DATA SHEET

Part No.	AN8953NFA
Package Code No.	QFP056-P-1010B

SEMICONDUCTOR COMPANY
MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

Contents

AN8953NFA

Silicon Monolithic Bi-CMOS IC

■ Features

- IF-AMP 1, IF-AMP 2, DET, NOISE-SQ, RSSI, DATA-AMP, BATT-LOW, COMPANDER, SP-AMP, Half-Mute, OSC, PRESCALER, PROGRAMMABLE-COUNTER, Pre-AMP, Vol Control, Power Down, Splatter-Filter

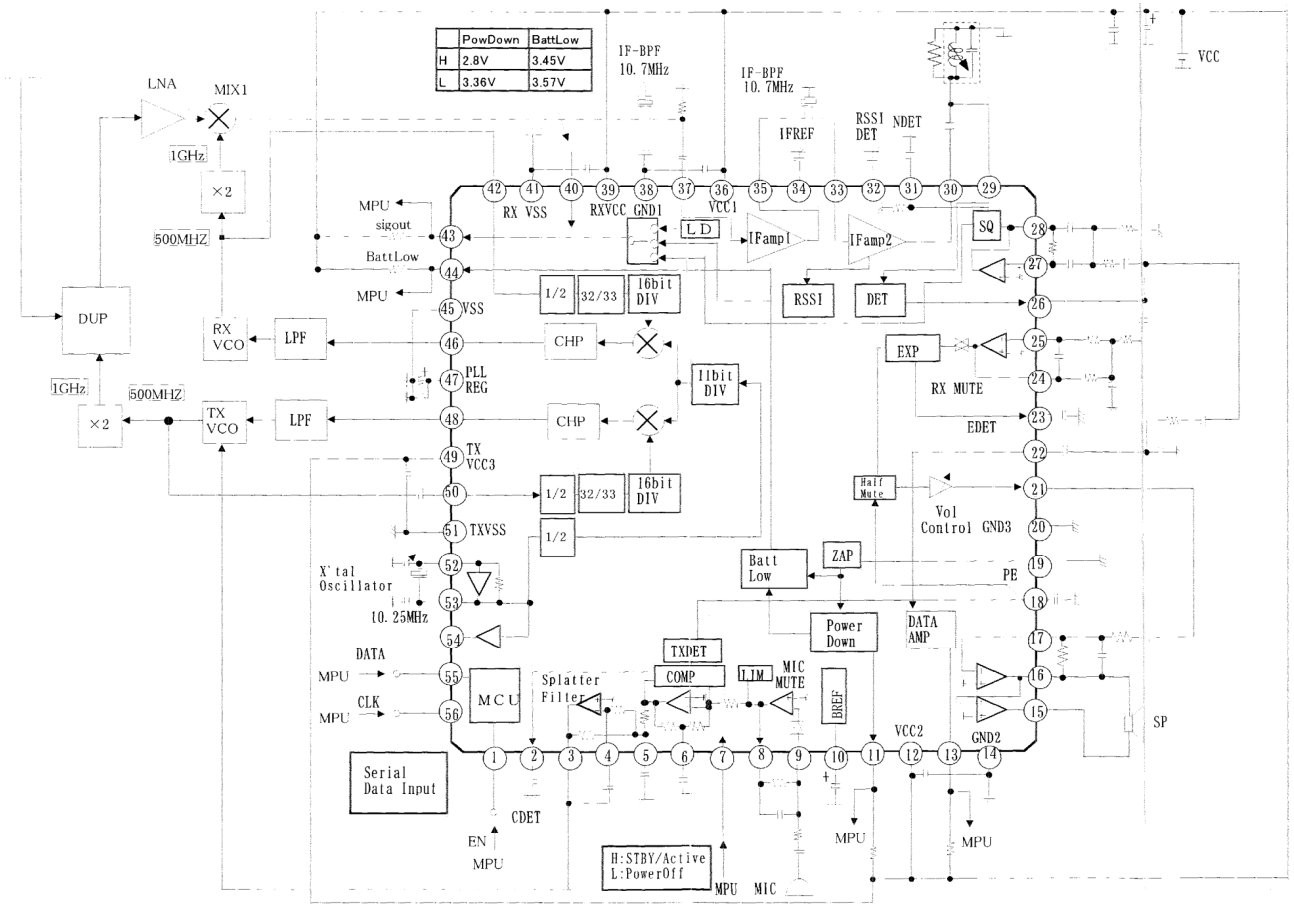
■ Applications

- IC for Cordless Telephone (IF + COMPANDER + PLL)

