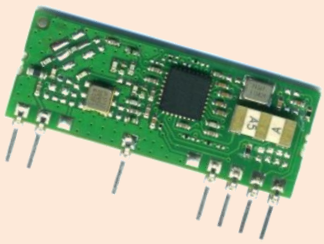
FSK SUPER HETERODYNE COMPACT RECEIVER + F.E. 433.92 MHz

Product Code: **32001366**

lead-free

DESCRIPTION:

Low cost, high performance Super Heterodyne FSK receiver with very low profile and height.



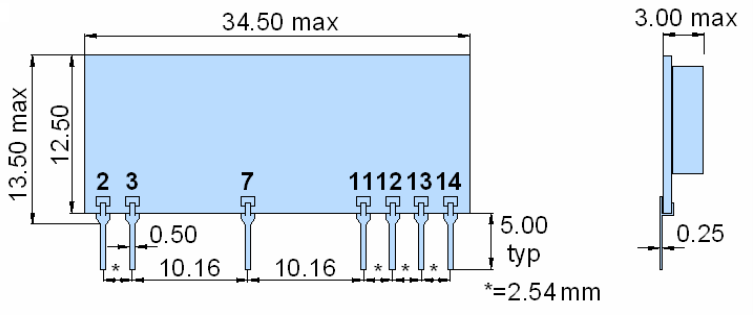
HIGHLIGHTS:

This module is equipped with **SAW FRONT END FILTER** for a good out of band interference immunity. Thanks to an efficient embedded noise cancellation filter, a good noise reduction and restoration of received signal integrity are achieved, providing excellent performances. Suitable for all HCS, HT12 encodings and similar. RSSI output proportional to received signal level.
Wide supply voltage range from 2.1 to 5.5 V.
The module meets all the requirements in the **industrial temperature range -40 / 85°C.**
CATEGORY 2 RECEIVER developed according to **ETSI EN 300 220** European Standard.
The module meets with the Radio Equipment Directive **(RED) 2014/53/EU.**
Compliant with **REACH** and **RoHS** directives.

APPLICATIONS:

Security systems, data transmission, industrial controls, home automation, etc.

MECHANICAL CHARACTERISTICS



Pin functions:

2 = GND
3 = RF Input (50 Ω)
7 = GND
11 = GND
12 = + Vcc
13 = RSSI Out
14 = TTL Output – Data OUT

ABSOLUTE MAXIMUN RATINGS

Supply voltage, +Vcc, pin 10, 12, 15:	5.5 V
Radio Frequency Input, pin 3:	10 dBm
Output pins voltage with respect to GND:	+Vcc
Storage Temperature:	-40 ÷ 100 °C
Operating Temperature:	-40 ÷ 85 °C

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Mipot S.p.A. reserves the right to modify the specifications without notice

