	-3.0	-	dB
Frequency Characteristic 3	Gf3	Input sine signal voltage (150MHz/100kHz, 1.0Vp-p), 6dB mode for Y/PB/PR input terminal	-	-3.0	-	dB
Cross Talk between Input terminals	CTI	Input sine signal voltage (3.58MHz, 1.0Vp-p)	-	-60	-50	dB
Differential Gain	DG	Input video signal voltage (1.0Vp-p, 10step)	-	0.5	-	%
Differential Phase	DP	Input video signal voltage (1.0Vp-p, 10step)	-	0.5	-	deg
Signal Detective Voltage	Vdet	16kHz, 4.7μs, 1.0Vp-p Square pulse	-	200	-	mVp-p
Output/output voltage difference on mute mode	dVDo	On mute mode	-0.4	-	0.4	V
S/N ratio	SNv	Input White video signal voltage (1.0Vp-p, 100%), S/N ratio for V/SY/Y/PB/PR input terminal	-	75	-	dB
Switch Change Over Voltage (H level)	VthH		2.0	-	VCC	V
Switch Change Over Voltage (L level)	VthL		0	-	1.0	V
Maximum inflow current on Switch ON	IthH	V=3.3V	-	-	120	μA
Maximum inflow current on Switch OFF	IthL	V=0.3V	-	-	8	μA
Low level Voltage at EX Output	VEXL		0	-	0.4	V
Leak Current on EX Output OFF	IEXoff		-	-	1	μA

■MUTE CONTROL

L: MUTE ON

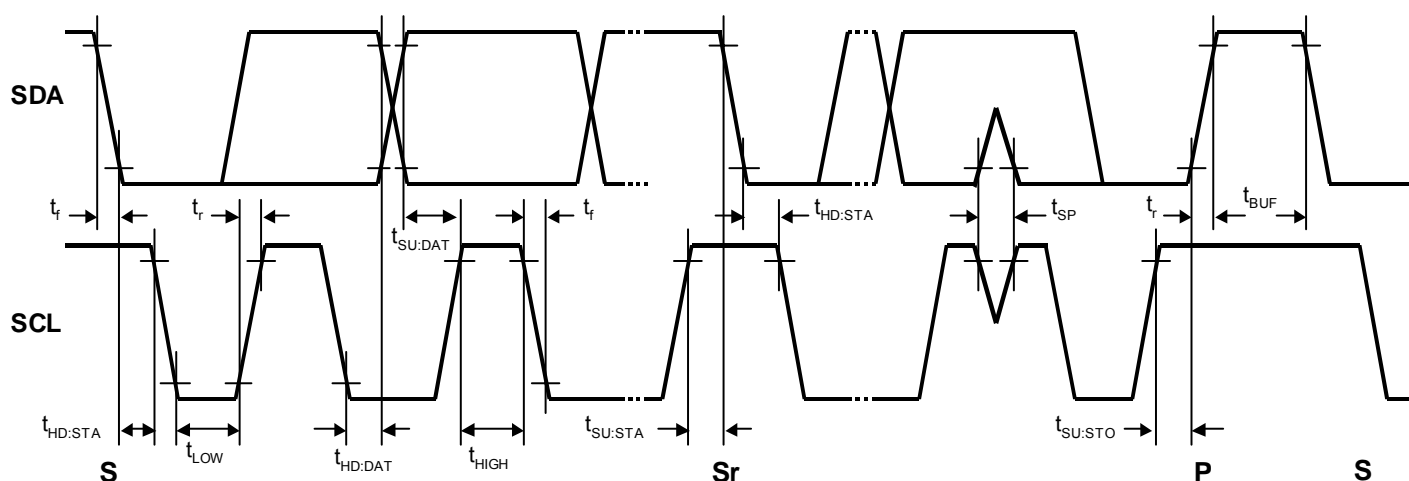
H: MUTE OFF

■DUAL/SINGLE MUTE CONTROL

GND: Dual Supply Mode

VCC: Single Supply Mode

■TIMING on the I²C BUS (SDA, SCL)



■CHARACTERISTICS OF I/O STAGES FOR I²C BUS (SDA, SCL)

I²C BUS Load Conditions

STANDARD MODE: Pull up resistance 4k Ω (Connected to +5V), Load capacitance 200pF (Connected to GND)

PARAMETER	SYMBOL	STANDARD MODE			UNIT
		MIN.	TYP.	MAX.	
Low Level Input Voltage	V_{IL}	0.0	-	$V_{CC} \times 0.3$	V
High Level Input Voltage	V_{IH}	$V_{CC} \times 0.7$	-	5.5	V
Low Level Output Voltage (3mA at SDA pin)	V_{OL}	0	-	0.4	V
Input current each I/O pin with an input voltage between 0.1V _{cc} and 0.9V _{cc}	I_i	-10	-	10	μ A

