

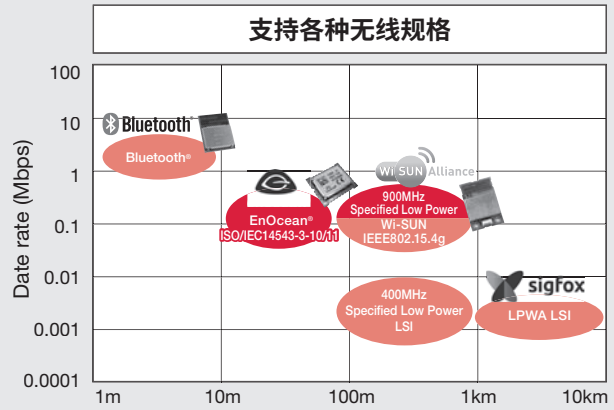
## 无线通信模块

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## 关于罗姆的无线通信技术

## ■无线通信





罗姆集团进行广泛的近距离无线通信元器件研发



## Wi-SUN 通信模块 (特定小功率通信模块)



- 920MHz频段 特定小功率无线模块
- 先进接收灵敏度
- 内置天线无需高频设计
- 发送功率已调整完毕
- MAC地址已写入完毕
- 已获得日本电波法认证
- 使用LAPIS Technology生产的LSI

Built-in antenna	Surface mount
 BP35A1	 BP35C0
	 BP35C0-J11
	 BP35C5

## Wi-SUN通信模块(特定小功率通信模块)

Part No.	Supply Voltage (V)	Operating Temperature (°C)	Host I/F	Compatible Standards	Radio law Certification	Dimensions (mm)	Package
BP35A1	2.7 to 3.6 (Single power)	-20 to +80	UART	Wi-SUN Route-B	TELEC	22.0×33.5×3.9	Connector joint type 0.5mm pitch, 20pin
BP35C0	2.6 to 3.6 (Single power)	-30 to +85	UART	Wi-SUN Route-B/HAN	TELEC	15.0×19.0×2.6	SMD 1.27mm pitch, 28pin
BP35C0-J11	2.6 to 3.6 (Single power)	-30 to +85	UART	Wi-SUN Route-B/HAN/Enhanced HAN	TELEC	15.0×19.0×2.6	SMD 1.27mm pitch, 28pin
BP35C5	2.6 to 3.6 (Single power)	-30 to +85	UART	Wi-SUN FAN	TELEC/FCC	15.0×19.0×2.6	SMD 1.27mm pitch, 30pin

## Bluetooth® 模块 Bluetooth®

- 超低消耗电流, 适用于需要延长硬币电池和纽扣电池寿命的设备
- 支持Bluetooth® low energy单通道的模块
- 内置图形天线, 出货时已调整无线特性
- 已通过的电波法认证: 日本电波法认证、FCC、ISED(IC)、CE
- 已获得Bluetooth认证



Bluetooth® low energy模块										(LAPIS Technology产品)	
Part No.	Supply Voltage (V)	Operating Temperature (°C)	Host I/F	Bluetooth Certification	Radio law Certification	Module Specification	Include Flash/RAM	Include Crystal Oscillator	Include Antenna	Dimension (mm)	Package
MK71511-NNN	1.7 to 3.6	-40 to +85	UART SPI	Ver5.2 (Single mode) QDID: 146733 (RF-PHY Component)	TELEC/FCC/ ISED/CE	Role: Master/Slave Application: Blank	Flash: 192KB RAM: 24KB	32MHz 32.768kHz	Pattern	9.7x13.4x2.0	M-FLGA54- 9.7X13.4- 0.80-9Y
MK71511A-NNN								32MHz			M-FLGA54- 9.7X13.4- 0.80-9Y
MK71521-NNN							Flash: 512KB RAM: 64KB	32MHz 32.768kHz			M-FLGA54- 9.7X13.4- 0.80-9Y
MK71521A-NNN							32MHz	M-FLGA54- 9.7X13.4- 0.80-9Y			
































Bluetooth®是Bluetooth SIG的注册商标。

## EnOcean® 通信模块

EnOcean®通信模块是利用环境发电的无需电池的无线通信模块。

- 特点
- 支持EnOcean®通信标准(ISO/IEC 14543-3-10/11)
  - 内置天线无需高频设计
  - 已获得日本电波法认证

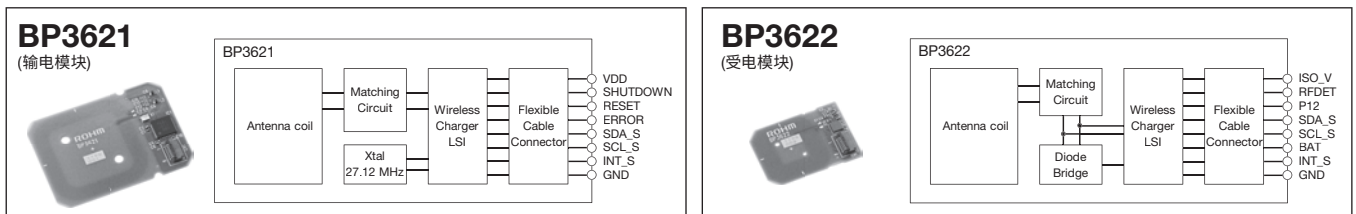
\* 本产品已获得日本电波法认证, 可作为928MHz频带特定小功率无线电台使用。

EnOcean®通信模块、元器件										
Frequency Band	Use Target Area	Products								
		Energy converter for motion energy harvesting (for the switch module)	Transmitter module (for switch module)	Push button multi-channel switch module	Energy harvesting wireless transceiver module	Programmable transceiver module	Energy harvesting magnet contact module	Energy harvesting temperature sensor module	Humidity sensor module	Receiver USB module
928MHz	Japan	 ECO 200/ ECO 260	 PTM 535J	 PTM 215J	 STM 400J	 TCM 410J/ TCM 515J	 STM 429J	 STM 431J	 HSM 100	 USB 400J/ USB 500J
868MHz	Europe/China	 ECO 200/ ECO 260	 PTM 535	 PTM 210/ PTM 215	 STM 300	 TCM 310	 STM 329	 STM 331	 HSM 100	 USB 300
902MHz	North America	 ECO 200/ ECO 260	 PTM 535U	 PTM 215U	 STM 300U	 TCM 310U	 STM 320U	 STM 331U	 HSM 100	 USB 500U
921MHz	Asia	 ECO 200/ ECO 260	—	—	—	—	—	 STM 431T	 HSM 100	 USB 500T

\*EnOcean®是EnOcean GmbH的注册商标。

## 13.56MHz(NFC)无线充电模块

13.56MHz无线充电模块是搭载天线的电路板一体化模块。可大幅减少天线设计和匹配调整的开发工时, 轻松实现无线充电功能。有助于实现可穿戴式设备及IoT设备等所需的小型、无连接器、防水防尘等框体的设计。



大范围供电型13.56MHz无线充电输电模块									
Part No.	Transmitter/Receiver	Module type	Module size (mm)	Weight (g)	Supply Voltage (V)	Output Power (Max) (mW)	Feeding Distance (d) (mm)	Operating Temperature (°C)	Interface
BP3621	Power Transmitter	Wide Range type	35.0x26.0x1.5	0.80	4.5 to 5.5	—	10	-10 to +50	8pin, 0.5mm pitch, FPC connector
大范围供电型13.56MHz无线充电受电模块									
BP3622	Power Receiver	Wide Range type	24.0x17.0x1.5	0.38	—	200	10	-10 to +50	8pin, 0.5mm pitch, FPC connector