AN6484FBP

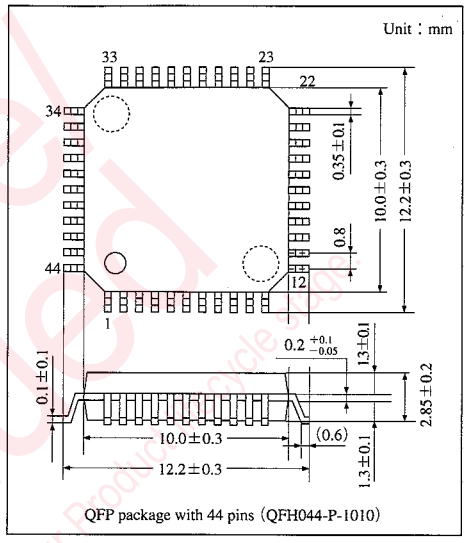
Cellular Telephone Power Supply IC

■ Overview

The AN6484FBP provides 9 regulated voltage outputs, a buzzer function, and a loudspeaker amplifier to make cellular telephones more compact and consuming less power.

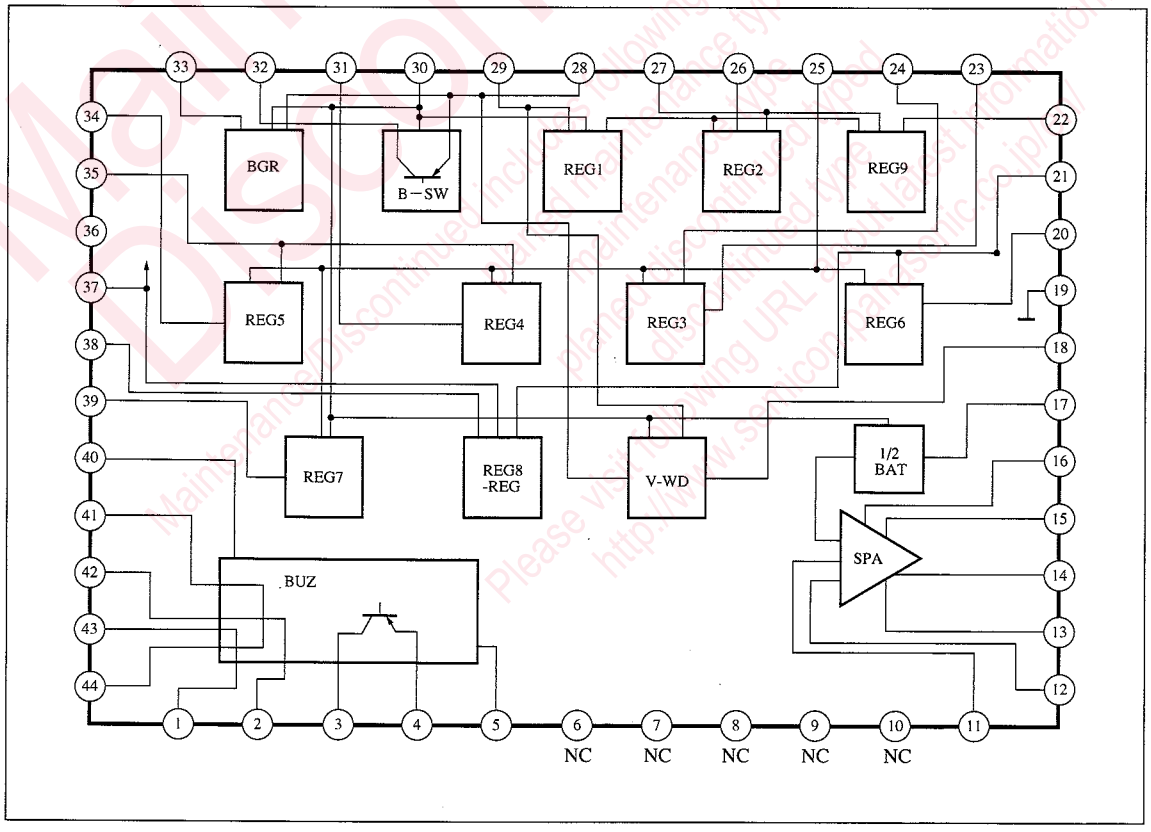
■ Features

- Nine 3.7V regulated voltage outputs
- Incorporates a buzzer function.
- Incorporates a loudspeaker amplifier.
- Incorporates a voltage detection function.