■CHARACTERISTICS OF BUS LINES (SDA, SCL) FOR I²C BUS DEVICES

PARAMETER	SYMBOL	STANDARD MODE			UNIT
		MIN.	TYP.	MAX.	
SCL clock frequency	f_{SCL}	-	-	100	kHz
HOLD time	$t_{HD:STA}$	4.0	-	-	μ s
Low period of the SCL clock	t_{LOW}	4.7	-	-	μ s
High period of the SCL clock	t_{HIGH}	4.0	-	-	μ s
Set-up time for a repeated START condition	$t_{SU:STA}$	4.7	-	-	μ s
Data Hold Time ^{NOTE)}	$t_{HD:DAT}$	0	-	-	μ s
Data set-up Time	$t_{SU:DAT}$	250	-	-	ns
Rise time of both SDA and SCL signals	t_r	-	-	1000	ns
Fall time of both SDA and SCL signals	t_f	-	-	300	ns
Set-up time for STOP condition	$t_{SU:STO}$	4.0	-	-	μ s
Bus free time between a STOP and START condition	t_{BUF}	4.7	-	-	μ s
Capacitive load for each bus line	C_b	-	-	400	pF
Noise margin at the Low level	V_{nL}	0.5	-	-	V
Noise margin at the High level	V_{nH}	1	-	-	V

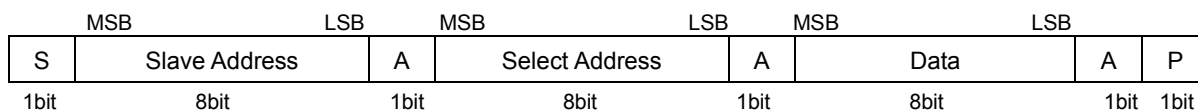
C_b ; total capacitance of one bus line in pF

NOTE) Data hold time: $t_{HD:DAT}$

Please hold the Data Hold Time ($t_{HD:DAT}$) to 300ns or more to avoid status of unstable at SCL falling edge.

■DEFINITION OF I²C RESISTOR

•I²C BUS FORMAT



S: Starting term
A: Acknowledge bit
P: Ending term

• SLAVE ADDRESS

Slave Address								Hex
MSB				LSB				-
1	0	0	1	0	1	1	R/W	-
□ R/W = 0: write mode								-
1	0	0	1	0	1	1	0	96(h)
□ R/W = 1: read mode.								-
1	0	0	1	0	1	1	1	97(h)

• WRITE MODE

The auto increment function cycles the select address as follows.

00H → 01H → 02H → 03H → 04H → 05H → 00H

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
00H	VOUT1,2,3 Select			VOUT5 Select			VOUT4 Select	
01H	VOUT6 Select			VOUT1 Mute	VOUT2 Mute	VOUT3 Mute	-	Power Save
02H	SYOUT1,2,3/SCOUT1,2,3 Select			SYOUT4/SCOUT4 Select		SYOUT1/SCOUT1 Mute	SYOUT2/SCOUT2 Mute	SYOUT3/SCOUT3 Mute
03H	VOUT1,2,3 Gain	VOUT4 Gain	VOUT5 Gain	VOUT6 Gain	SYOUT1,2,3/SCOUT1,2,3 Gain	SYOUT4/SCOUT4 Gain	EX1	EX2
04H	YOUT1,2/PBOUT1,2/PROUT1,2 Select		YOUT3/PBOUT3/PROUT3 Select			YOUT4/PBOUT4/PROUT4 Select		
05H	YOUT1/PBOUT1/PROUT1 Mute	YOUT2/PBOUT2/PROUT2 Select	YOUT2/PBOUT2/PROUT2 Mute	YOUT3/PBOUT3/PROUT3 Gain	YOUT3/PBOUT3/PROUT3 Mute	YOUT4/PBOUT4/PROUT4 Gain	YOUT4/PBOUT4/PROUT4 Mute	-

•READ MODE

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
00H	1	1	1	1	1	DET V	DET SY	DET Y

D0,D1,D2: Signal ON→1, Signal OFF → 0

■CONTROL REGISTER TABLE

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
00H	0	0	0	0	0	0	0	0
01H	0	0	0	0	0	0	0	0
02H	0	0	0	0	0	0	0	0
03H	0	0	0	0	0	0	0	0
04H	0	0	0	0	0	0	0	0
05H	0	0	0	0	0	0	0	0
06H	0	0	0	0	0	0	0	0

