DATA SHEET

Part No.	AN16903A
Package Code No.	SSOP024-P-0300E

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AN16903A

IC for sound multiplex demodulation in NTSC (Japanese TV mode)

■ Overview

The AN16903A is TV sound multiplex demodulator IC corresponding to both I^2C-bus control and parallel control for Japan. The functions of a SIF demodulation, a STEREO demodulation, and a Bilingual demodulation are built in.

■ Features

- Controllable by either I^2C bus or parallel.
- Built-in SIF demodulation circuit.
- Perfect adjustment free (in the case of use in SIF input).
  In use in base band input, one adjustment is required.
- Reduction of external parts.
- Low power consumption（TYP: V_{CC} = 5 V, I tot = 22 mA）

■ Applications

- TV, VCR, DVD recorder, PC, etc. for Japan.

■ Package

- 24 pin Plastic Shrink Small Outline Package (SSOP type)

■ Type

- Silicon Monolithic Bipolar IC

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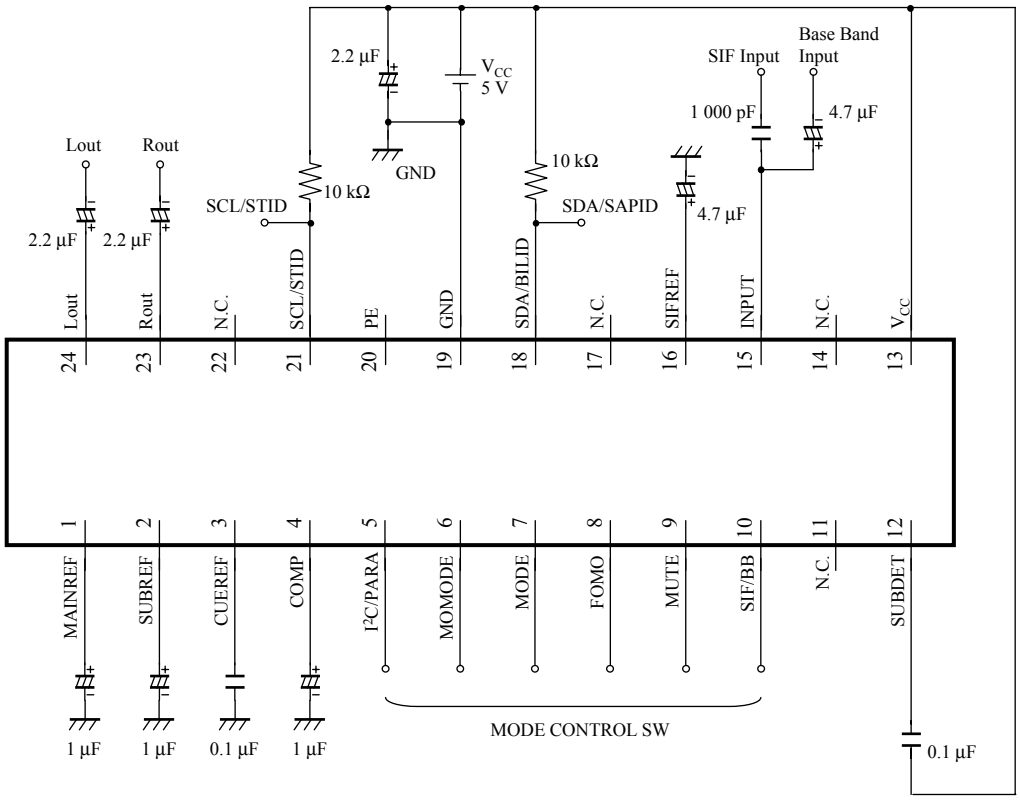
■ Application Circuit Example



