Bluetooth® Module
Product By TAIYO YUDEN

No matter how far apart– several devices can be operated at the same time. The module is available worldwide, since the use of the 2.4 GHz band is license free in every country of the world.
Global standard that guarantees compatibility with products of all brands.
TAIYO YUDEN CO., LTD. with customer with a reliable & small-sized module of low power consumption in the best harmony of core technologies: Multi-layer technology, High frequency designing technology & Mounting technology.

- **EYSF2CAXX ;** RF+B.B, UART, Ver.1.2*1, RoHS Available(from Sep, '04)
- **EYSF2CAXX-XX ;** RF+B.B, UART, Embedded SPP, RoHS Available(from Sep, '04)
- **EYSF2CSXX ;** RF+B.B, USB, Ver.1.2*1, RoHS Available(from Sep, '04)
- **EYMF2CAMM ;** ANT+RF+B.B, UART, Ver.1.2*1 RoHS Available(from Jan, '05)
- **EYMF2CAMM-XX ;** ANT+RF+B.B, UART, Embedded SPP, RoHS Available(from Jan, '05)
- **EYMF2CSMM ;** ANT+RF+B.B, USB, Ver.1.2*1, RoHS Available(from Jan, '05)
- **EYTF2CSTT ;** RF+B.B, USB, Connector Type, Ver.1.2*1, RoHS Available(from Jan, '05)
- Up!! **EYSFCCSXX ;** RF+B.B, USB, Connector Type, Ver.1.2, RoHS Available
- Up!! **EYSFDCSXX ;** ANT+RF+B.B, USB, Connector Type, Ver.1.2, RoHS Available
- **EWSCASQXX ;** RF,CDMA I/F,5.1x5.1mm, RoHS Available
- New!! **EWSCBBQXX ;** RF,CDMA I/F,5.0x4.0mm, RoHS Available
- New!! **EYSF1UAXX**(-XX) ; RF+B.B, UART, Class1,(Embedded SPP), Ver.1.2, RoHS Available
- **EYSF2CSUU ;** USB Adaptor (Dongle)
- **Evaluation Kit, Evaluation Board**

*All modules mentioned above are Class 2 unless stated.
*Ver. 1.2*1 ; Ver. 1.2 Mandatory Available (include Faster Connection, AFH)
*RoHS ; Restriction of the use of certain hazardous substances in electrical and electronic equipment.

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Bluetooth® **Module**

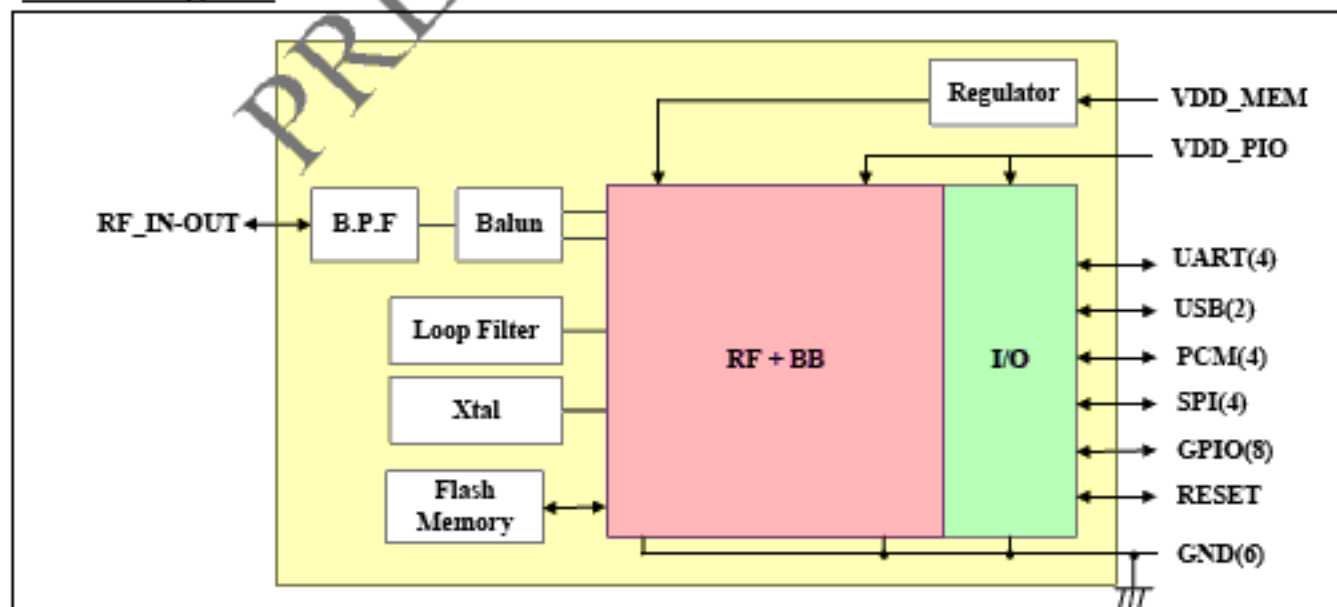## Class2 UART Full Module

EYSF2CAXX

Features

- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver. 1.2 conformity.
- Internal baseband clock oscillator.
- Internal 1.8V regulator
- Low current consumption
- Support functions
  SCO links,ACL links,Piconet<7>,Hold,Sniff,Park, AFH, Faster connection
- Interface:EYSF2CAXX:UART&PCM(for voice CODEC)
- Protocol stack:Under HCI firmware
- Small outline.   15.4 x 10 x 2.0 mm
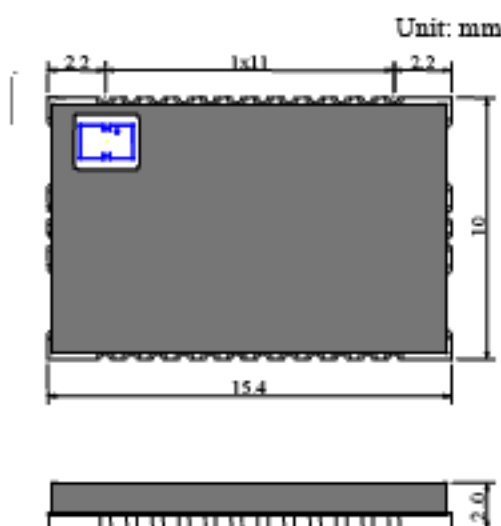
Applications

- Notebook PC
- PDA
- Cellular Phone

Outline

Unit: mm

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD_MEM)		3.00	3.30	3.60	V
Operating Voltage (VDD_PIO)		3.00	3.30	3.60	V
RF Output Power	measured in 50 ohm	-6	0	4	dBm
RX Sensitivity			-83	-70	dBm
Load Impedance	No abnormal Oscillation			5:1	-
Input Low Voltage	RESET, UART, GPIO, PCM	-0.30	-	0.80	V
Input High Voltage	RESET, UART, GPIO, PCM	0.70VDD_PIO	-	VDD_PIO+0.30	V
Output Low Voltage	UART, GPIO, PCM	-	-	0.40	V
Output High Voltage	UART, GPIO, PCM	VDD_PIO-0.40	-	-	V
Average Current Consumption	Receive DM1		46	-	mA

Block Diagram

Note: The above PRELIMINARY data are not guaranteed and are subject to change without notice.
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TAIYO YUDEN