■ INSTRUCTION CODE

a)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
00H	VOUT1,2,3 Select			VOUT5 Select			VOUT4 Select	

• VOUT SELECT TABLE

VOUT1,2,3 Select			VOUT1	VOUT2	VOUT3
D7	D6	D5			
0	0	0	VIN1*	VIN1*	VIN1*
0	0	1	VIN2	VIN2	VIN2
0	1	0	VIN3	VIN3	VIN3
0	1	1	VIN4	VIN4	VIN4
1	0	0	VIN5	VIN5	VIN5
1	0	1	VIN6	VIN6	VIN6

*:Default Value

VOUT5 Select			VOUT5
D4	D3	D2	
0	0	0	Mute*
0	0	1	VIN1
0	1	0	VIN2
0	1	1	VIN3
1	0	0	VIN4
1	0	1	VIN5
1	1	0	VIN6

*:Default Value

VOUT4 Select		VOUT4
D1	D0	
0	0	Mute*
0	1	"VOUT1,2,3 Select" Select Signal
1	0	VIN7

*:Default Value

b)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
01H	VOUT6 Select			VOUT1 Mute	VOUT2 Mute	VOUT3 Mute	-	Power Save

• **VOUT SELECT TABLE**

VOUT6 Select			VOUT6
D7	D6	D5	
0	0	0	Mute*
0	0	1	VIN1
0	1	0	VIN2
0	1	1	VIN3
1	0	0	VIN4
1	0	1	VIN5
1	1	0	VIN6

*:Default Value

VOUT1 Mute	VOUT1
D4	
0	Mute*
1	Through

*:Default Value

VOUT2 Mute	VOUT2
D3	
0	Mute*
1	Through

*:Default Value

VOUT3 Mute	VOUT3
D2	
0	Mute*
1	Through

*:Default Value

• **POWER SAVE TABLE**

Power Save	
D0	
0	Power Save Mode*
1	Normal Mode

*:Default Value

c)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
02H	SYOUT1,2,3/SCOUT1,2,3 Select			SYOUT4/SCOUT4 Select		SYOUT1/ SCOUT1 Mute	SYOUT2/ SCOUT2 Mute	SYOUT3/ SCOUT3 Mute

• SYOUT/SCOUT SELECT TABLE

SYOUT1,2,3/SCOUT1,2,3 Select			SYOUT1	SYOUT2	SYOUT3	SCOUT1	SCOUT2	SCOUT3
D7	D6	D5						
0	0	0	SYIN1*	SYIN1*	SYIN1*	SCIN1*	SCIN1*	SCIN1*
0	0	1	SYIN2	SYIN2	SYIN2	SCIN2	SCIN2	SCIN2
0	1	0	SYIN3	SYIN3	SYIN3	SCIN3	SCIN3	SCIN3
0	1	1	SYIN4	SYIN4	SYIN4	SCIN4	SCIN4	SCIN4
1	0	0	SYIN5	SYIN5	SYIN5	SCIN5	SCIN5	SCIN5
1	0	1	SYIN6	SYIN6	SYIN6	SCIN6	SCIN6	SCIN6

*:Default Value

SYOUT4/SCOUT4 Select		SYOUT4	SCOUT4
D4	D3		
0	0	Mute*	Mute*
0	1	"SYOUT1,2,3 Select" Select Signal	"SCOUT1,2,3 Select" Select Signal
1	0	SYIN7	SCIN7

*:Default Value

SYOUT1/SCOUT1 Mute	SYOUT1/SCOUT1
D2	
0	Mute*
1	Through

*:Default Value

SYOUT2/SCOUT2 Mute	SYOUT2/SCOUT2
D1	
0	Mute*
1	Through

*:Default Value

SYOUT3/SCOUT3 Mute	SYOUT3/SCOUT3
D0	
0	Mute*
1	Through

*:Default Value

d)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
03H	VOUT1,2,3 Gain	VOUT4 Gain	VOUT5 Gain	VOUT6 Gain	SYOUT1,2,3/ SCOUT1,2,3 Gain	SYOUT4/ SCOUT4 Gain	EX1	EX2

• OUTPUT SIGNAL GAIN

VOUT1,2,3,4 Gain	Gain
D7	
0	
1	6dB

*:Default Value

VOUT4 Gain	Gain
D6	
0	
1	Vin1~6 Output : 4/6dB (VOUT1,2,3Gain Select) Vin7 Output : 6dB

*:Default Value

VOUT5 Gain	Gain
D5	
0	
1	6dB

*:Default Value

VOUT6 Gain	Gain
D4	
0	
1	6dB

*:Default Value

SYOUT1,2,3/ SCOUT1,2,3 Gain	Gain
D3	
0	
1	6dB

*:Default Value

SYOUT4/SCOUT4 Gain	Gain
D2	
0	
1	SY/SCin1~6 Output : 4/6dB(SYOUT1,2,3/SCOUT1,2,3 Gain Select) SY/SCin7 Output : 6dB