QFP package with 44 pins (QFH044-P-1010)

■ Block Diagram



■ Absolute Maximum Ratings (Ta=25℃)

Parameter	Symbol	Rating	Unit
Supply voltage	V_{CC}	8	V
Supply current	I_{CC}	300	mA
Power dissipation	P_D	1660	mW
Operating ambient temperature	T_{opr}	−20 to +75	℃
Storage temperature	T_{stg}	−55 to +125	℃

■ Recommended Operating Range (Ta=25℃)

Parameter	Symbol	Range
Operating supply voltage range	V_{CC}	3.2 to 7V

■ Electrical Characteristics (Ta=25℃)

Parameter	Symbol	Condition	min	typ	max	Unit
3.7V regulator output voltage (V_L, V_S)	V_{REG1}	V_C=5V, I_{REG}=−30mA	3.563	3.74 (±3.7%)	3.837	V
3.7V regulator saturation voltage	V_{RF}	BATT=4V, I_{REG}=−30mA	3.5	—	3.837	V
3.7V regulator output voltage	V_{RM}	I_{REG}=−50mA	3.4	3.6	3.837	V
3.7V regulator response speed	T_{REG}	R_{REG}=120Ω, C_{REG}=10μF	—	0.7	1.0	ms
Voltage cetection reset toltage (BATT)	V_{BR}	V_L=3.7V, BATT=5 to 3V	3.4	3.6	3.8	V
Voltage detection set voltage (BATT)	V_{BS}	V_L=3.7V, BATT=3 to 5V	3.6	3.8	4.0	V
Voltage detection reset voltage (V_L)	V_{LR}	BATT=5V, V_L=4 to 2.5V	3.1	3.25	3.45	V
Voltage detection reset voltage (V_L)	V_{LS}	BATT=5V, V_L=2.5 to 4V	3.15	3.45	V_L−0.15V	V
Loudspeaker amp. dynamic range	D_{R1}	gain=26dB, R_L=1kΩ, THD=5%, f=1kHz	1	2	—	Vrms
Loudspeaker amp. dynamic range	D_{R2}	gain=26dB, R_L=32Ω, THD=5%, f=1kHz	1	2	—	Vrms

Note) Unless otherwise specified, BATT=5V.

■ Pin Descriptions

Pin No.	Symbol	Description	Pin No.	Symbol	Description
1	B5	Buzzer output	23	VK	REG3 output
2	B8	Buzzer output	24	CT2	REG3 control
3	B4	Buzzer output	25	VBS	Ref. voltage input
4	BATT2	Buzzer battery	26	VB	REG2 output
5	GND2	Buzzer ground	27	CB	REG2/REG9 control
6	NC		28	BATT1	Regulator battery
7	NC		29	V_L	REG1 output
8	NC		30	KB	BGR/V-WD/REG1/REG7/VR (SP) control
9	NC		31	VR2	REG4 output
10	NC		32	B-OUT	Battery output
11	CV2	SP control	33	VBGR	Ref. voltage output
12	VIN	SP input	34	VR1	REG5 output
13	GND3	SP ground	35	CR	REG4/REG5 control
14	V1	SP output (1)	36	GND1A	Regulator ground (BCR/REG4/REG5/REG7)
15	V2	SP output (2)	37	VT3	REG8 input
16	BATT3	SP battery	38	VT2	REG8 output
17	SPVR	SP reference	39	VP	REG7 output
18	R1	V-WD reset output	40	B3	Buzzer input (pulse)
19	GND1B	Regulator ground (REGs. 2, 3, 6, 8, 9, V-WD)	41	B2	Buzzer input
20	VT1	REG6 output	42	B7	Buzzer input
21	CT	REG6/REG8 control	43	B1	Buzzer input
22	VIF	REG9 output	44	B6	Buzzer output

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