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<System overview>

The products have been developed for bluetooth headset service to customers.
They consists of Headset(H/S), Audiogate(A/G).

<Components>

H/S components are :
◆ main basic module
◆ I/F module
◆ Battery
◆ Speaker
◆ Microphone

A/G components are :
◆ same main basic module
◆ I/F module
◆ Battery
◆ audio-jack cord.

Technical Circuit Description

1. Main Basic Module - common

U4(BC02-External)

Bluecore2-External is a single chip radio and baseband IC for Bluetooth 2.4GHz system.

U3(Flash-SST39VF800-90-4C-B3K)

Flash memory is loaded Bluetooth stack firmare which runs on the internal RISC microcontroller. This is compliant with the Bluetooth specification.

U1(X'tal-TSX-3225)

X'tal is supplied with reference clock. The clock frequency is 16 MHz.

U2(Balun)

The balun device is converted the differential RF signal to single RF signal.

F1(Band pass filter-BPF)

The BPF filters RF signal. The bandwidth of the BPF is 2.4GHz~2.483GHz. The insertion loss is 0.3 dB.

2. I/F Module of H/S

U233(CODEC-MC145483)

CODEC is supplied with PCM_OUT, PCM_IN, PCM_CLK, PCM_SYNC from U4. This signals carry up to bi-directional channels of voice data, each at 8ksamples/s. The format of the PCM samples can be 8-bit u-law, 13 bit linear or 16-bit linear.

U165/U166(Voltage Regulator-R1140Q)

The output voltage of these regulators is internally fixed high accuracy. The voltage is 3.0 Volt.

3. I/F Module of A/G

U1(Optocoupler-TCMT11_4P)

Optocoupler is used by the purpose of input and output isolation. The element are mounted on one leadframe using a coplanar technique, providing a fixed distance between input and output for highest safety requirements.

<General RF Spec.>

ITEMS	SPECIFICATION	REMARK
Frequency Range	2400 MHz ~ 2483.5 MHz	ISM Band
Maximum Output Power	3 dBm	CLASS II
Minimum Output Power	-14 dBm	CLASS II
Spurious Emissions	Under -30 dBm	2483.5 MHz < f < 2400 MHz
Sensitivity	Under -81 dBm	BER ≤ 0.1 %