Bluetooth® Module

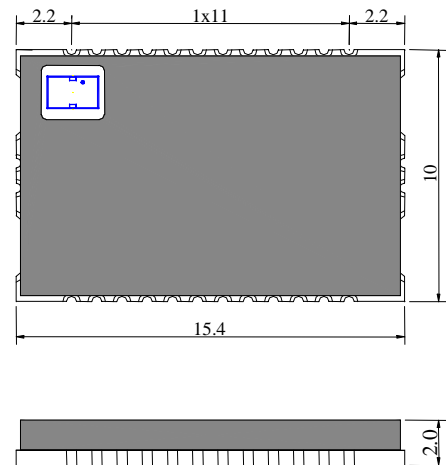## Simple Cable Replacement

EYSF2CA**-**

Features

- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver1.1 conformity.
- Internal baseband clock oscillator.
- Internal 1.8V regulator
- Low current consumption
- Support functions

Serial Port Emulation (Point-To-Point)

- Interface: UART
- Protocol Stack/Profile (L2CAP,RFCOMM,SDP,GAP,SPP)
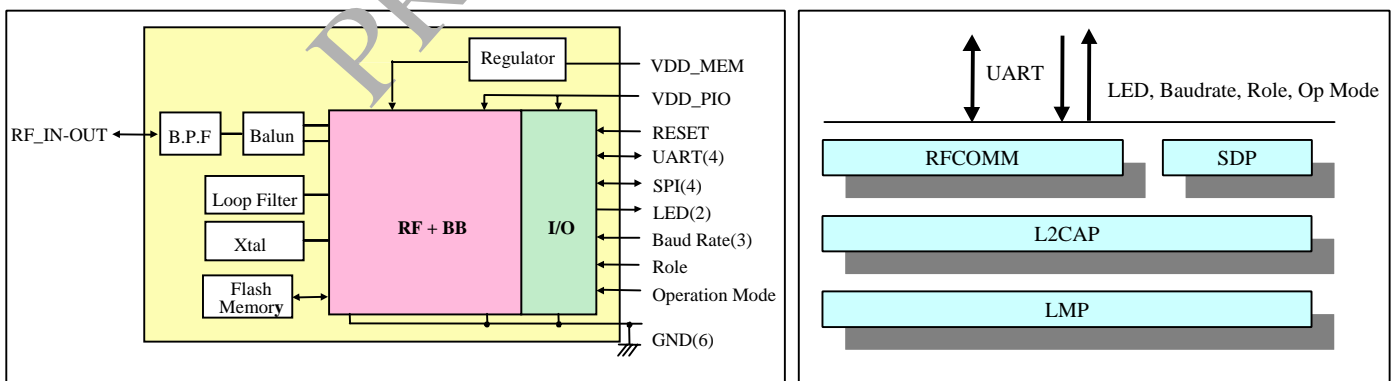- Small outline.   **15.4** x **10** x **2.0** mm

Applications

- POS,Barcode Reader,FA equipments

Outline

Unit: mm

2.2   1x11   2.2

10

15.4

2.0

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD_MEM)		3.00	3.30	3.60	V
Operating Voltage (VDD_PIO)		3.00	3.30	3.60	V
RF Output Power	measured in 50 ohm	-6	0	4	dBm
RX Sensitivity			-83	-70	dBm
Load Impedance	No abnormal Oscillation			5:1	-
Input Low Voltage	RESET, UART, GPIO	-0.30	-	0.80	V
Input High Voltage	RESET, UART, GPIO	0.70VDD_PIO	-	VDD_PIO+0.30	V
Output Low Voltage	UART, GPIO	-	-	0.40	V
Output High Voltage	UART, GPIO	VDD_PIO-0.40	-	-	V
Average Current Consumption	Receive DM1 Packet		TBD	-	mA

Block Diagram

Regulator — VDD_MEM

VDD_PIO

RF_IN-OUT — B.P.F — Balun

Loop Filter

Xtal

Flash Memory

RF + BB   I/O

RESET
UART(4)
SPI(4)
LED(2)
Baud Rate(3)
Role
Operation Mode
GND(6)

UART

LED, Baudrate, Role, Op Mode

RFCOMM   SDP

L2CAP

LMP

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Bluetooth® Module

Class2 USB Full Module

EYSF2CSXX

Features

- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver. 1.2 conformity.
- Internal baseband clock oscillator.
- Internal 1.8V regulator
- Low current consumption
- Support functions
  SCO links,ACL links,Piconet<7>,Hold,Sniff,Park, AFH, Faster connection
- Interface:EYSF2CSXX: USB(for data and voice)
- Protocol stack:Under HCI firmware
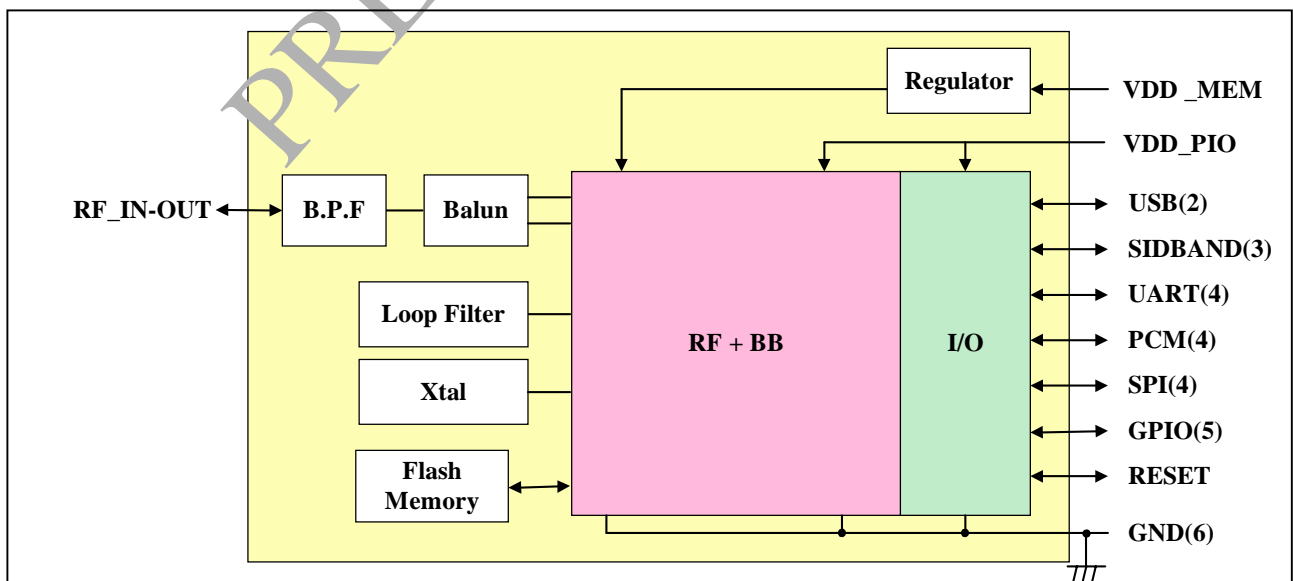- Small outline.   **15.4** x **10** x **2.0** mm
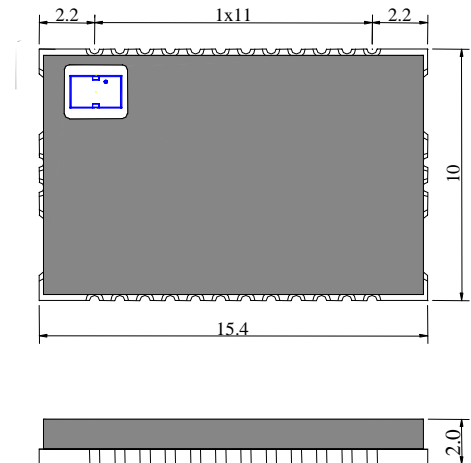
Applications

