

Item NO.	RF01	RF31	RFM01	RFM31
Type	Receiver IC	Receiver IC	Receiver Module	Receiver Module
Package	dice	Package (QFN-20)	Module (DIP/SMD)	Module (DIP/SMD)
Work Frequency	315, 433, 868, 915 MHz frequency range	240-930MHz	315, 433, 868, 915 MHz frequency range	240-930MHz
Work Voltage	2.2~5.4V	1.8-3.6V	2.2~5.4V	1.8-3.6V
Work Temperature	. -40+85°C	. -40+85°C	. -20+60°C	. -40+85°C
Modulation	FSK	FSK, GFSK, OOK	FSK	FSK, GFSK, OOK
Data Rate	115.2kbps	1-128Kbps	115.2kbps	1-128Kbps
Max. Output Power	-	-	-	-
Sensitivity	-109dBm@315MHz -109dBm@433MHz -102dBm@868MHz -102dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz	-109dBm@315MHz -109dBm@433MHz -102dBm@868MHz -102dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz
Supply Current for TX (Max.)	-	-	-	-
Supply Current for RX	9mA@315MHz 9mA@433MHz 10.5mA@868MHz 10.5mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz	9mA@315MHz 9mA@433MHz 10.5mA@868MHz 10.5mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz
Sleep Mode Current	≤0.3uA	≤0.01uA	≤0.3uA	≤0.01uA
FIFO Length	16bit	64byte	16bit	64byte
Frequency Resolution	2.5-7.5kHz	156.25-312.5Hz	2.5-7.5kHz	156.25-312.5Hz
Low Battery Detector	Yes	Yes	Yes	Yes
Temperature Sensor	No	Yes	No	Yes
Frequency Hopping Capability	Yes	Yes	Yes	Yes
Wideband or Narrowband Design	Wideband	Wideband or Narrowband	Wideband	Wideband or Narrowband
Output Power Configurability	-	-	-	-
Antenna Diversity	No	Yes	No	No
RSSI	Yes	Yes	No	Yes

Item NO.	RF02	RF43	RF42	RFM02	RFM43	RFM42
Type	Transmitter IC	Transmitter IC	Transmitter IC	Transmitter Module	Transmitter Module	Transmitter Module
Package	dice	Package (QFN-20)	Package (QFN-20)	Module (DIP/SMD)	Module (DIP/SMD)	Module (DIP/SMD)
Work Frequency	433M, 868, 915MHz frequency range	240-930MHz	240-930MHz	433, 868, 915MHz frequency range	240-930MHz	240-930MHz
Work Voltage	2.2~5.4V	1.8-3.6V	1.8-3.6V	2.2~5.4V	1.8-3.6V	1.8-3.6V
Work Temperature	. -40+85°C	. -40+85°C	. -40+85°C	. -20+60°C	. -40+85°C	. -40+85°C
Modulation	FSK	FSK, GFSK, OOK	FSK, GFSK, OOK	FSK	FSK, GFSK, OOK	FSK, GFSK, OOK
Data Rate	115.2kbps	1-128Kbps	1-128Kbps	115.2kbps	1-128Kbps	1-128Kbps
Max. Output Power	8dBm@433MHz 6dBm@868MHz 6dBm@915MHz	13dBm@315MHz 13dBm@433MHz 13dBm@868MHz 13dBm@915MHz	20dBm@315MHz 20dBm@433MHz 20dBm@868MHz 20dBm@915MHz	8dBm@433MHz 6dBm@868MHz 6dBm@915MHz	13dBm@315MHz 13dBm@433MHz 13dBm@868MHz 13dBm@915MHz	17dBm@315MHz 17dBm@433MHz 17dBm@868MHz 17dBm@915MHz
Sensitivity	-	-	-	-	-	-
Supply Current for TX (Max.)	23mA@433MHz 25mA@868MHz 26mA@915MHz	28mA@315MHz 28mA@433MHz 28mA@868MHz 28mA@915MHz	80mA@315MHz 80mA@433MHz 80mA@868MHz 80mA@915MHz	23mA@433MHz 25mA@868MHz 26mA@915MHz	28mA@315MHz 28mA@433MHz 28mA@868MHz 28mA@915MHz	80mA@315MHz 80mA@433MHz 80mA@868MHz 80mA@915MHz
Supply Current for RX	-	-	-	-	-	-
Sleep Mode Current	≤0.3uA	≤0.01uA	≤0.01uA	≤0.3uA	≤0.01uA	≤0.01uA
FIFO Length	1bit	64byte	64byte	1bit	64byte	64bit
Frequency Resolution	2.5~7.5kHz	156.25-312.5Hz	156.25-312.5Hz	2.5-7.5kHz	156.25-312.5Hz	156.25-312.5Hz
Low Battery Detector	Yes	Yes	Yes	Yes	Yes	Yes
Temperature Sensor	No	Yes	Yes	No	Yes	Yes
Frequency Hopping Capability	Yes	Yes	Yes	Yes	Yes	Yes
Wideband or Narrowband Design	Wideband	Wideband or Narrowband	Wideband or Narrowband	Wideband	Wideband or Narrowband	Wideband or Narrowband
Output Power Configurability	Yes	Yes	Yes	Yes	Yes	Yes
Antenna Diversity	No	No	No	No	No	No
RSSI	-	-	-	-	-	-

