DATA SHEET

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

SEMICONDUCTOR COMPANY MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.

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Silicon Monolithic Bi-CMOS IC

Features

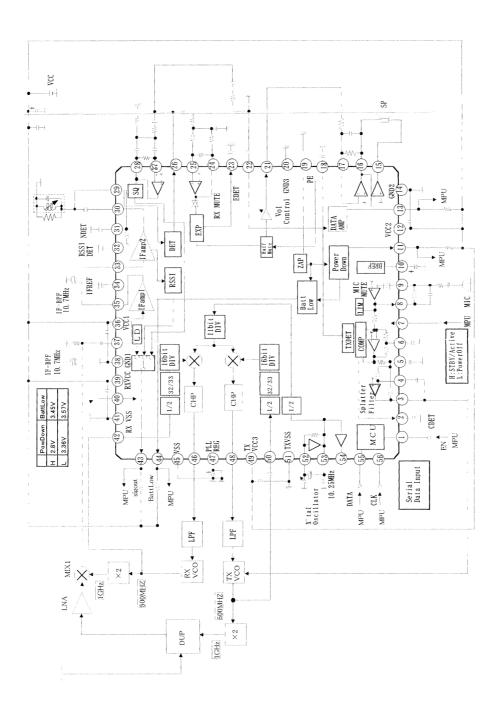
• IF-AMP 1, IF-AMP 2, DET, NOISE-SQ, RSSI, DATA-AMP, BATT-LOW, COMPANDER, SP-AMP, Half-Mute, OSC, PRESCALER, PROGRAMMABLE-COUNTER, Pre-AMP, Vol Control, Power Down, Splatter-Filter

Applications

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

Package

• Quad 56-Pin Plastic Package (QFP Type)



SDE00022AEB

Application Circuit

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■Pin Descriptions

Pin No.	o. 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

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Absolute Maximum Ratings

Α	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}	$1.013 imes 10^5 \pm 0.61 imes 10^5$	Ра		
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 $_{\rm CC1}$ (Pin 36), V $_{\rm CC2}$ (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 $\ensuremath{V_{\text{CC}}}$.

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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