



Micro Modules

(Substrates with Built-in ICs, Products Utilizing with SESUB)

Bluetooth V4.0 Smart Single Mode Module

SESUB-PAN-T2541

Micro Modules

(Substrates with Built-in ICs, Products Utilizing with SESUB)

Bluetooth V4.0 Smart Single Mode Module

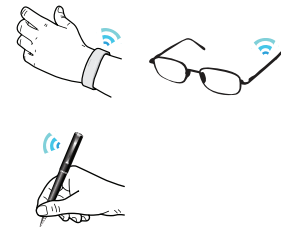
Overview of SESUB-PAN-T2541

FEATURES

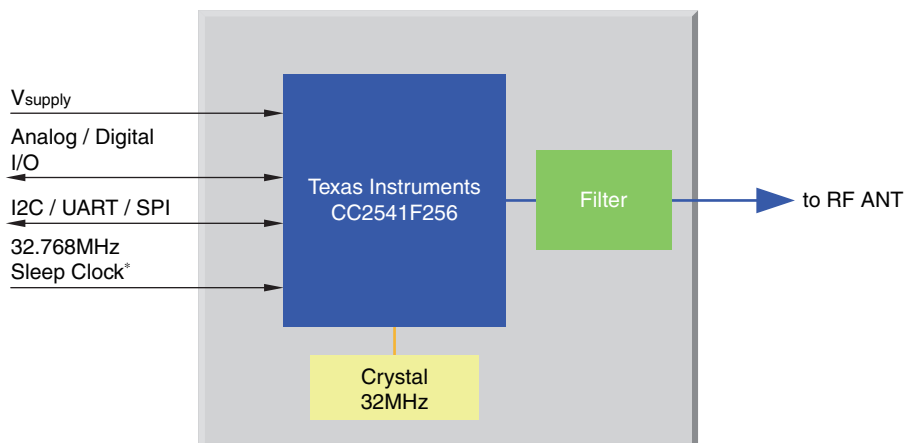
- Micro size (4.6×5.6×1.0mm) ideal for wearable devices.
- Communicable with Bluetooth® Smart Ready compatible devices.
- Separate antenna type that provides more flexibility for product design.

APPLICATION

- Health care, sports & fitness devices
(physical activity monitor, thermometer, blood pressure monitor, blood oxygen monitor, blood sugar monitor, heart rate monitor, etc.)
- Wearable computers
(bracelet type, watch type, ring type, glass type, shoe, hat, shirt, etc.)
- Home & entertainment devices
(remote control, sensor tag, toy, lighting apparatus, etc.)
- PC accessories
(mouse, keyboard, stylus pen, presentation pointer, etc.)



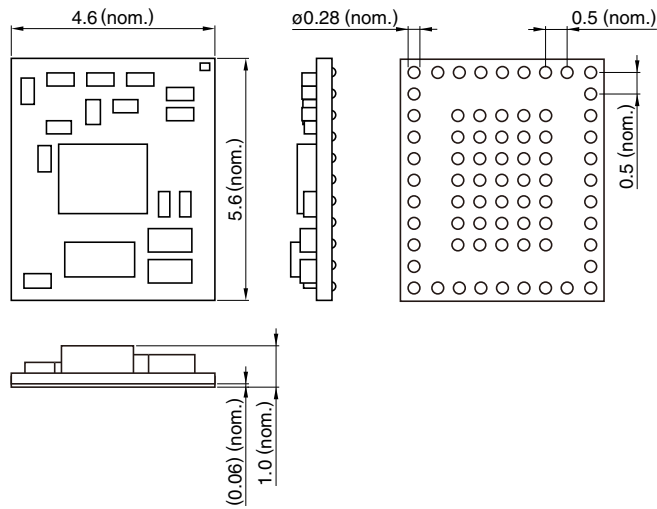
BLOCK DIAGRAM



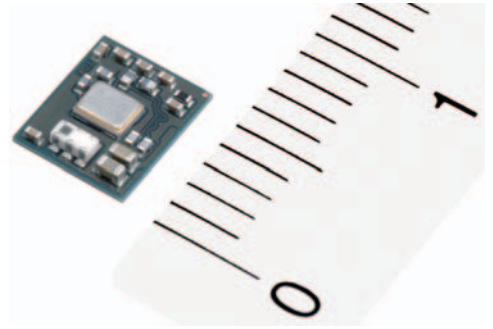
○ Bluetooth® and Bluetooth® Low Energy are the standards established by Bluetooth Special Interest Group (SIG).

SESUB-PAN-T2541

■ SHAPE & DIMENSIONS



Dimensions in mm



■ ELECTRICAL CHARACTERISTICS

□ CHARACTERISTICS SPECIFICATION TABLE

Communication standards	2.4GHz Bluetooth® V4.0 low energy
Wireless output power (dBm)typ.	0
Communication range (m)*	10
Interface	UART/SPI/I2C/GPIO/ADC

* Line-of-sight distances. Depending on antenna properties.

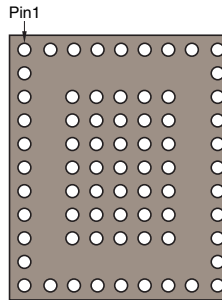
SESUB-PAN-T2541

MODULE TERMINAL

1 GND	2 P2_1	3 P2_0	4 VDO	5 VDA_1	6 VDA_2	7 GND	8 RST_N	9 GND
36 P2_2								10 P0_0
35 GND		GND	GND	GND	GND	GND		11 P0_1
34 P2_4/32k		GND	GND	GND	GND	GND		12 P0_2
33 P2_3/32k		GND	GND	GND	GND	GND		13 P0_3
32 P1_7		GND	GND	GND	GND	GND		14 P0_4
31 P1_6		GND	GND	GND	GND	GND		15 P0_5
30 P1_1		GND	GND	GND	GND	GND		16 P0_6
29 P1_2		GND	GND	GND	GND	GND		17 P0_7
28 P1_3								18 P1_0
27 GND	26 SCL	25 SDA	24 P1_4	23 P1_5	22 GND	21 2G_RF	20 GND	19 GND

Module Bottom View

RF	
POWER	
Clock	
I/O	
Cont	
GND	



EVALUATION BOARD

Based on the IC manufacturer-provided evaluation environment (TDK part number: SP13801)

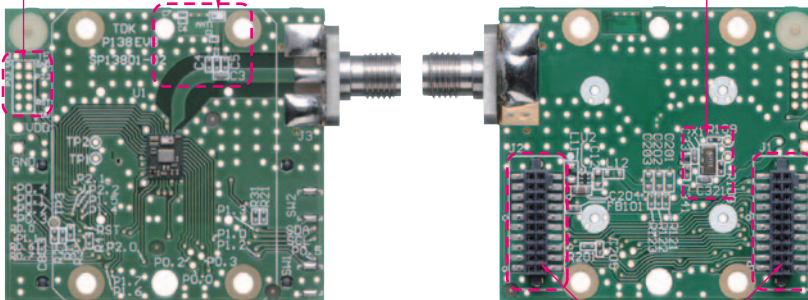
- The product is used by connecting to the IC evaluation kits of IC manufacturers.
- All software development environments and programming tools are provided by IC manufacturers.
- Various development materials of IC manufacturers are available as they are, which enables smooth development of products.
- We also offer evaluation kits which enables to evaluate product functions easily. (TDK part number: SP13808)

* For more details, please contact us.

Equipped with a program writing terminal

A chip antenna on the evaluation board

Equipped with a land pattern for a crystal unit for generating a sleep clock



Connectors to evaluation boards of the IC manufacturers