- Notebook PC
- PDA

Outline

Unit: mm

2.2   1x11   2.2

10

15.4

2.0

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD_MEM)		3.10	3.30	3.45	V
Operating Voltage (VDD_PIO)		3.10	3.30	3.45	V
RF Output Power	measured in 50 ohm	-6	0	4	dBm
RX Sensitivity			-83	-70	dBm
Load Impedance	No abnormal Oscillation			5:1	-
Input Low Voltage	RESET, SIDBAND, GPIO	-0.30	-	0.80	V
Input Low Voltage	D+, D-	-		0.80	V
Input High Voltage	RESET, SIDBAND, GPIO	0.70VDD_PIO	-	VDD_PIO+0.30	V
Input High Voltage	D+, D-	2.00	-	-	V
Output Low Voltage	SIDBAND, GPIO	-	-	0.40	V
Output Low Voltage	D+, D-	-	-	0.30	V
Output High Voltage	SIDBAND, GPIO	VDD_PIO-0.40	-	-	V
Output High Voltage	D+, D-	2.80	-	-	V
Average Current Consumption	Receive DM1		48	-	mA

Block Diagram

PRELIMINARY

Regulator → VDD _MEM

VDD_PIO

RF_IN-OUT ← B.P.F — Balun — RF + BB — I/O

Loop Filter

Xtal

Flash Memory

USB(2)
SIDBAND(3)
UART(4)
PCM(4)
SPI(4)
GPIO(5)
RESET
GND(6)

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Bluetooth® **Module**

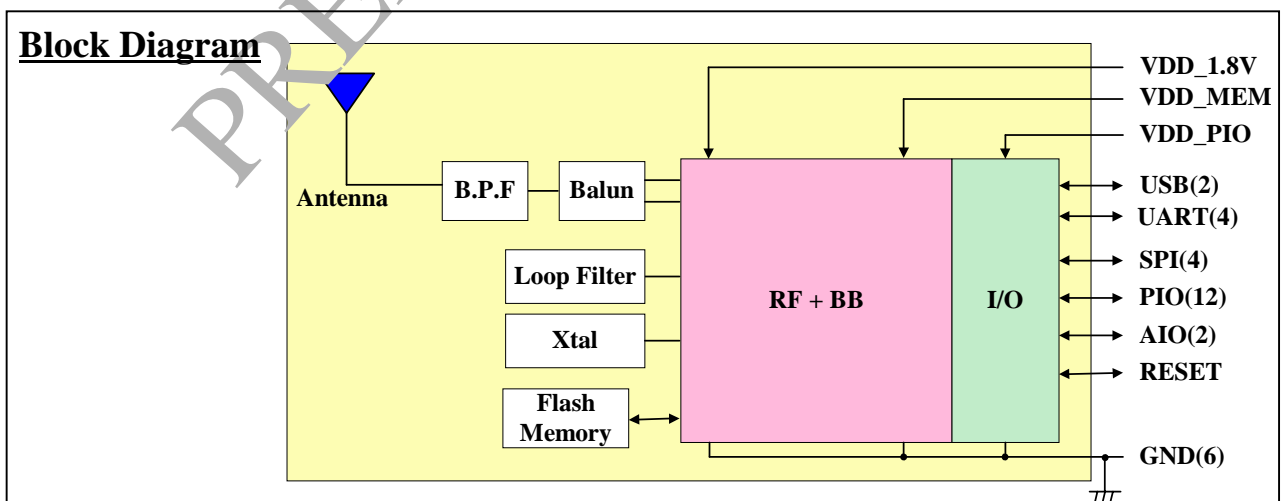## Class 2 UART All In One(ANT+RF+BB)   EYMF2CAMM

Features

- **Antenna is provided on board**
- **The module is Max.4 dBm(Class2)module**
- **Bluetooth® standard Ver. 1.2 conformity**
- **Internal baseband clock oscillator**
- **Low current consumption**
- **Support functions**
  ACL links, Piconet<7>, Hold, Sniff, Park, AFH, Faster connection
- **Interface: UART**
- **HCI module**
- **Outline: 34.0 x 15.6 x 3.7 mm**
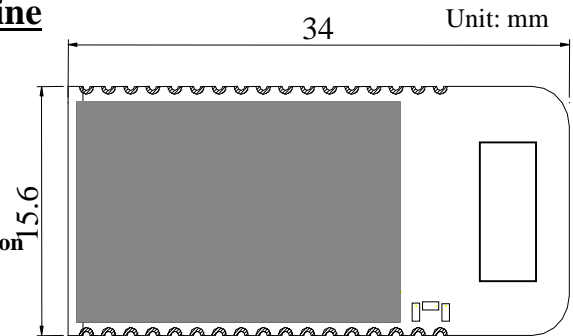
Outline

Unit: mm

34

15.6

3.7

Applications

- **PC & peripheral**

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage(VDD_MEM)	VDD_MEM = VDD_PIO	3.0	3.3	3.6	V
Operating Voltage(VDD_PIO)	VDD_MEM = VDD_PIO	3.0	3.3	3.6	V
Operating Voltage(VDD_1.8)		1.75	1.8	1.9	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Operation temperature range		0	25	70	Degree C
Input Low Voltage	PIO, AIO, SPI	-0.3		0.8	V
Input Low Voltage	UART_RX, UART_CTS	-0.3		0.8	V
Input Low Voltage	RESET	-0.3		0.8	V
Input High Voltage	PIO, AIO, SPI	0.7VDD_PIO		VDD +0.3	V
Input High Voltage	UART_RX, UART_CTS	0.7VDD_PIO		VDD +0.3	V
Input High Voltage	RESET	0.7VDD_PIO		VDD +0.3	V
Output Low Voltage	PIO, AIO, SPI	-		0.4	V
Output Low Voltage	UART_TX, UART_RTS	-		0.4	V
Output High Voltage	PIO, AIO, SPI	VDD -0.4		-	V
Output High Voltage	UART_TX, UART_RTS	VDD -0.4		-	V
Average Current Consumption	Receive DM1(VDD_MEM,VDD_PIO)		14	-	mA
	Receive DM1(VDD_1.8)		35	-	

Block Diagram

VDD_1.8V
VDD_MEM
VDD_PIO

Antenna — B.P.F — Balun

Loop Filter

Xtal

Flash Memory

RF + BB

I/O

USB(2)
UART(4)
SPI(4)
PIO(12)
AIO(2)
RESET

GND(6)

Note: The above PRELIMINARY data are not guaranteed and are subject to change without notice.
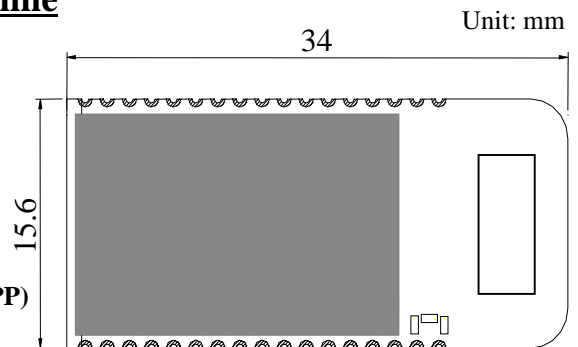**The *Bluetooth*® word mark and logos are owned by the *Bluetooth* SIG, Inc. and any use of such marks by TAIYO YUDEN CO., LTD. is under license.**