*:Default Value

• EX OUTPUT

EX1	EX1 Output
D1	
0	Open*
1	Low

*:Default Value

EX2	EX2 Output
D0	
0	Open*
1	Low

*:Default Value

e)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
04H	YOUT1,2/PBOUT1,2/ PROUT1,2 Select		YOUT3/PBOUT3/ PROUT3 Select			YOUT4/PBOUT4/ PROUT4 Select		

• YOUT/PBOUT/PROUT SELECT TABLE

YOUT1,2/PBOUT1,2/ PROUT1,2 Select		YOUT1	PBOUT1	PROUT1	YOUT2	PBOUT2	PROUT2
D7	D6						
0	0	YIN1*	PBIN1*	PRIN1*	YIN1/YIN5*	PBIN1/PBIN5*	PRIN1/PRIN5*
0	1	YIN2	PBIN2	PRIN2	YIN2/YIN5	PBIN2/PBIN5	PRIN2/PRIN5
1	0	YIN3	PBIN3	PRIN3	YIN3/YIN5	PBIN3/PBIN5	PRIN3/PRIN5
1	1	YIN4	PBIN4	PRIN4	YIN4/YIN5	PBIN4/PBIN5	PRIN4/PRIN5

*:Default Value

YOUT3/PBOUT3/PROUT3			YOUT3	PBOUT3	PROUT3
D5	D4	D3			
0	0	0	YIN1*	PBIN1*	PRIN1*
0	0	1	YIN2	PBIN2	PRIN2
0	1	0	YIN3	PBIN3	PRIN3
0	1	1	YIN4	PBIN4	PRIN4
1	0	0	YIN5	PBIN5	PRIN5

*:Default Value

YOUT4/PBOUT4/PROUT4			YOUT4	PBOUT4	PROUT4
D2	D1	D0			
0	0	0	YIN1*	PBIN1*	PRIN1*
0	0	1	YIN2	PBIN2	PRIN2
0	1	0	YIN3	PBIN3	PRIN3
0	1	1	YIN4	PBIN4	PRIN4
1	0	0	YIN5	PBIN5	PRIN5

*:Default Value

f)

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
05H	YOUT1/ PBOUT1/ PROUT1 Mute	YOUT2/ PBOUT2/ PROUT2 Select	YOUT2/ PBOUT2/ PROUT2 Mute	YOUT3/ PBOUT3/ PROUT3 Gain	YOUT3/ PBOUT3/ PROUT3 Mute	YOUT4/ PBOUT4/ PROUT4 Gain	YOUT4/ PBOUT4/ PROUT4 Mute	-

• **YOUT/PBOUT/PROUT SELECT TABLE**

YOUT1/PBOUT1/ PROUT1 Mute	Mute
D7	
0	
1	Through

*:Default Value

YOUT2/PBOUT2/ PROUT2 Select	YOUT2	PBOUT2	PROUT2
D6			
0	“YOUT1,2select” Select Signal *	“PBOUT1,2select” Select Signal *	“PROUT1,2select” Select Signal *
1	YIN5	PBIN5	PRIN5

*:Default Value

YOUT2/PBOUT2/ PROUT2 Mute	Mute
D5	
0	
1	Through

*:Default Value

YOUT3/PBOUT3/ PROUT3 Gain	Gain
D4	
0	
1	6dB

*:Default Value

YOUT3/PBOUT3/ PROUT3 Mute	Mute
D3	
0	
1	Through

*:Default Value

YOUT4/PBOUT4/ PROUT4 Gain	Gain
D2	
0	
1	6dB

*:Default Value

YOUT4/PBOUT4/ PROUT4 Mute	Mute
D1	
0	
1	Through

*:Default Value

g) READ MODE

No.	BIT							
	D7	D6	D5	D4	D3	D2	D1	D0
00H	1	1	1	1	1	DET V	DET SY	DET Y

•V SIGNAL TABLE

DET V	DET V
D2	
0	Signal Off
1	Signal On

•SY SIGNAL TABLE

DET SY	DET SY
D2	
0	Signal Off
1	Signal On

•Y SIGNAL TABLE

DET Y	DET Y
D2	
0	Signal Off
1	Signal On

■ TERMINAL DESCRIPTION (Function Voltage's Value on Single Supply Mode)