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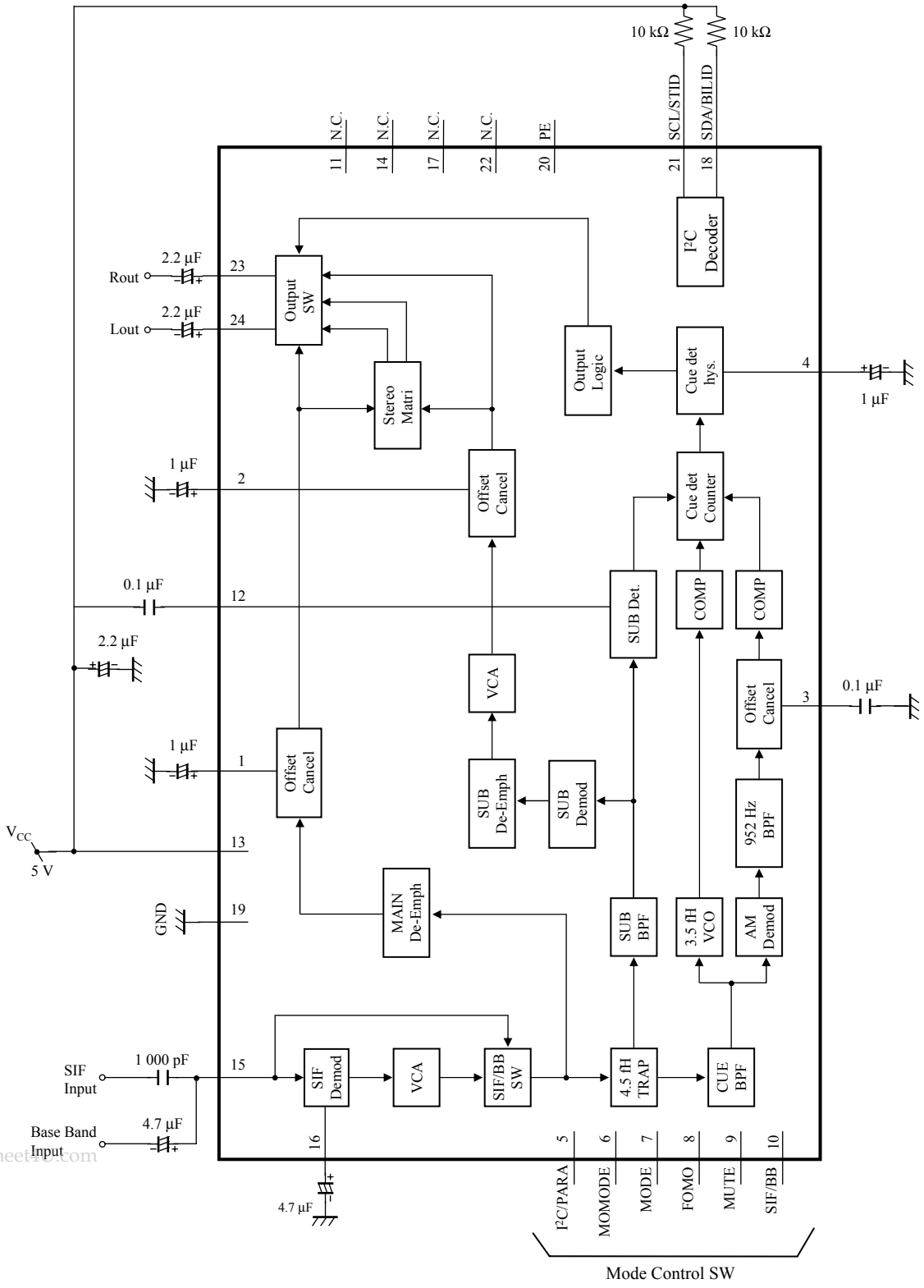
■ Block Diagram



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■ Pin Descriptions

Pin No.	Pin name	Type	Description
1	MAINREF	Input/Output	MAIN system DC offset absorption
2	SUBREF	Input/Output	SUB system DC offset absorption
3	CUEREF	Input/Output	CUE DC offset absorption
4	COMP	Input/Output	COMP
5	I2C/PARA	Input	I^2C/Parallel control selection
6	MOMODE	Input	Forced monaural mode selection (used only for parallel control)
7	MODE	Input	Output mode selection (used only for parallel control)
8	FOMO	Input	Forced monaural selection (used only for parallel control)
9	MUTE	Input	Mute selection (used only for parallel control)
10	SIF/BB	Input	SIF/Base band input selection (used only for parallel control)
11	NC	—	N.C.
12	SUBDET	Input/Output	SUB DET
13	VCC	Power supply	V_{CC}
14	NC	—	N.C.
15	INPUT	Input	SIF/Base band input
16	SIFREF	Input/Output	SIF REF
17	NC	—	N.C.
18	SDA/BILID	Input/Output	SDA / BILINGUAL ID
19	GND	Ground	GND
20	PE	—	PE
21	SCL/STID	Input/Output	SCL / STEREO ID
22	NC	—	N.C.
23	ROUT	Output	R-ch output
24	LOUT	Output	L-ch output

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■ Absolute Maximum Ratings

A No.	Parameter	Symbol	Rating	Unit	Notes
1	Supply voltage	V_{CC}	6.0	V	*1
2	Supply current	I_{CC}	32	mA	—
3	Power dissipation	P_D	156	mW	*2
4	Operating ambient temperature	T_{opr}	–20 to 85	°C	*3
5	Storage temperature	T_{stg}	–55 to 125	°C	*3

Notes) *1: The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.
*2: The power dissipation shown is the value at T_a = 85°C for the independent (unmounted) IC package.
*3: Except for the operating ambient temperature and storage temperature, all ratings are for T_a = 25°C.

■ Operating Supply Voltage Range

Parameter	Symbol	Range	Unit	Notes
Supply voltage range	V_{CC}	4.5 to 5.5	V	*

Note) *: The values under the condition not exceeding the above absolute maximum ratings and the power dissipation.

■ Allowed Voltage Ranges

Pin No.	Pin name	Rating	Unit	Notes
5	I2C/PARA	– 0.3 to (V_{CC} + 0.3)	V	*1
6	MOMODE	– 0.3 to (V_{CC} + 0.3)	V	*1
7	MODE	– 0.3 to (V_{CC} + 0.3)	V	*1
8	FOMO	– 0.3 to (V_{CC} + 0.3)	V	*1
9	MUTE	– 0.3 to (V_{CC} + 0.3)	V	*1

Pin No.	Pin name	Rating	Unit	Notes
10	SIF/BB	– 0.3 to (V_{CC} + 0.3)	V	*1
13	VCC	– 0.3 to 6.0	V	—
18	SDA/BILDT	– 0.3 to (V_{CC} + 0.3)	V	*1
21	SCL/STID	– 0.3 to (V_{CC} + 0.3)	V	*1

Notes) 1. Volotage values, unless otherwise specified, are with respect to GND.
2. Do not apply external current or volotage to any pin not mentioned below.
3. *1: (V_{CC} + 0.3) V should not be more than 6.0V.

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