

- Ideal for 303.825 MHz Unlicensed Transmitters in Japan & Korea
- Quartz SAW Frequency Stabilization and Harmonic Filtering
- Compact Surface-Mount Case with < 90 mm² Footprint

The HX1001 is a miniature transmitter module that generates on-off keyed (OOK) modulation from an external digital encoder (not included). The carrier frequency is quartz surface acoustic wave (SAW) stabilized and output harmonics are suppressed by a SAW filter. The results are excellent performance in a simple-to-use surface-mount device with low external component count. The HX1001 is designed specifically for unlicensed remote-control and wireless security transmitters operating in Japan under MPT regulations and in Korea. Applications also include very short-range devices in the USA under FCC Part 15 regulations.

303.825 MHz Hybrid Transmitter



SM-4 Case

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ABSOLUTE MAXIMUM RATINGS

Rating	Value	Units
Power Supply and/or Modulation Input Voltage	10	V
Non-Operating Case Temperature	-40 to +85	°C
10 second Soldering Temperature	230	

ELECTRICAL CHARACTERISTICS

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Operating Frequency	Absolute Frequency	f _o	1, 2	303.675	—	303.975	MHz
	Relative to 303.825 MHz	Δf _o		—	—	±150	kHz
RF Output Power into 50 Ω	at 25 °C	P _O	2	-18	-16	-14	dBm
	Over Temperature Range		1, 2	-20	-16	-14	
Harmonic Spurious Emissions			1, 2	—	-45	-35	dBc
Modulation Input	Input HIGH Voltage	V _{IH}	1, 2	2.5	—	V _{CC}	V
	Input LOW Voltage	V _{IL}		0.0	—	0.3	
	Input HIGH Current	I _{IH}		—	—	100	μA
	Input LOW Current	I _{IL}		0.0	—	—	
Data Timing Parameters	Modulation Bandwidth		1, 2, 3	—	1	—	kHz
	Modulation Rise Time	t _r		—	—	100	μs
	Modulation Fall Time	t _f		—	—	100	
Power Supply	Voltage	V _{CC}		2.7	3	3.3	VDC
	Peak Current	I _{CC}	1, 2, 4	—	1.5	3.0	mA
	Standby Current		5	—	—	1.0	μA
Operating Case Temperature Range		T _C		-40	—	+85	°C

Lid Symbolization (in addition to date and/or lot code)

RFM HX1001

Notes: (Case temperature = +25°C ±2°C, test load impedance = 50 Ω and modulation input is at logic HIGH unless noted otherwise.)

1. Applies over the specified range of operating temperature.
2. Applies over the specified range of operating power supply voltage.
3. The maximum modulation bandwidth (and data rate) is dependent on the characteristics of the external encoding circuitry (not included).
4. The maximum operating current occurs at the maximum specified power supply voltage and maximum specified operating temperature.
5. Standby current is defined as the supply current consumed with the modulation input at logic LOW.
6. The design, manufacturing process, and specifications of this device are subject to change without notice.
7. Manufacturers of end products utilizing this device are responsible for obtaining approval by the appropriate government regulatory agencies.
8. One or more of the following U. S. Patents apply: 4,454,488, 4,616,197, 4,670,681 and 4,760,352.
9. RFM® is a registered trademark of RF Monolithics, Inc.
10. CAUTION: ELECTROSTATIC SENSITIVE DEVICE. Observe precautions for handling.



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