No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
93 94 95 96 97 98 99 1 2 3 4 5 6 7	VIN1 VIN2 VIN3 VIN4 VIN5 VIN6 VIN7 SYIN1 SYIN2 SYIN3 SYIN4 SYIN5 SYIN6 SYIN7	V Input SY Input		1.9V
8 9 10 11 12 13 14	SCIN1 SCIN2 SCIN3 SCIN4 SCIN5 SCIN6 SCIN7	SC Input		2.5V
15 23	BIAS1 BIAS2	Bias Voltage		2.5V

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No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
16 29 55 63 72 81 92	VCC	Supply		5V
17 40 48 56 64 73 100	VEE	Negative Supply		0V
18	GND	Ground		0V
19	VDD	Logic Supply		5V
20	SDA	I ² C Data Input	<p>The diagram shows the internal circuitry for the SDA pin. It features a pull-up resistor connected to the VCC supply. The pull-down network consists of a series combination of a diode connected to the VEE supply and a transistor connected to the GND supply. A 4kΩ resistor is connected between the SDA pin and the VCC supply.</p>	-

No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
21	SCL	I ² C Clock Input		-
22 45	MUTE DUAL/SINGLE	Mute Supply Mode		0V
24 25 26 27 28	YIN1 YIN2 YIN3 YIN4 YIN5	Y Input		1.9V

No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
30 31 32 33 34 35 36 37 38 39	PBIN1 PBIN2 PBIN3 PBIN4 PBIN5 PRIN1 PRIN2 PRIN3 PRIN4 PRIN5	Pb Input Pr Input		2.5V
41 84 98	YDETOUT VDETOUT SYDETOUT	YDET Output YDET Output SYDET Output		-
42 87 91	YOUT VOUT SYOUT	Y Output V Output SY Output		1.9V

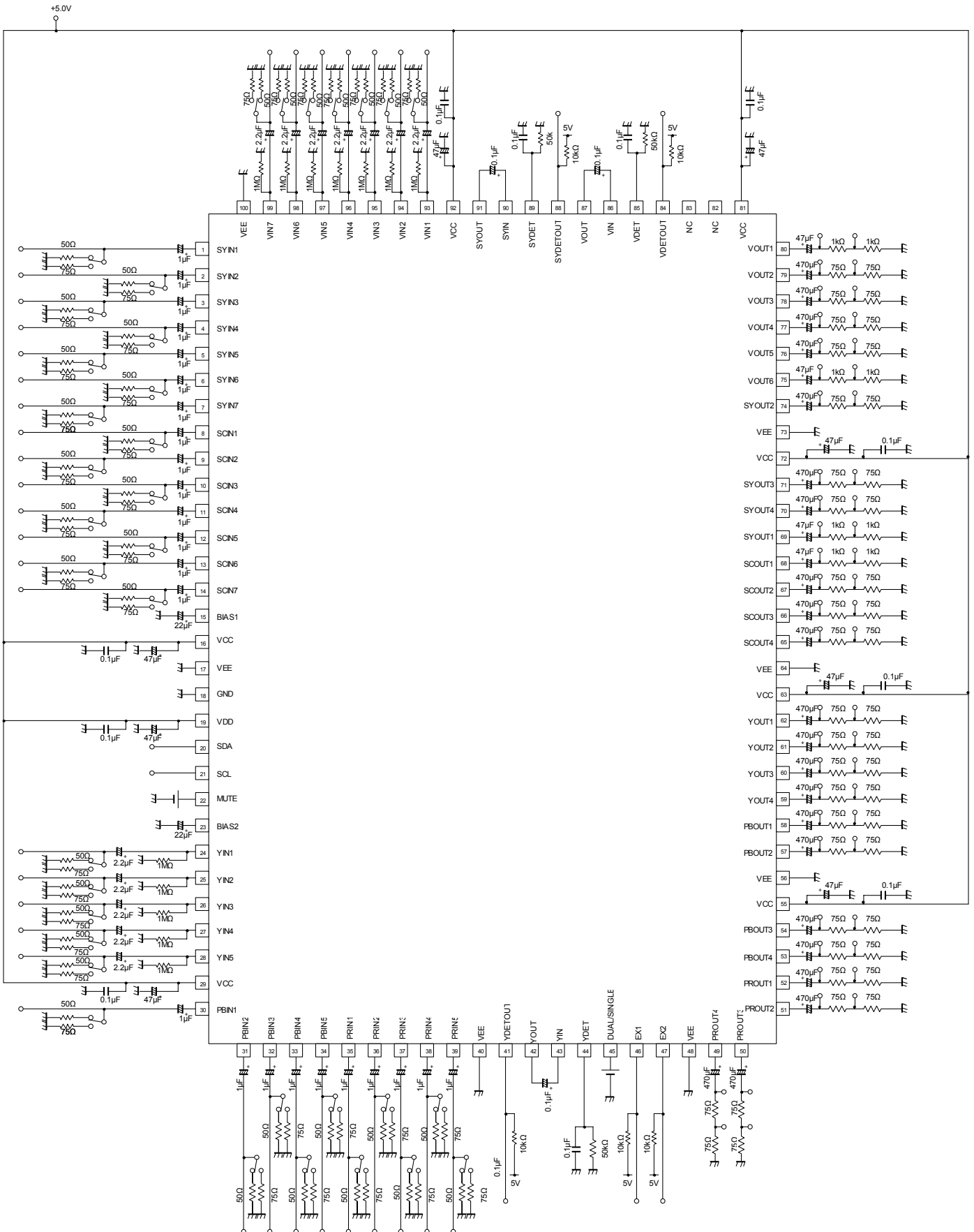
No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
43 86 90	YIN VIN SYIN	Y Input V Input SY Input		3.3V
44 85 89	YDET VDET SYDET	Y Detect Filter V Detect Filter SY Detect Filter		-
46 47	EX1 EX2	EX Output		-

