

# DATA SHEET

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

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# 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

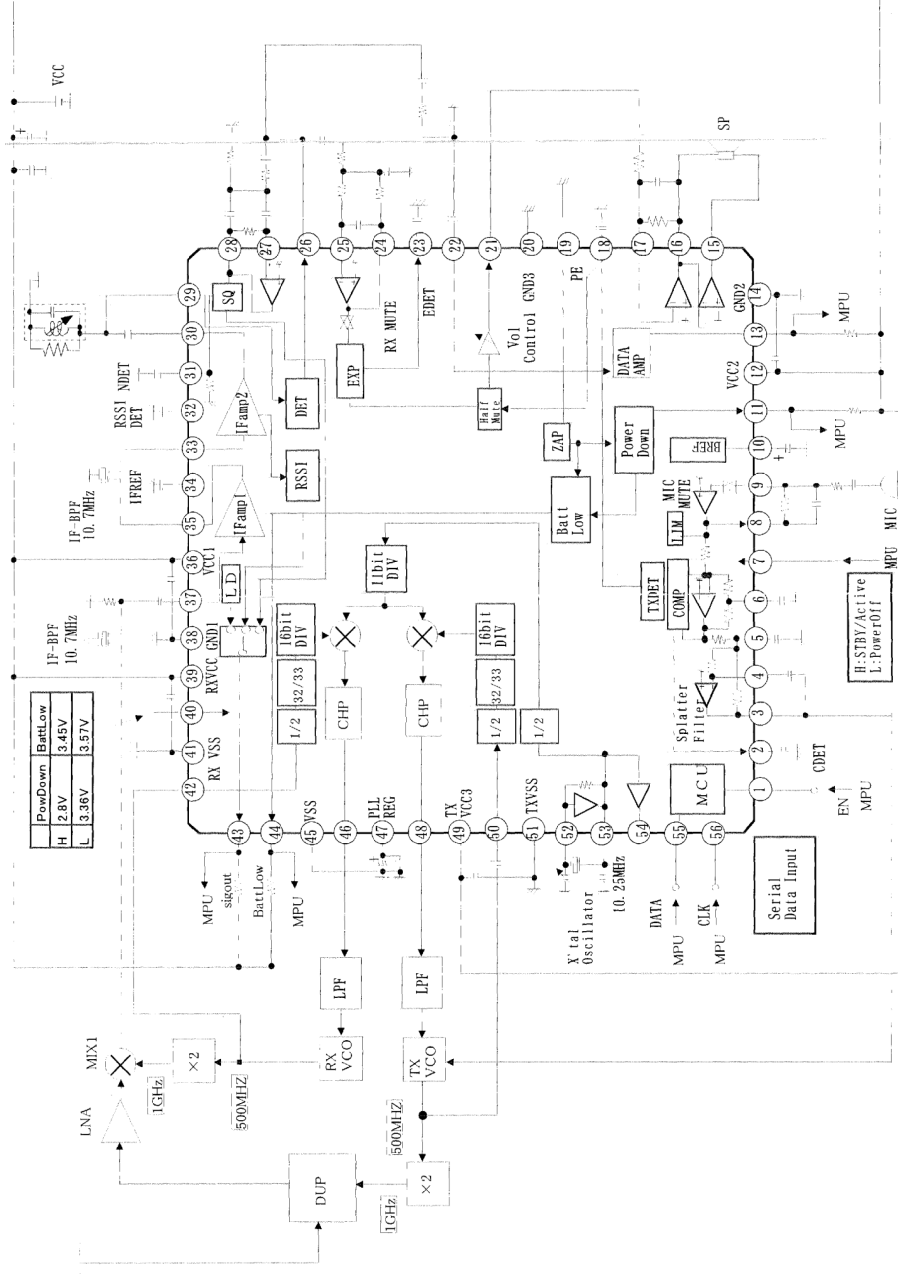
### ■ Applications

- 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	$T_{\text{stg}}$	– 55 to + 125	°C	*1
2	Operating ambient temperature	$T_{\text{opr}}$	– 20 to + 75	°C	*1
3	Operating ambient atmospheric pressure	$P_{\text{opr}}$	$1.013 \times 10^5 \pm 0.61 \times 10^5$	Pa	
4	Operating constant gravity	$G_{\text{opr}}$	9 810	m/S <sup>2</sup>	
5	Operating shock	$S_{\text{opr}}$	4 900	m/S <sup>2</sup>	
6	Supply voltage	$V_{\text{CC1}}, V_{\text{CC2}},$ $RxV_{\text{CC}}, TxV_{\text{CC}}$	6.5	V	*2
7	Supply current	$I_{\text{CC}}$	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  $T_a = 25^\circ\text{C}$ .

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

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

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

### ■ Operating Supply Voltage Range

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

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