Item NO.	RF12	RF12B	RF23	RF22	RFM12	RFM12B	RFM23	RFM22	RFM12BP
Type	Transceiver IC	Transceiver IC	Transceiver IC	Transceiver IC	Transceiver Module	Transceiver Module	Transceiver Module	Transceiver Module	Transceiver Module
Package	dice	dice	Package (QFN-20)	Package (QFN-21)	Module (DIP/SMD)	Module (DIP/SMD)	Module (DIP/SMD)	Module (DIP/SMD)	Module (SMD)
Work Frequency	315, 433, 868, 915 MHz frequency range	433, 868, 915MHz frequency range	240-930MHz	240-930MHz	315, 433, 868, 915 MHz frequency range	433, 868, 915MHz frequency range	240-930MHz	240-930MHz	433, 868, 915MHz frequency range
Work Voltage	2.2-5.4V	2.2-3.8V	1.8-3.6V	1.8-3.6V	2.2-5.4V	2.2-3.8V	1.8-3.6V	1.8-3.6V	3.3V, 12V
Work Temperature	-40+85°C	-40+85°C	-40+85°C	-40+85°C	-20+60°C	-20+60°C	-40+85°C	-40+85°C	-20+60°C
Modulation	FSK	FSK	FSK, GFSK, OOK	FSK, GFSK, OOK	FSK	FSK	FSK, GFSK, OOK	FSK, GFSK, OOK	FSK
Data Rate	115.2kbps	115.2kbps	1-128Kbps	1-128Kbps	115.2kbps	115.2kbps	1-128Kbps	1-128Kbps	115.2kbps
Max. Output Power	7dBm@315MHz 7dBm@433MHz 2dBm@868MHz 2dBm@915MHz	7dBm@433MHz 4dBm@868MHz 4dBm@915MHz	13dBm@315MHz 13dBm@433MHz 13dBm@868MHz 13dBm@915MHz	20dBm@315MHz 20dBm@433MHz 20dBm@868MHz 20dBm@915MHz	5dBm@315MHz 5dBm@433MHz 0dBm@868MHz 0dBm@915MHz	5dBm@433MHz 3dBm@868MHz 3dBm@915MHz	13dBm@315MHz 13dBm@433MHz 13dBm@868MHz 13dBm@915MHz	17dBm@315MHz 17dBm@433MHz 17dBm@868MHz 17dBm@915MHz	27dBm@433MHz 27dBm@868MHz 27dBm@915MHz
Sensitivity	-105dBm@315MHz -105dBm@433MHz -102dBm@868MHz -102dBm@915MHz	-109dBm@433MHz -105dBm@868MHz -105dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz	-105dBm@315MHz -105dBm@433MHz -100dBm@868MHz -100dBm@915MHz	-105dBm@433MHz -102dBm@868MHz -102dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz	-118dBm@315MHz -118dBm@433MHz -118dBm@868MHz -118dBm@915MHz	-116dBm@433MHz -112dBm@868MHz -112dBm@915MHz
Supply Current for TX (Max.)	22mA@315MHz 22mA@433MHz 23mA@868MHz 24mA@915MHz	22mA@433MHz 23mA@868MHz 24mA@915MHz	28mA@315MHz 28mA@433MHz 28mA@868MHz 28mA@915MHz	80mA@315MHz 80mA@433MHz 80mA@868MHz 80mA@915MHz	22mA@315MHz 22mA@433MHz 23mA@868MHz 24mA@915MHz	22mA@433MHz 23mA@868MHz 24mA@915MHz	28mA@315MHz 28mA@433MHz 28mA@868MHz 28mA@915MHz	80mA@315MHz 80mA@433MHz 80mA@868MHz 80mA@915MHz	250mA@433MHz 250mA@868MHz 250mA@915MHz
Supply Current for RX	11mA@315MHz 11mA@433MHz 12mA@868MHz 13mA@915MHz	11mA@433MHz 12mA@868MHz 13mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz	11mA@315MHz 11mA@433MHz 12mA@868MHz 13mA@915MHz	11mA@433MHz 12mA@868MHz 13mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz	18.5mA@315MHz 18.5mA@433MHz 18.5mA@868MHz 18.5mA@915MHz	30mA@433MHz 30mA@868MHz 30mA@915MHz
Sleep Mode Current	≤0.3uA	≤0.3uA	≤0.01uA	≤0.01uA	≤0.3uA	≤0.3uA	≤0.01uA	≤0.01uA	≤1uA
FIFO Length	16bit	16bit	64byte	64byte	16bit	16bit	64byte	64byte	16bit
Frequency Resolution	2.5-7.5kHz	2.5-7.5kHz	156.25-312.5Hz	156.25-312.5Hz	2.5-7.5kHz	2.5-7.5kHz	156.25-312.5Hz	156.25-312.5Hz	2.5-7.5kHz
Low Battery Detector	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Temperature Sensor	No	No	Yes	Yes	No	No	Yes	Yes	No
Frequency Hopping Capability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Wideband or Narrowband Design	Wideband	Wideband	Wideband or Narrowband	Wideband or Narrowband	Wideband	Wideband	Wideband or Narrowband	Wideband or Narrowband	Wideband
Output Power Configurability	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
Antenna Diversity	No	No	Yes	Yes	No	No	No	No	No
RSSI	Yes	Yes	Yes	Yes	No	No	Yes	Yes	No