No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
49 50 51 52 53 54 57 58	PROUT4 PROUT3 PROUT2 PROUT1 PBOUT4 PBOUT3 PBOUT2 PBOUT1	Pr Output Pb Output For 75Ω Drive		2.5V
59 60 61 62	YOUT4 YOUT3 YOUT2 YOUT1	Y Output For 75Ω Drive		1.3V
65 66 67	SCOUT4 SCOUT3 SCOUT2	SC Output For 75Ω Drive		2.5V

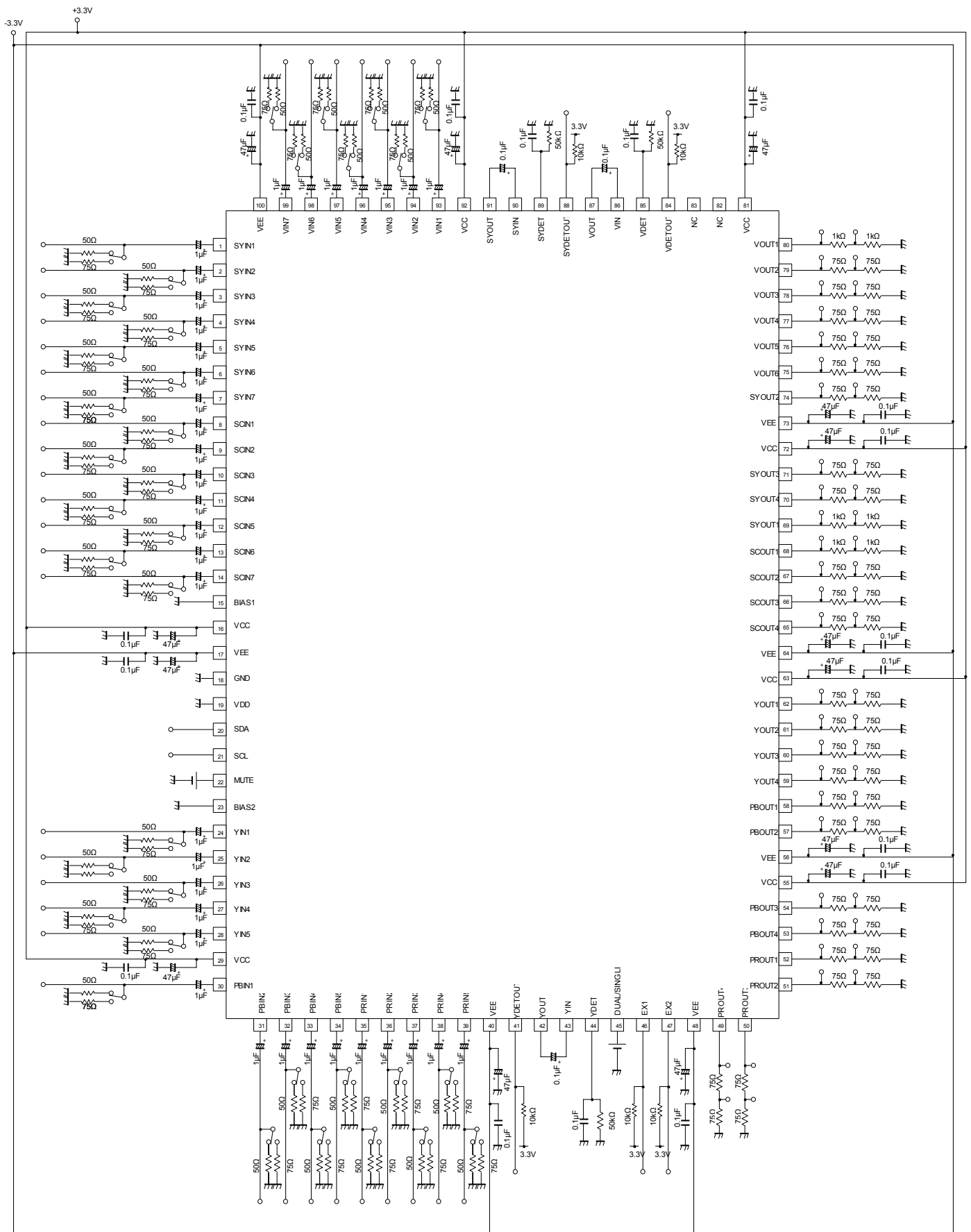
No.	SYMBOL	FUNCTION	EQUIVALENT CIRCUIT	VOLATGE
68	SCOUT1	SC Output With load resistance 1k Ω		2.5V
69 80	SYOUT1 VOUT1	SY Output V Output With load resistance 1k Ω		1.3V
70 71 74 75 76 77 78 79	SYOUT4 SYOUT3 SYOUT2 VOUT6 VOUT5 VOUT4 VOUT3 VOUT2	SY Output V Output For 75 Ω Drive		1.3V

