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

April 2015

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Bluetooth V4.0 Smart Single Mode Module

SESUB-PAN-T2541

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Bluetooth V4.0 Smart Single Mode Module

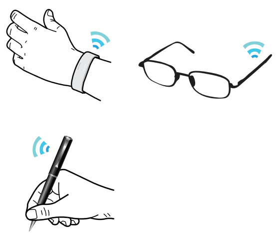
Overview of SESUB-PAN-T2541

FEATURES

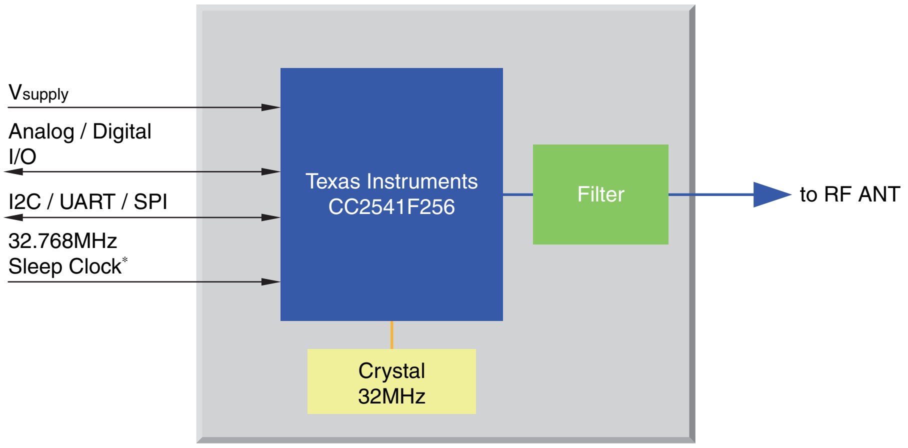
○ Micro size (4.6×5.6×1.0mm) ideal for wearable devices.
○ Communicable with Bluetooth® Smart Ready compatible devices.
○ Separate antenna type that provides more flexibility for product design.

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

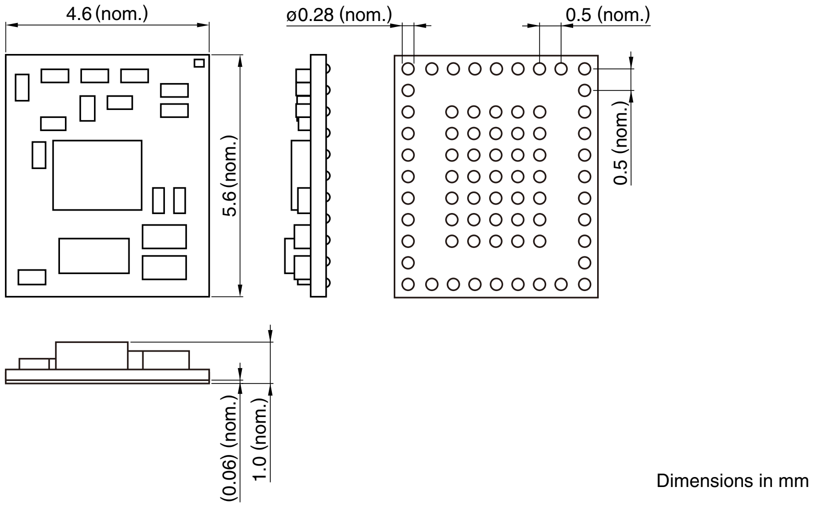


○ Bluetooth® and Bluetooth® Low Energy are the standards established by Bluetooth Special Interest Group (SIG).

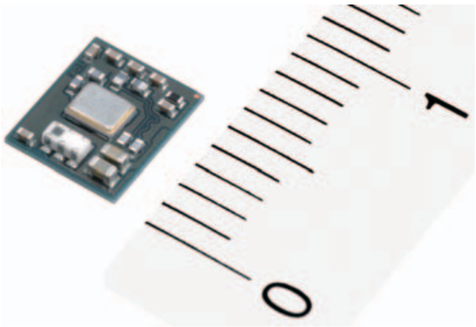
⚠ Please be sure to request delivery specifications that provide further details on the features and specifications of the products for proper and safe use.
Please note that the contents may change without any prior notice due to reasons such as upgrading.
For product inquiries: SESUB_Support@tdk.co.jp

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.

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

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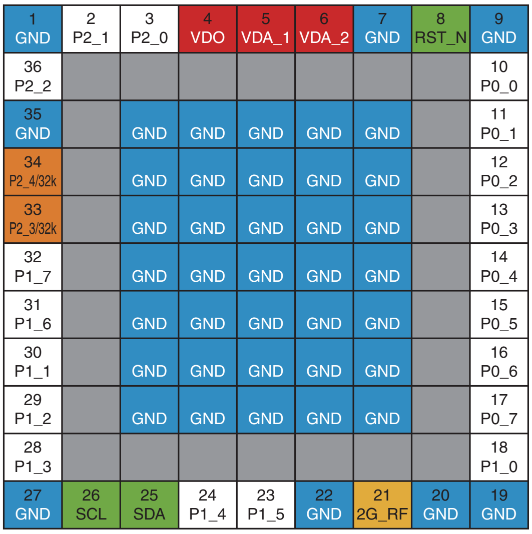
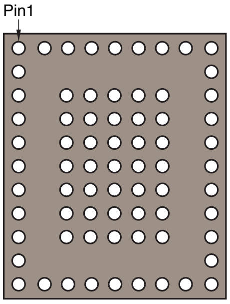
MODULE TERMINAL



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)

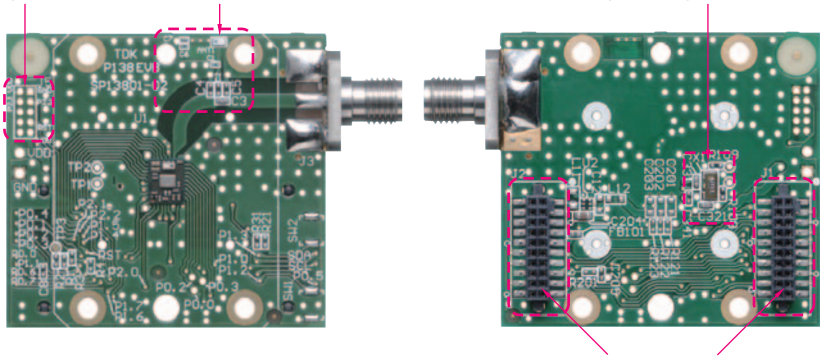
○ The product is used by connecting to the IC evaluation kits of IC manufacturers.

○ 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

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