

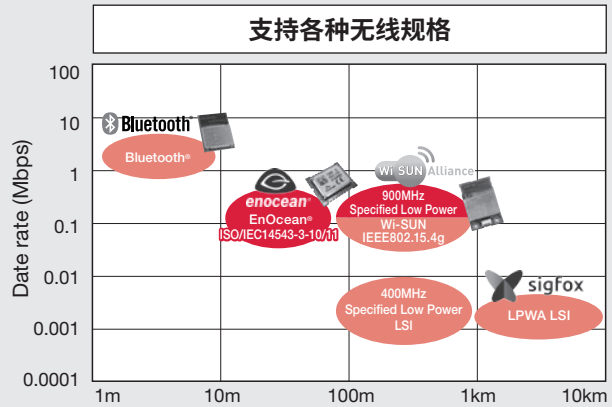
## 无线通信模块

关于罗姆的无线通信技术	P.290	Wi-SUN通信模块(特定小功率通信模块)	P.290
Bluetooth® 模块	P.291	EnOcean® 通信模块	P.291
13.56MHz(NFC)无线充电模块	P.291		

点击图标即可链接至罗姆官网的产品介绍页面。可通过官网确认最新情况。

## 关于罗姆的无线通信技术





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)

Wi-SUN Alliance

- 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	外形尺寸图 (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、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	Built-in Flash/RAM	Built-in Crystal Oscillator	Built-in Antenna	Dimension (mm)	Package
MK71511-NNN	1.7 to 3.6	-40 to +85	UART SPI	Ver5.4 (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®

EnOcean® 通信模块是利用环境发电的无需电池的无线通信模块。

- 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

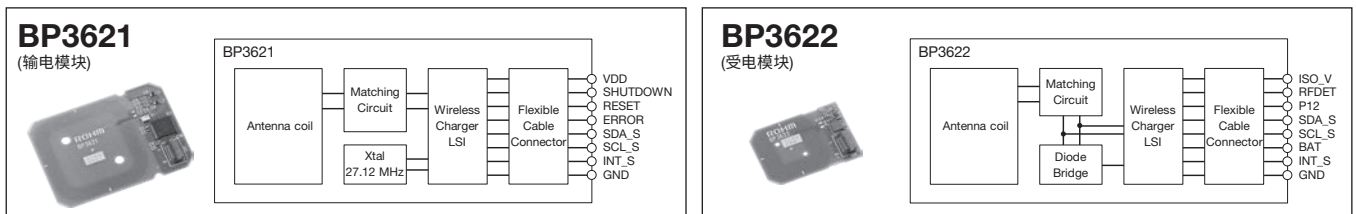
\*本产品已获得日本电波法认证, 可作为928MHz频带特定小功率无线电台使用。

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 260	PTM 535J	PTM 215J	STM 400J	TCM 410J/ TCM 515J	STM 429J	STM 431J	HSM 100	USB 500J
868MHz	Europe·China	ECO 260	PTM 535	PTM 210/ PTM 215	STM 300	TCM 310/ TCM 515	STM 329	STM 331	HSM 100	USB 300
902MHz	North America	ECO 260	PTM 535U	PTM 215U	STM 300U	TCM 310U/ TCM 515U	STM 320U	STM 331U	HSM 100	USB 500U
921MHz	Asia	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									
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
BP3622	Power Receiver	Wide Range type	24.0x17.0x1.5	0.38	-	200	10	-10 to +50	8pin, 0.5mm pitch, FPC connector