■ Package

- Quad 56-Pin Plastic Package (QFP Type)

■ Application Circuit



■Pin Descriptions

Pin No.	Pin Description		Pin No.	Pin Description	
1	EN	Enable input	29	DET-IN	FM detector input
2	C-DET	COMP detection	30	IF 2-OUT	IF amp 2 output
3	SF-OUT	Splatter filter output	31	N-DET	Noise detection
4	SFC 2	External splatter filter	32	RSSI-DET	RSSI detection
5	SFC 1	COMP output	33	IF 2-IN	IF amp 2 input
6	COMP-DC	COMP output V_{REF}	34	IF 2-V_{REF}	IF amp 2 V_{REF}
7	POFF	Power down input	35	IF 1-OUT	IF amp 1 output
8	MIC-OUT	Microphone amp output	36	V_{CC1}	V_{CC1}
9	MIC-IN	Microphone amp input	37	IF 1-IN	IF amp 1 input
10	BREF	Audio system reference output	38	GND 1	Ground 1
11	PD-OUT	Power down output	39	RXVCC	RX-counter V_{CC}
12	V_{CC2}	V_{CC2}	40	PDL	BL, PD threshold selection
13	DOUT	Data amp output	41	RXGND	RX - counter gnd
14	GND 2	Ground 2	42	FINR	RX - counter input
15	BTL	SP amp output 1	43	SIG-OUT	LD, RSSI, ND output
16	SP-OUT	SP amp output 2	44	Batt-Low	Battery Low output
17	SP-IN	SP amp input	45	VSS	Logic gnd
18	TXDET	Half-Mute detection	46	RX-PD	RX-phase comparator output
19	PE	ZAP write	47	PLLREG	Logic power source output
20	GND 3	Ground 3	48	TX-PD	TX-phase comparator output
21	EXPOUT	EXP output	49	TXVCC	TX-counter V_{CC}
22	DIN	Data amp input	50	FINT	TX-counter input
23	EDET	EXP detection	51	TXGND	TX-counter gnd
24	PreAMP-OUT	Pre-amp output	52	OSCI	Xtal oscillator input
25	PreAMP-IN	Pre-amp input	53	OSCD 1	Xtal oscillator output 1
26	DET-OUT	FM detector output	54	OSCD 2	Xtal oscillator output 2
27	NFIN	Noise filter input	55	DATA	Serial data input
28	NFOUT	Noise filter output	56	CLK	Clock input

■ Absolute Maximum Ratings

A	Absolute Maximum Ratings				
No.	Parameter	Symbol	Rating	Unit	Note
1	Storage temperature	T_{stg}	– 55 to + 125	°C	*1
2	Operating ambient temperature	T_{opr}	– 20 to + 75	°C	*1
3	Operating ambient atmospheric pressure	P_{opr}	$1.013 \times 10^5 \pm 0.61 \times 10^5$	Pa	
4	Operating constant gravity	G_{opr}	9 810	m/S^2	
5	Operating shock	S_{opr}	4 900	m/S^2	
6	Supply voltage	V_{CC1}, V_{CC2}, RxV_{CC},TxV_{CC}	6.5	V	*2
7	Supply current	I_{CC}	30	mA	*3
8	Power dissipation	P_D	195	mW	

Note) *1 : Expect for the operating ambient temperature and storage temperature , all ratings are for Ta = 25°C.

*2 : Power supply terminals (V_{CC1} (Pin 36), V_{CC2} (Pin 12)) should be supplied with same supply voltage.

*3 : I_{CC} is defined as total current consumption at four power supply terminals (V_{CC1} (Pin 36), V_{CC2} (Pin 12), RxV_{CC} (Pin 39), TxV_{CC} (Pin 49)).

From now on, we call this four supply voltage as V_{CC}.

■ Operating Supply Voltage Range

Parameter	Symbol	Range	Unit
Operating supply voltage range	V_{CC1}, V_{CC2}, RxV_{CC},TxV_{CC}	2.7 to 5.5	V

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