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Bluetooth® **Module**
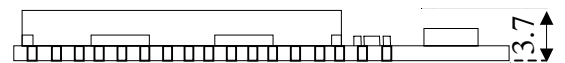
Simple Cable Replacement
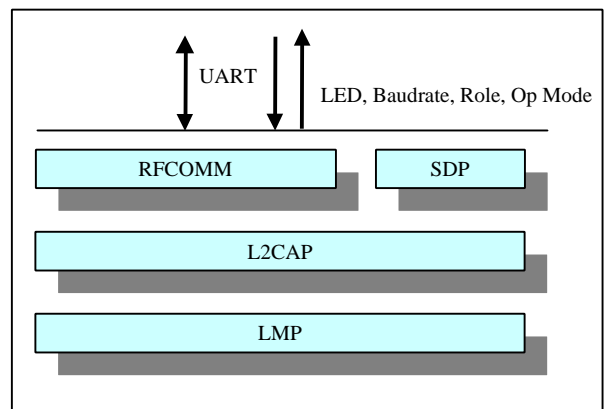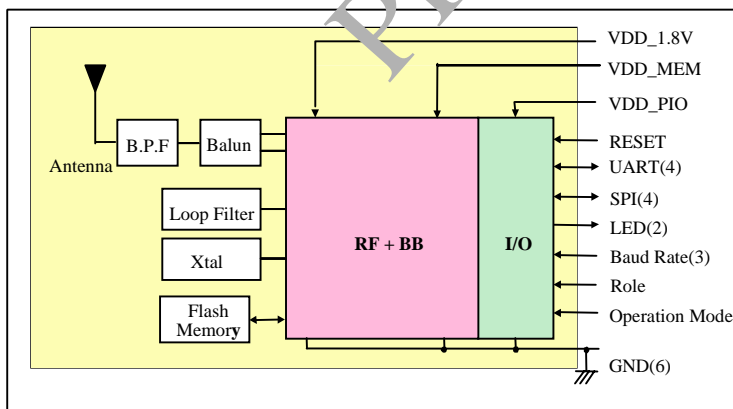
EYMF2CA**-**

Features

- • Antenna is provided on board
- • The module is Max.4 dBm(Class2)module
- • *Bluetooth*® standard Ver.1.1 conformity
- • Internal baseband clock oscillator
- • Low current consumption
- • Support functions
  Serial Port Emulation (Point-To-Point)
- • Interface: UART
- • Protocol Stack/Profile (L2CAP,RFCOMM,SDP,GAP,SPP)
- • Outline: 34.0 x 15.6 x 3.7 mm

Outline

Unit: mm

34

15.6

3.7

Applications

- • POS,Barcode Reader,FA equipments

General Electrical Specification

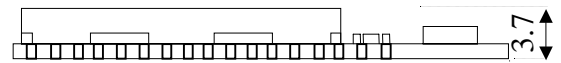| Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage(VDD_MEM)		3.0	3.3	3.6	V
Operating Voltage(VDD_PIO)		3.0	3.3	3.6	V
Operating Voltage(VDD_1.8V)		1.7	1.8	1.9	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Operation temperature range		0	25	70	Degree C
Input Low Voltage	PIO, AIO, SPI	-0.3		0.8	V
Input Low Voltage	UART_RX, UART_CTS	-0.3		0.8	V
Input Low Voltage	RESET	-0.3		0.8	V
Input High Voltage	PIO, AIO, SPI	0.7VDD_PIO		VDD +0.3	V
Input High Voltage	UART_RX, UART_CTS	0.7VDD_PIO		VDD +0.3	V
Input High Voltage	RESET	0.7VDD_PIO		VDD +0.3	V
Output Low Voltage	PIO, AIO, SPI	-		0.4	V
Output Low Voltage	UART_TX, UART_RTS	-		0.4	V
Output High Voltage	PIO, AIO, SPI	VDD -0.4		-	V
Output High Voltage	UART_TX, UART_RTS	VDD -0.4		-	V
Average Current Consumption 1	Receive DM1 Packet		TBD	-	mA

Block Diagram

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TAIYO YUDEN
Bluetooth® **Module**

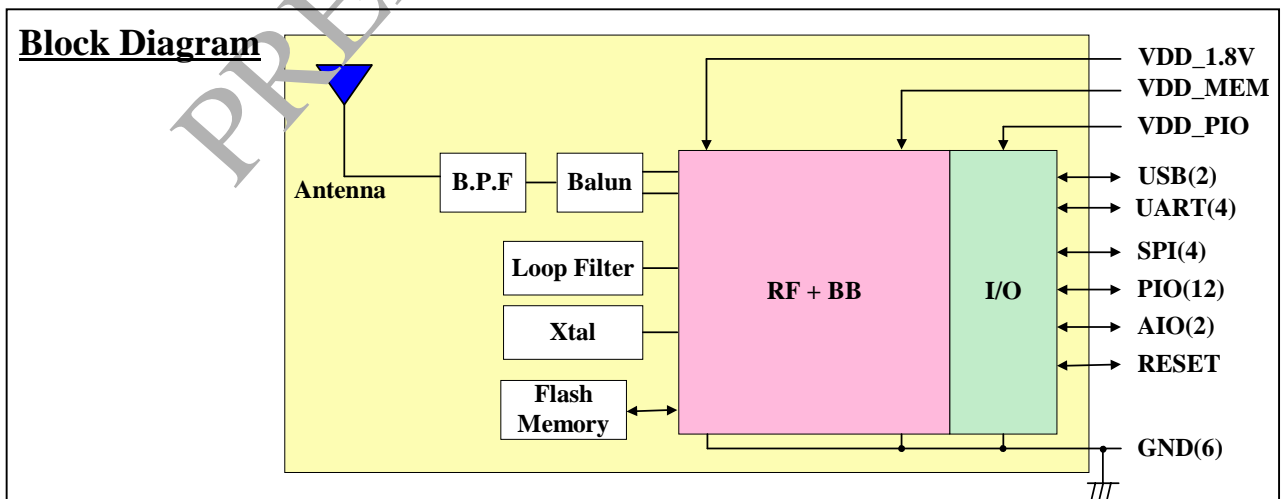| **Class 2 USB All In One(ANT+RF+BB)**	**EYMF2CSMM**

Features

Outline

Unit: mm

• **Antenna is provided on board**
•**The module is Max.4 dBm(Class2)module**
• *Bluetooth*® **standard Ver. 1.2 conformity**
• **Internal baseband clock oscillator**
• **Low current consumption**
• **Support functions**
  ACL links, Piconet<7>, Hold, Sniff, Park, AFH, Faster connection
• **Interface: USB**
• **HCI module**
• **Outline: 34.0 x 15.6 x 3.7 mm**
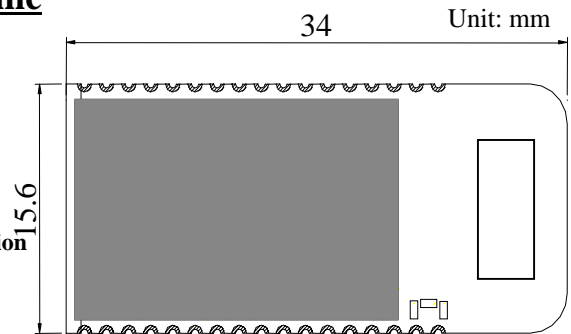
34

