

AQA300 Major Function Block Description

H/S RF Module:

RX: The signal from the antenna through a filter 2403MHz, and be strengthen through an amplifier,

Then mix with the local signal generated by VCO, the output signal be filtered 10.7MHz, then output the first IF, then mixed with the signal from the IC DBL5018V, generated the second IF, through 450BW, the AF signal after quad. To compressor & expander IC and RX data shaping circuit.

TX: The AF signal or the TX data from the main board, modulated by the TX VCO, then through gain and power amp. two stage, then and the signal send out from the TX antenna after filtered by 2475.

The RX and TX PLL controlled by LMX1602, the and IC controlled by three group signal (PLL clock, enable, data) from MCU.

H/S MCU:

The H/S use SamSung KS57 series IC, as the main controlle unit, it complete the following functions:

1. Through clock, enable and data controlled the RF Module.
2. Two pin connected the com-mute and exp-mute of compressor&expander IC.
3. Low battery detect.
4. Controlle buzzer circuit.
5. Detected the signal from the dialing key and send the data from the TX data pin.
6. Drive the LCD, and display the data from RF Module or dialing key board on the LCD.
7. Complete the charge detect.

Compress&expander:

It complete the AF compress to RF Module, and expander the AF from the RF Module.

Reduce the noise, improve the distortion.

Power Supply:

The power supply 3.6V to other parts.

B/S RF Module:

RX: The signal from the antenna through a filter 2475MHz, and be strengthen through an amplifier,

Then mix with the local signal generated by VCO, the output signal be filtered 10.7MHz, then output the first IF, then mixed with the signal from the IC DBL5018V, generated the second IF, through 450BW, the AF signal after quad. To compressor & expander IC and RX data shaping circuit.

TX: The AF signal or the TX data from the main board, modulated by the TX VCO, then through gain and power amp. two stage, then and the signal send out from the TX antenna after filtered by 2403.

The RX and TX PLL controlled by LMX1602, the and IC controlled by three group signal (PLL clock, enable, data) from MCU.

B/S MCU

The base unit use EMC78911, it complete the following functions.

1. Through clock, enable and data controlled the RF Module.
2. Two pin connected the com-mute and exp-mute of Compressor&Expander IC.
3. Received the data from RF Module, generated the DTMF signal to the telephone line interface.
4. Detect the ringer from the telephone line interface and send to handset.
5. Compress the signal from the Ringer and Tip.

Compressor&Expander:

It complete the AF compress to RF Module, and expander the AF from the RF Module.

Reduce the noise, improve the distortion.

Power Supply:

The base power supply 12V DC, and supply the handset charge source.

Telephone Line Interface Circuit:

The telephone line interface contact the PSTN and Base other work circuit. It make up of three groups, the ringer circuit, detect part that line and transmission to the telephone line or from the telephone line by match transformer.

ACA300 Antenna Diagram Block Added

H/S: The H/S use two antennas, TX antenna and RX antenna, TX and RX disparate. The RX antenna receive the radio wave from the Base or other equipment, and send the signal to the filter (2403). At the same time, the TX antenna send the signal out from the TX power circuit filtered by a filter (2475). H/S receive frequency from 2402.799043MHz to 2404.749043MHz, H/S send frequency from 2472.24901MHz to 2476.19901MHz.

B/S: The B/S use two antennas, TX antenna and RX antenna, TX and RX disparate. The RX antenna receive the radio wave from the handset or other equipment, and send the signal to the filter (2475). At the same time, the TX antenna send the signal out from the TX power circuit filtered by a filter (2403). B/S receive frequency from 2474.24906MHz from 2476.199006MHz, B/S send frequency from 2402.799039MHz to 2404.749039MHz.

CHANNEL FREQUENCY CARRIER'S ALLOCATION TABLE

CH	BASE Tx (MHz)	BASE Rx (MHz)	CH	HANDSET Tx (MHz)	HANDSET Rx (MHz)
1	2402.799039	2474.249006	1	2474.24901	2402.799043
2	2402.849039	2474.299006	2	2474.29901	2402.849043
3	2402.899039	2474.349006	3	2474.34901	2402.899043
4	2402.949039	2474.399006	4	2474.39901	2402.949043
5	2402.999039	2474.449006	5	2474.44901	2402.999043
6	2403.049039	2474.499006	6	2474.49901	2403.049043
7	2403.099039	2474.549006	7	2474.54901	2403.099043
8	2403.149039	2474.599006	8	2474.59901	2403.149043
9	2403.199039	2474.649006	9	2474.64901	2403.199043
10	2403.249039	2474.699006	10	2474.69901	2403.249043
11	2403.299039	2474.749006	11	2474.74901	2403.299043
12	2403.349039	2474.799006	12	2474.79901	2403.349043
13	2403.399039	2474.849006	13	2474.84901	2403.399043
14	2403.449039	2474.899006	14	2474.89901	2403.449043
15	2403.499039	2474.949006	15	2474.94901	2403.499043
16	2403.549039	2474.999006	16	2474.99901	2403.549043
17	2403.599039	2475.049006	17	2475.04901	2403.599043
18	2403.649039	2475.099006	18	2475.09901	2403.649043
19	2403.699039	2475.149006	19	2475.14901	2403.699043
20	2403.749039	2475.199006	20	2475.19901	2403.749043
21	2403.799039	2475.249006	21	2475.24901	2403.799043
22	2403.849039	2475.299006	22	2475.29901	2403.849043
23	2403.899039	2475.349006	23	2475.34901	2403.899043
24	2403.949039	2475.399006	24	2475.39901	2403.949043
25	2403.999039	2475.449006	25	2475.44901	2403.999043
26	2404.049039	2475.499006	26	2475.49901	2404.049043
27	2404.099039	2475.549006	27	2475.54901	2404.099043
28	2404.149039	2475.599006	28	2475.59901	2404.149043
29	2404.199039	2475.649006	29	2475.64901	2404.199043
30	2404.249039	2475.699006	30	2475.69901	2404.249043
31	2404.299039	2475.749006	31	2475.74901	2404.299043
32	2404.349039	2475.799006	32	2475.79901	2404.349043
33	2404.399039	2475.849006	33	2475.84901	2404.399043
34	2404.449039	2475.899006	34	2475.89901	2404.449043
35	2404.499039	2475.949006	35	2475.94901	2404.499043
36	2404.549039	2475.999006	36	2475.99901	2404.549043
37	2404.599039	2476.049006	37	2476.04901	2404.599043
38	2404.649039	2476.099006	38	2476.09901	2404.649043
39	2404.699039	2476.149006	39	2476.14901	2404.699043
40	2404.749039	2476.199006	40	2476.19901	2404.749043