TEST CIRCUIT

● Single Supply Case



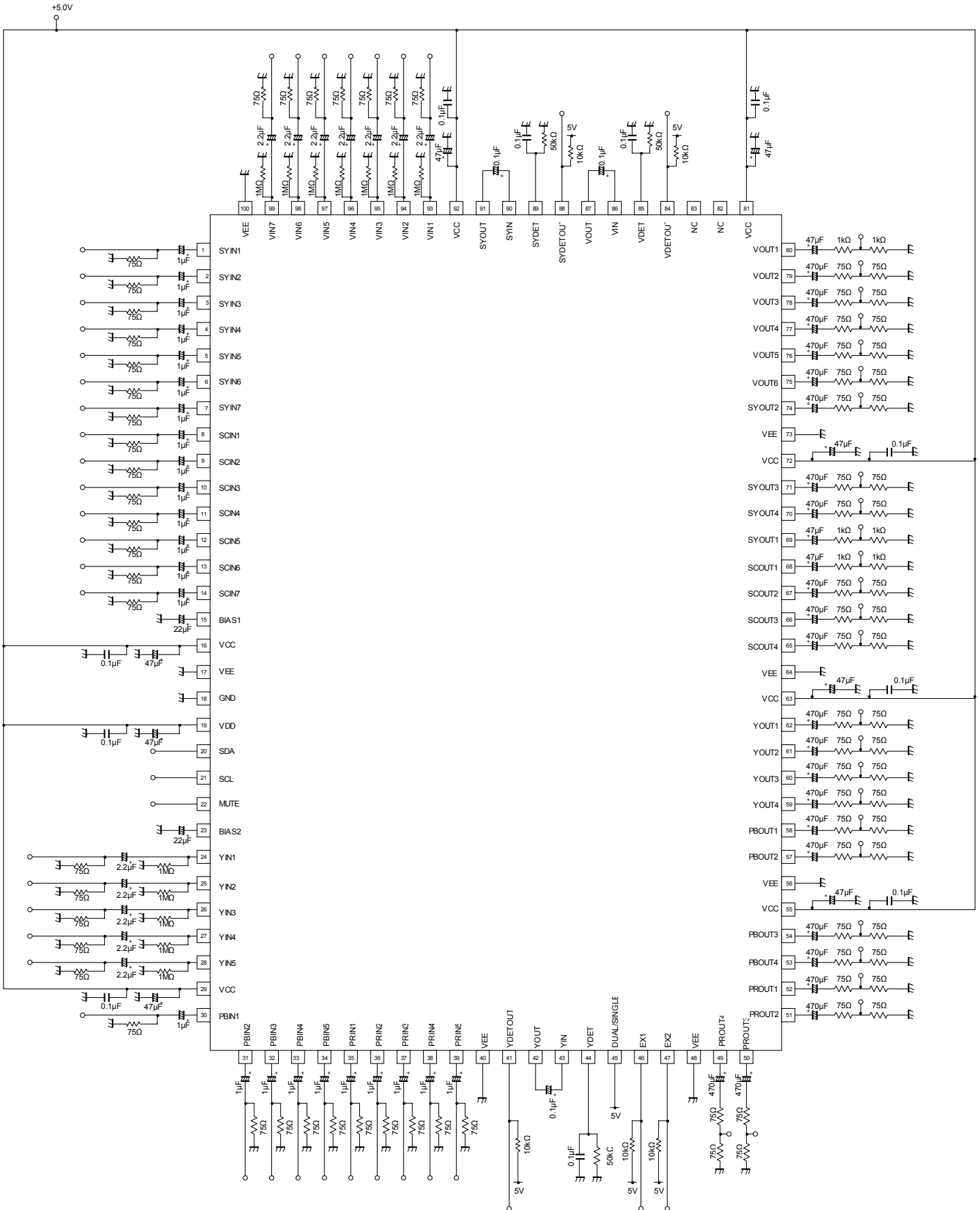
●Dual Supply Case



NJW1325

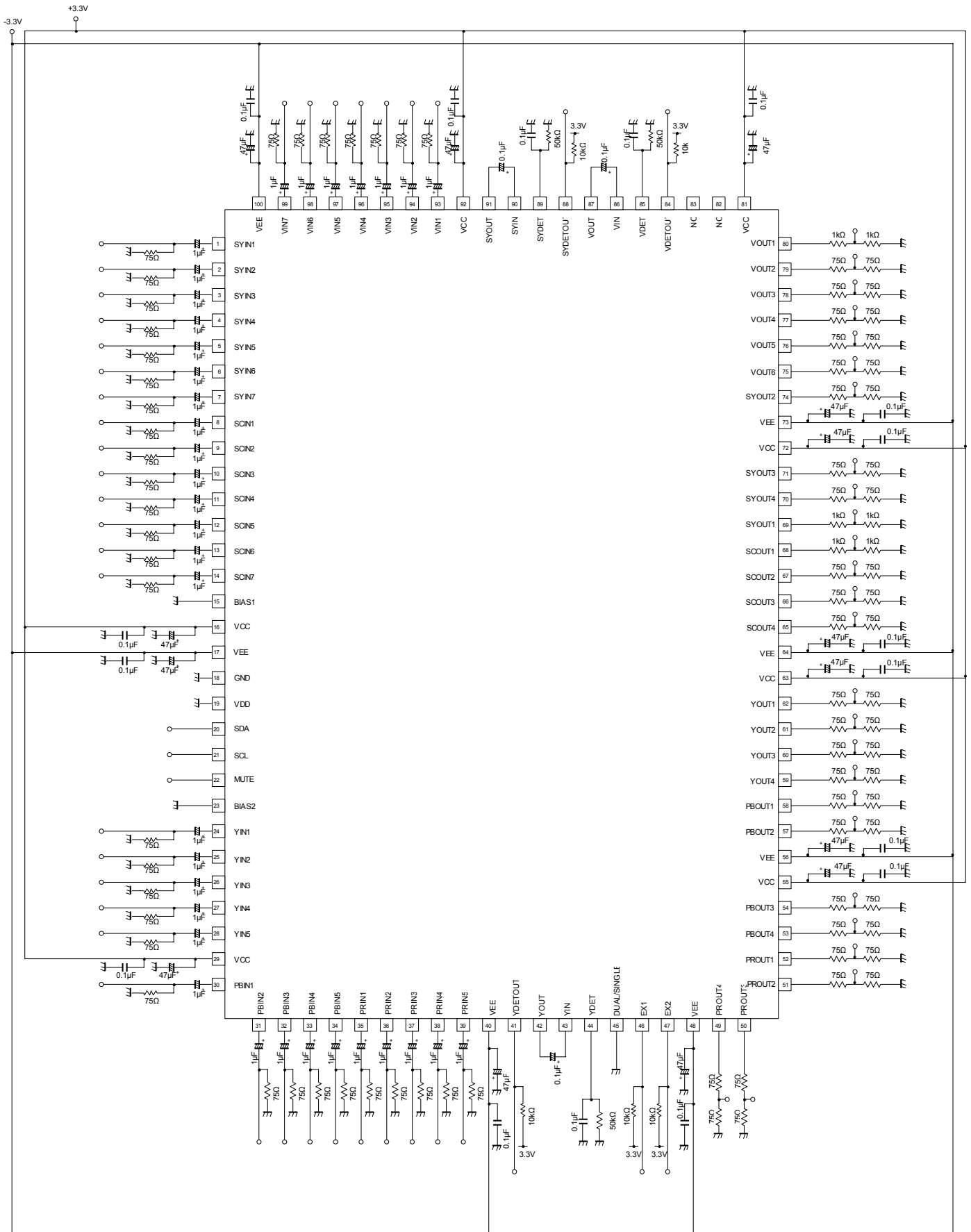
APPLICATION CIRCUIT

● Single Supply Case



New Japan Radio Co., Ltd.

●Dual Supply Case



[CAUTION]

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