15.6

3.7

Applications

• **PC & peripheral**

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage(VDD_MEM)		3.1	3.3	3.45	V
Operating Voltage(VDD_PIO)		3.1	3.3	3.45	V
Operating Voltage(VDD_1.8V)		1.7	1.8	1.9	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Operation temperature range		0	25	70	Degree C
Input Low Voltage	PIO, AIO, SPI	-0.3		0.8	V
Input Low Voltage	D+, D-	-		0.8	V
Input Low Voltage	RESET	-0.3		0.8	V
Input High Voltage	PIO, AIO, SPI	0.7VDD_PIO		VDD +0.3	V
Input High Voltage	D+, D-	2.0		-	V
Input High Voltage	RESET	0.7VDD_PIO		VDD +0.3	V
Output Low Voltage	PIO,AIO,SPI	-		0.4	V
Output Low Voltage	D+, D-	-		0.3	V
Output High Voltage	PIO, AIO, SPI	VDD_PIO-0.4		-	V
Output High Voltage	D+, D-	2.8		-	V
Average Current Consumption	Receive DM1(VDD_MEM,VDD_PIO)		14	-	mA
	Receive DM1(VDD_1.8)		37	-	

Block Diagram

Antenna · B.P.F · Balun · Loop Filter · Xtal · Flash Memory · RF + BB · I/O

VDD_1.8V
VDD_MEM
VDD_PIO
USB(2)
UART(4)
SPI(4)
PIO(12)
AIO(2)
RESET
GND(6)

TAIYO YUDEN   *Bluetooth*® **Module**

Class 2 USB Connector Type Full Module   EYTF2CSTT

Features

- **The module is a Max.4dBm(Class2) module.**
- ***Bluetooth*® standard Ver. 1.2 conformity.**
- **Internal baseband clock oscillator.**
- **Internal 1.8V regulator.**
- **Low current consumption.**
- **Support functions**
  ACL links, Piconet<7>, Hold, Sniff, Park, AFH, Faster connection
- **USB Interface**
- **Protocol stack: Under HCI firmware.**
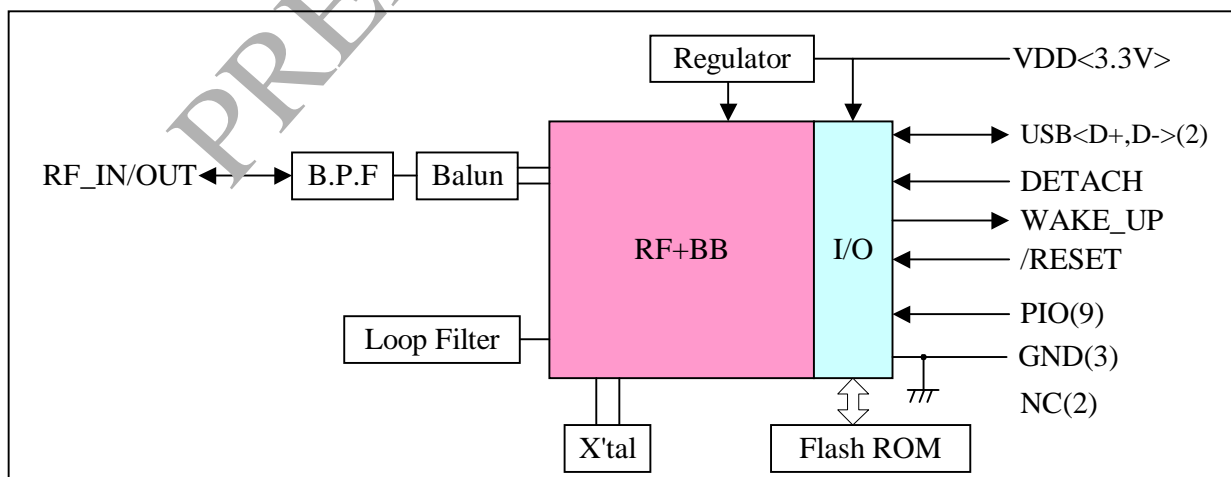- **Outline: 26.0 x 23.0 x 3.0 mm.**
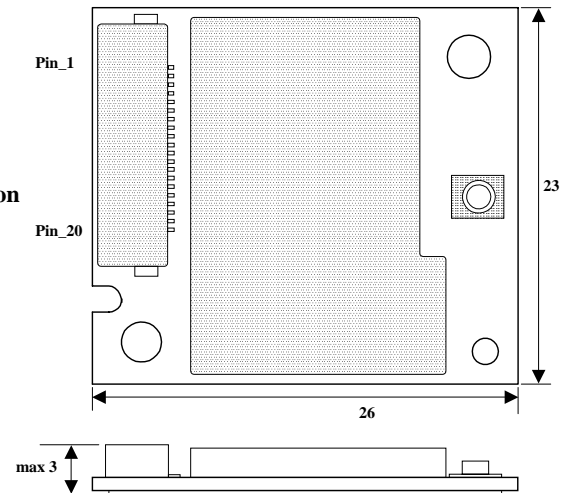
Applications

- **Notebook PC**
- **PDA**

Outline

Unit: mm

Pin_1

Pin_20

23

26

max 3

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage(VDD)		3.15	3.3	3.45	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Input Low Voltage	DETACH, PIO	-0.3		0.56	V
Input Low Voltage	D+,D-	-		0.8	V
Input Low Voltage	/RESET	0		0.6	V
Input High Voltage	DETACH, PIO	2.47		VDD +0.3	V
Input High Voltage	D+, D-	2.0		-	V
Input High Voltage	/RESET	High-Z		-	V
Output Low Voltage	WAKE_UP	-		0.4	V
Output Low Voltage	D+, D-	-		0.3	V
Output High Voltage	WAKE_UP	2.31		-	V
Output High Voltage	D+, D-	2.8		-	V
Average Current Consumption	Receive DM1		52.5	-	mA

Block Diagram

Regulator — VDD<3.3V>

RF_IN/OUT — B.P.F — Balun — RF+BB — I/O

USB<D+,D->(2)
DETACH
WAKE_UP
/RESET
PIO(9)
GND(3)
NC(2)

Loop Filter

X'tal   Flash ROM

TAIYO YUDEN — *Bluetooth*® **Module**
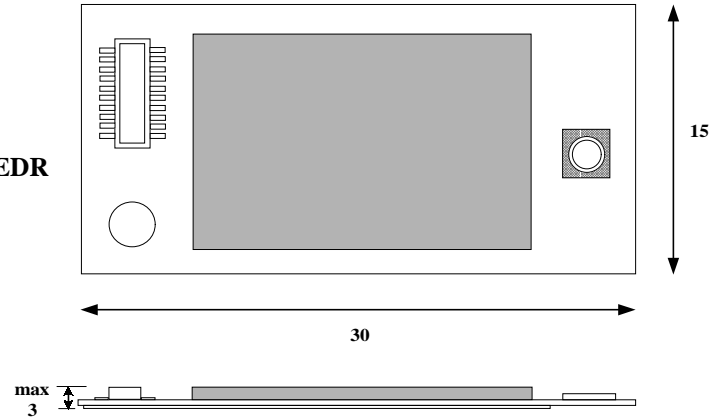
Class 2 Full Module (RF Connector Type)   EYSFCCSXX

Features

- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver. 1.2 conformity.
- Internal baseband clock oscillator.
- Support functions
  - Bluetooth
    ACL links, Piconet<7>, Scatternet <2.5>, Hold, Sniff,
    Park, AFH & Coexistence, Faster connection , eSCO , EDR
  - Others
    Selective Suspend, Dual Boot.
- USB Interface
- Protocol stack: Under HCI firmware.
- Outline: 30 x 15 x 3 mm.
- Complete Lead Free
- RoHS Available

Applications

- Notebook PC

Outline

Unit: mm

15

30

max 3

Board to Board Connector

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD)	USB Interface	3.15	3.3	3.45	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Input Low Voltage	/RESET, PIO	-0.3		0.8	V
Input Low Voltage	D+,D-	-		0.8	V
Input High Voltage	/RESET, PIO	0.7 x VDD		VDD +0.3	V
Input High Voltage	D+, D-	2.0		-	V
Output Low Voltage	PIO	-		0.4	V
Output Low Voltage	D+, D-	-		0.3	V
Output High Voltage	PIO	0.8 x VDD		-	V
Output High Voltage	D+, D-	2.8		-	V
Average Current Consumption	Receive DM1		T.B.D	-	mA

Block Diagram

RF_IN/OUT — RF Conn — Balun Filter — RF+BB — I/O

VDD<3.3V>
UART[4]
USB<D+,D->
SPI[4]
RESET
PIO[7]
GND

X'tal

Flash ROM

TAIYO YUDEN

Bluetooth® **Module**
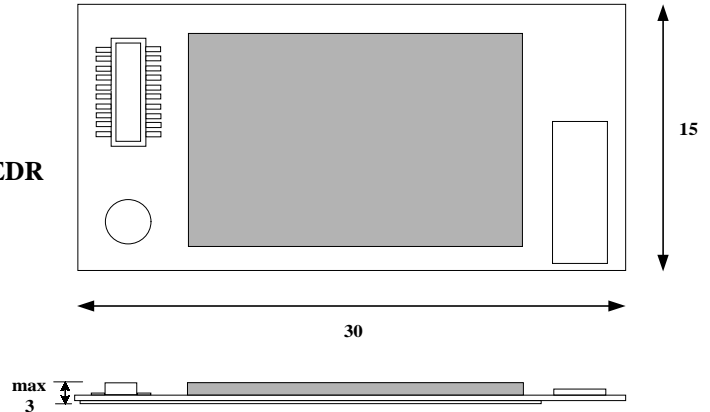
Class 2 Full Module (Antenna Type)

EYSFDCSXX

Features

- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver. 1.2 conformity.
- Internal baseband clock oscillator.
- Support functions
  - Bluetooth
    ACL links, Piconet<7>, Scatternet <2.5>, Hold, Sniff,
    Park, AFH & Coexistence, Faster connection , eSCO , EDR
  - Others
    Selective Suspend, Dual Boot.
- USB Interface
- Protocol stack: Under HCI firmware.
- Outline: 30 x 15 x 3 mm.
- Complete Lead Free
- RoHS Available

Applications

- Notebook PC

Outline

Unit: mm

15

30

max 3

Board to Board Connector

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD)	USB Interface	3.15	3.3	3.45	V
RF Output Power	Measured in 50 ohm	-6	0	4	dBm
RX Sensitivity		-	-83	-70	dBm
Load Impedance	No abnormal Oscillation	-		5:1	-
Input Low Voltage	/RESET, PIO	-0.3		0.8	V
Input Low Voltage	D+,D-	-		0.8	V
Input High Voltage	/RESET, PIO	0.7 x VDD		VDD +0.3	V
Input High Voltage	D+, D-	2.0		-	V
Output Low Voltage	PIO	-		0.4	V
Output Low Voltage	D+, D-	-		0.3	V
Output High Voltage	PIO	0.8 x VDD		-	V
Output High Voltage	D+, D-	2.8		-	V
Average Current Consumption	Receive DM1		T.B.D	-	mA

Block Diagram

Antenna

Balun Filter

RF+BB

I/O

X'tal

Flash ROM

VDD<3.3V>

UART[4]

USB<D+,D->

SPI[4]

RESET

PIO[7]

GND

PRELIMINARY

TAIYO YUDEN

Bluetooth® **Module**

Class2 *Bluetooth*® RF Module

EWSCASQ**

Features

- The module is a Max.4dBm (Class2) module.
- *Bluetooth*® standard Ver1.1 conformity.
- Compatible with CDMA Interface.
- Supports multiple host reference clock inputs
  (19.2MHz, 19.68MHz and 19.8MHz)
- Supports multiple host reference clock inputs
  (Reference clock frequency is corresponding to last 2
    wild cards(**) of the module name.
  "XX" : 19.2MHz, "XY" : 19.68MHz and "XZ" : 19.8MHz)
- Shield case type.
- Small outline by LTCC substrate built-in RF function.
- Outline : **5.1** x **5.1** x **1.2** mm   Pin pitch 0.8mm
- 16 pin LGA package.
- Lead Free
- RoHS Available

Outline

5.1 +/- 0.2

5.1 +/- 0.2

1.2 +/- 0.1

1.35   0.8x3   1.35
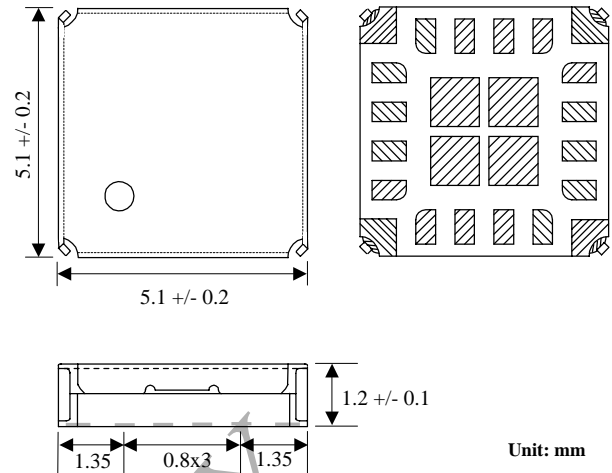
Unit: mm

Applications

- Cellular Phone

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Supply Voltage	VDD	2.3		3.6	V
Supply Voltage	VDD_IO	1.62		3.6	V
RF Output Power	Measured in 50 ohm	-6	-1	4	dBm
RX Sensitivity			-80	-70	dBm
TX Peak Current Consumption	Worst Case Transmit Mode		62		mA
RX Peak Current Consumption	Worst Case Receive Mode		74		mA
General Operating Temperature condition		-30	25	80	deg-C
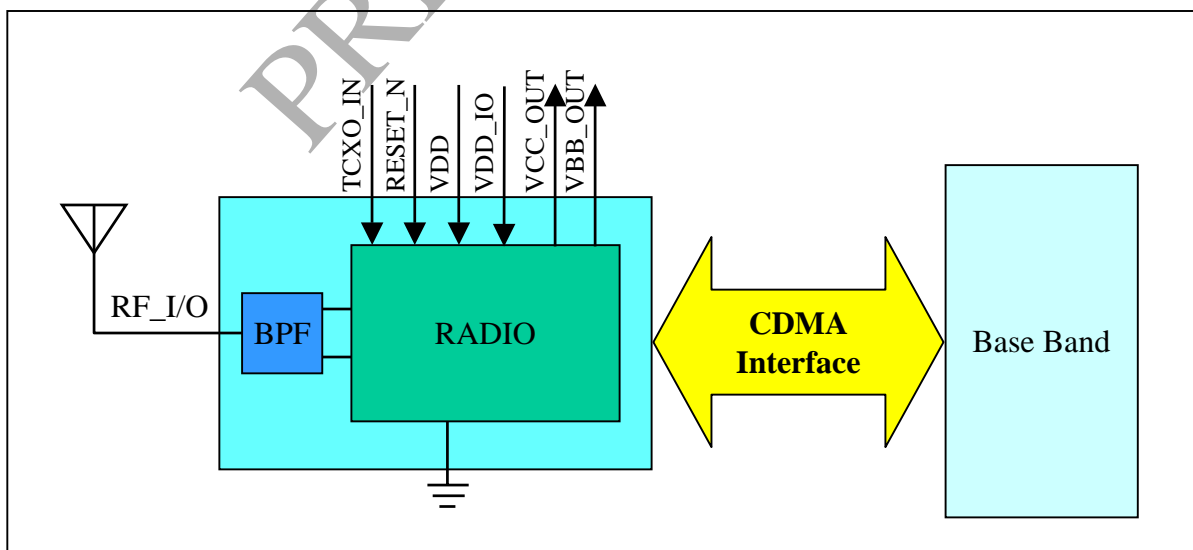
Block Diagram

RF_I/O — BPF — RADIO — CDMA Interface — Base Band

TCXO_IN RESET_N VDD VDD_IO VCC_OUT VBB_OUT

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TAIYO YUDEN

Bluetooth® Module

## Class2 *Bluetooth*® RF Module

EWSCBBQXX

Features

- The module is a Max.4dBm (Class2) module.
- *Bluetooth*® standard Ver1.1, 1.2 conformity.
- Compatible with CDMA Interface.
- Support the 19.2MHz host reference clock input.
- Shield case type.
- Small outline by LTCC substrate built-in RF function.
- Outline : **5.0** x **4.0** x **1.35max** mm   Pin pitch 0.75mm (Min)
- 16 pin LGA package.
- Lead Free
- RoHS Available

Applications

- Cellular Phone

Outline
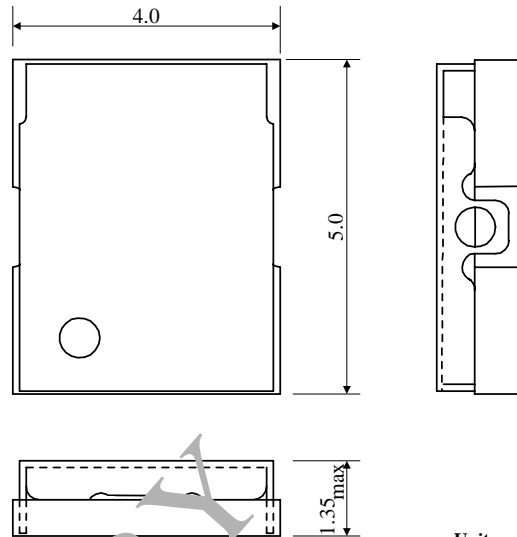
Unit: mm

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Supply Voltage	VDD	1.9		3.6	V
Supply Voltage	VDD_IO	1.62		2.92	V
RF Output Power	Measured in 50 ohm	-6		4	dBm
RX Sensitivity			-86	-70	dBm
TX Peak Current Consumption	Worst Case Transmit Mode		37		mA
RX Peak Current Consumption	Worst Case Receive Mode		38		mA
General Operating Temperature condition		-30	25	80	deg-C
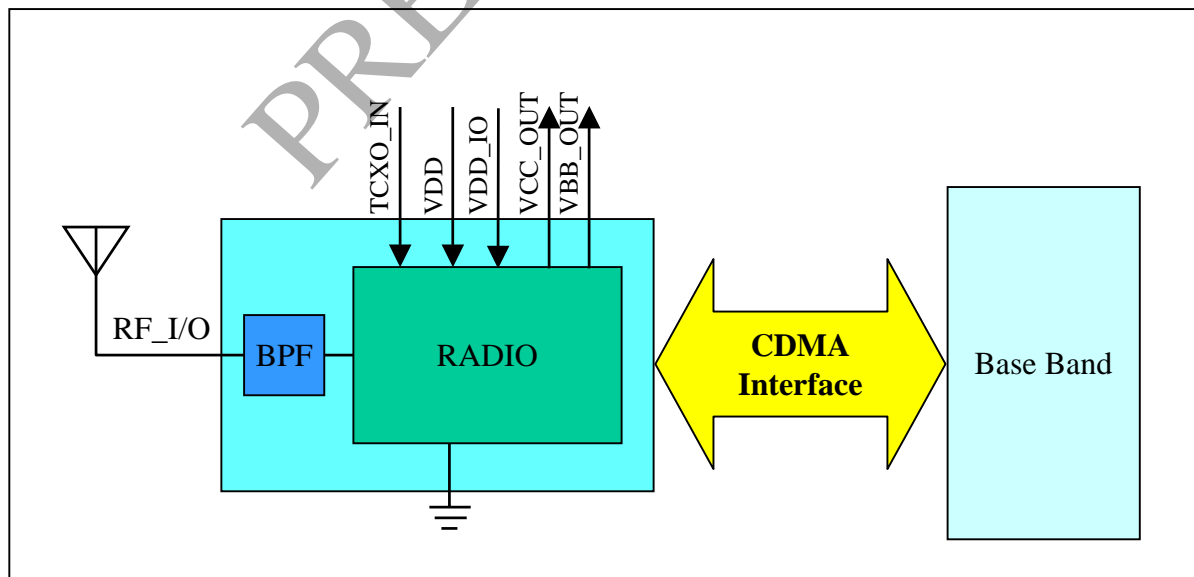
Block Diagram

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TAIYO YUDEN

## *Bluetooth*® Module

Class1 UART Full Module

EYSF1UA**, EYSF1UA**-**

Features

- •The module is a Max.20dBm(Class1) module.
- •*Bluetooth*® standard Ver1.2(Mandatory) conformity.
   (Ready for Optional Ver1.2 features)
- •Internal baseband clock oscillator.
- •Support functions
   SCO links,ACL links,Piconet<7>,Hold,Sniff,Park,
   Power Control
- •Interface:UART,PCM,GPIO
- •Protocol stack:
   Under HCI firmware Type,
   GAP+SDP+SPP+DUN+FAX+OPP+GOEP+HSP,
   A2DP+AVRCP+AVDTP+GAVDP+AVCTP+(HSP),
   HCRP+BIP +OPP+GOEP Stacked Type , etc
- •Small outline.   34.0 x 15.6 x 2.4 mm
- • **RoHS regulation substance (Pb.Cd.Hg.Cr+6.PBB.PBDE) :**
   Non use
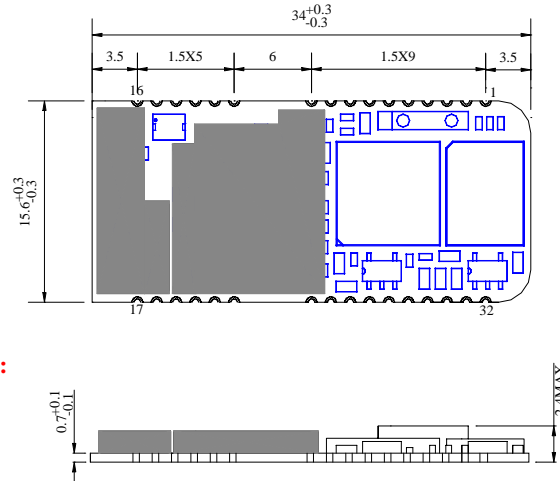
Applications

- •PC peripheral equipment
- •Home Network , AV
- •Access Point , FA etc

Outline

Unit;mm

General Electrical Specification

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VDD_PA)		3.2	3.3	3.4	V
Operating Voltage (VDD)		3.2		VDD_PA	V
RF Output Power	measured in 50 ohm,VDD_PA=VDD=3.3V		+17	+20	dBm
RX Sensitivity			-81	-70	dBm
Load Impedance	No abnormal Oscillation			5:1	-
Input Low Voltage	UART,PCM,GPIO	-	-	0.2VDD	V
Input High Voltage		0.8VDD	-	-	V
Output Low Voltage			-	0.4	V
Output High Voltage		VDD-0.6	-	-	V
Peak Current	Continues TX, ,VDD=3.3V		135	180	mA
Average Current Consumption 1	Audio with HV3 ,VDD=3.3V , TX=Max Power, Slave		43		mA
Average Current Consumption 2	Send ,(Master) DH5 packet , 921.6kbps,HCI,		95		mA
Average Current Consumption 3	Receive, (Slave) TX=Max Power,VDD=3.3V		56		mA
Average Current Consumption 4	Deep Sleep ,VDD=3.3V		0.9		mA
General Operating temperature condition		-20		+70	deg-C

Block Diagram
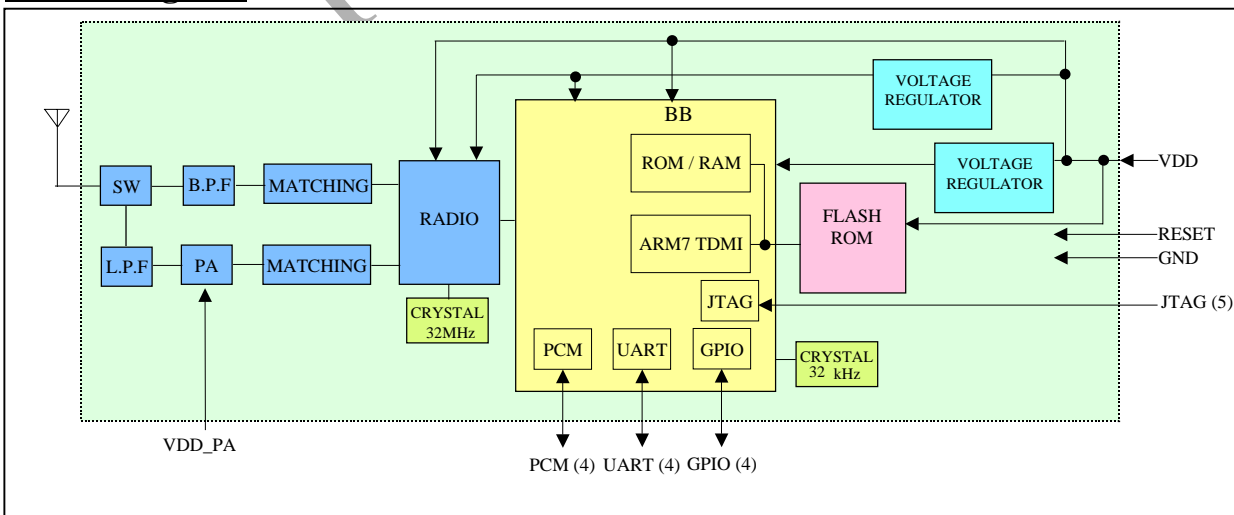
TAIYOYUDEN

Bluetooth® **Module**

USB Adaptor (Dongle)

EYSF2CSUU

Features

- All in one solution
- The module is a Max.4dBm(Class2) module.
- *Bluetooth*® standard Ver1.1 conformity.
- Internal baseband clock oscillator.
- Low current consumption
- Support functions
  SCO links,ACL links,Piconet<7>,Hold,Sniff,Park,Deep Sleep
- Interface: USB
- Protocol stack:Under HCI firmware
- Small outline.   16.50 x 56.85 x 8.10mm(typ)
- Strong Housing-case
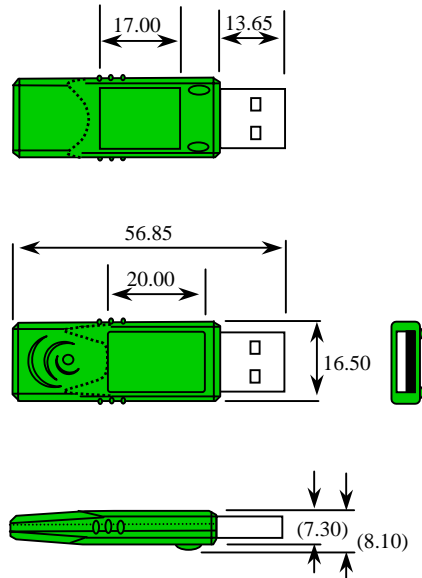
Applications

- PC(Windows)

Profiles

(Current) GAP, SPP, Fax, LAP, GOEP, OPP, FTP, DNP, SyncP
         Audio Gateway / Headset, PAN, HCRP, HID total 14 profiles

Outline

17.00   13.65

56.85

20.00

16.50

(7.30)   (8.10)

Parameter	Description	Min.	Typ.	Max.	Units
Carrier Frequency		2.402		2.480	GHz
Operating Voltage (VBUS)		4.5	-	5.5	V
RF Output Power	measured in 50 ohm	-6	-1	4	dBm
RX Sensitivity		-	-80	-70	dBm
Input Low Voltage	D+,D-	-		0.80	V
Input High Voltage	D+,D-	0.70VDD_PIO	-	-	V
Output Low Voltage	D+,D-	-	-	0.30	V
Output High Voltage	D+,D-	3.1	-	-	V
Average Current Consumption 1	transmitter		-	68	mA
Average Current Consumption 2	Receiver		-	75.5	mA

Block Diagram

Antenna

Regulator — VBUS

B.P.F — Balun

Loop Filter

Xtal

Flash Memory

RF + BB   I/O

USB(2)

GND(1)

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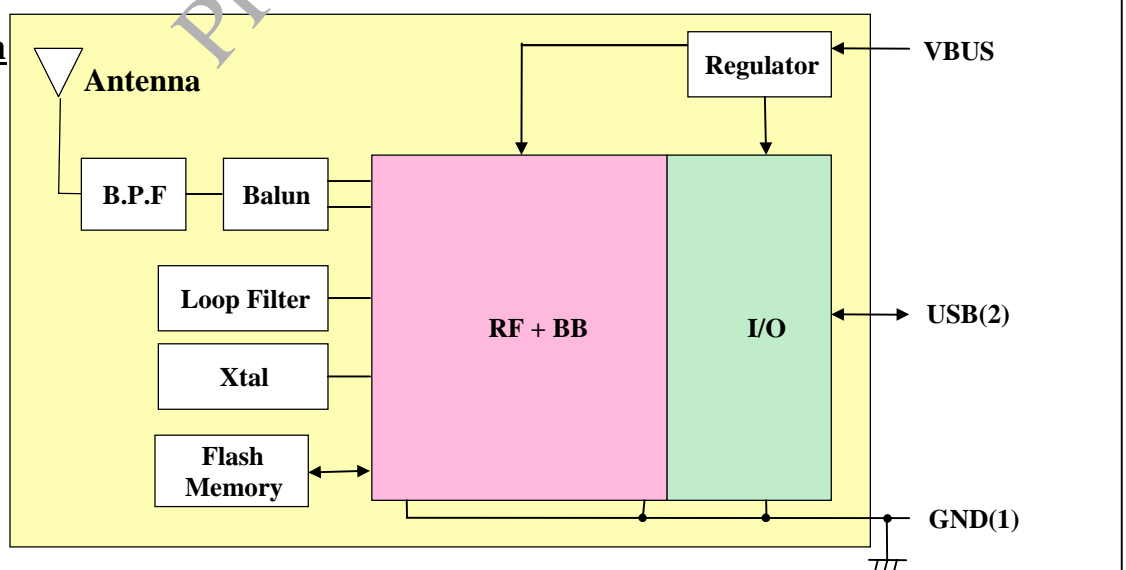The *Bluetooth*® word mark and logos are owned by the *Bluetooth* SIG, Inc. and any use of such marks by TAIYO YUDEN CO.,LTD. is under license.