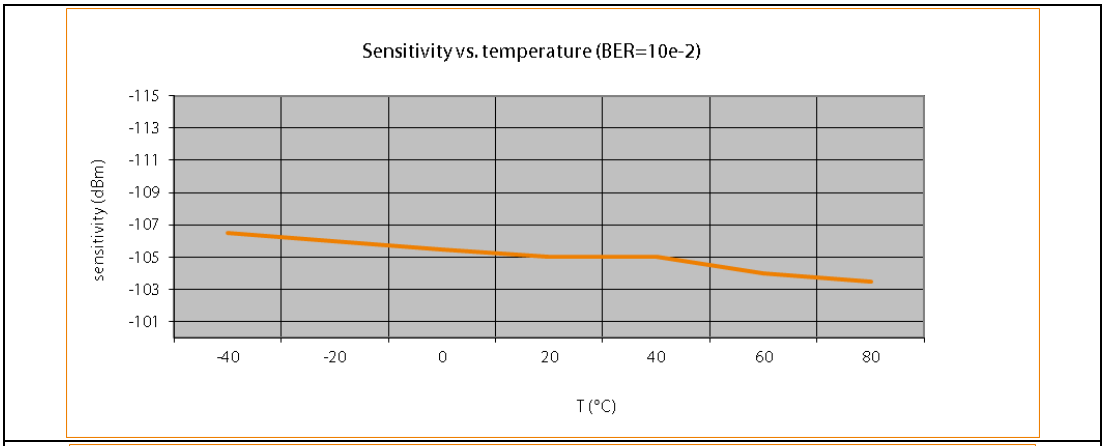
Cormons, October 8th, 2020

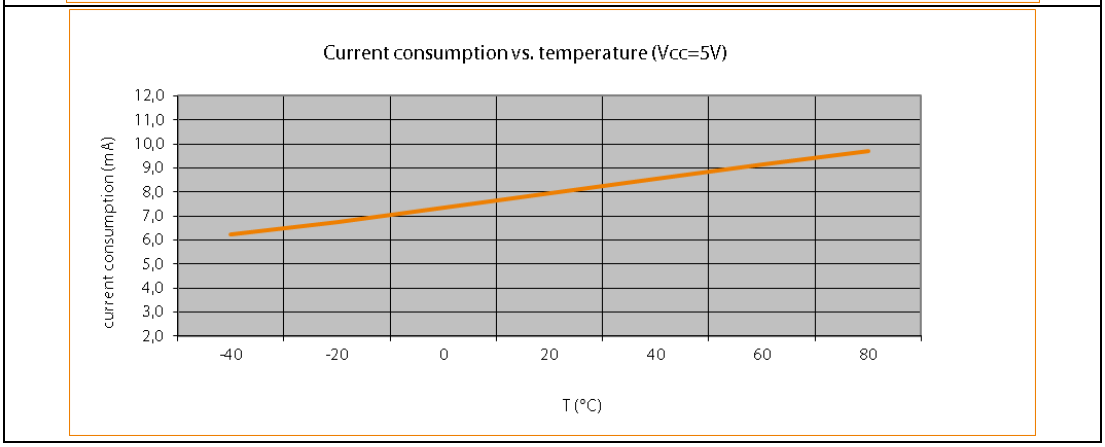
ELECTRICAL CHARACTERISTICS @ 25 °C

Parameter	*Min.*	*Typ.*	*Max.*	*Unit*	*Notes*
Supply Voltage (+Vcc)	2.1	-	5.5	V	
DC Current drain	-	8.5	-	mA	
Operating Frequency	-	433.92	-	MHz	
Sensitivity	-102	-	-	dBm	1
-3 dB RF Bandwidth	-	260	-	kHz	5
-6 dB Selectivity	-		-	kHz	5
-60 dB Selectivity	-		-	MHz	5
FSK deviation	±10	-	±100	kHz	5
Image Frequency Rejection	-		-	dBm	6
Spurious radiated level	-	-	-57	dBm	7
Baud rate	300	-	38400	Baud	2
Start-up time	-	-	15	ms	3
Settling time	-	-	10	ms	4
Output Logic low	GND	-	0.01	V	
Output Logic high	+Vcc-0.1V	-	+Vcc	V	
Output load (pin 14)	50	-	-	kΩ	

TYPICAL CHARACTERISTICS (*)

Note: All RF parameters measured with input (pin 3) connected to a 50-Ω impedance signal source or load.





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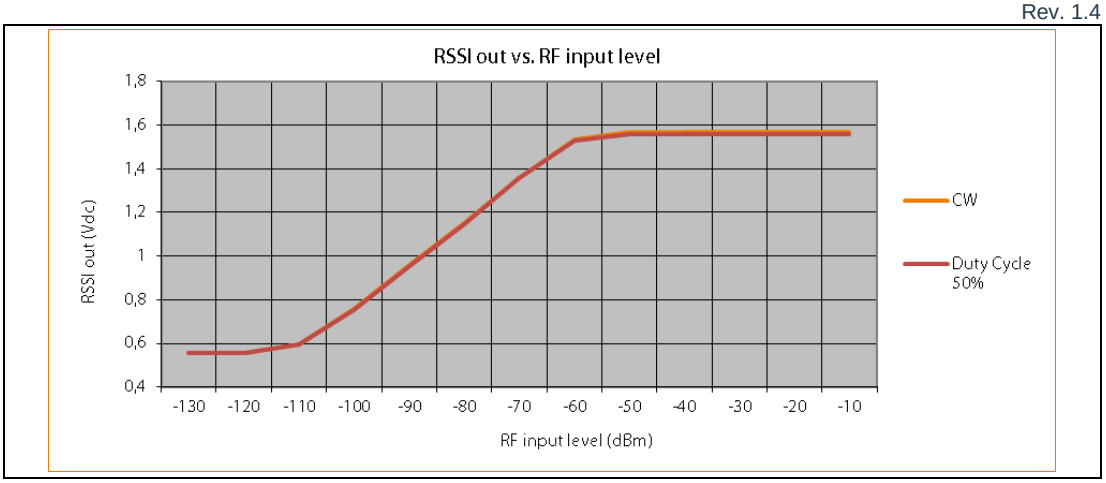

(*): All graphs must be considered as indicative typical results in accordance with temperature variation.

Note 1: Test signal FSK pseudo random code NRZ (deviation ±50 kHz) 9600 Baud. Result at BER=10^{-2} or better.
Note 2: Max and min baud rate limits measured with RF level 3 dB above sensitivity limit.
Note 3: Time by power-on to valid data reception.
Note 4: Time by test signal at RF input to valid data reception.
Note 5: All RF parameters measured with input (pin 3) connected to 50-Ω impedance signal source or load.
Note 6: Measured as per ***ETSI 300 220-1, 5.17.3.3 "Spurious response rejection – Conducted measurement"***, test signal FSK 9600 Baud, dev. ±50 kHz, f_i @ 412.52 MHz.
Note 7: No significant emission detected. As per ***ETSI 300 220-1, 5.9.3.3.1 "UNWANTED EMISSIONS IN THE SPURIOUS DOMAIN - Conducted measurement"*** *and 5.9.3.3.2* ***"UNWANTED EMISSIONS IN THE SPURIOUS DOMAIN - Radiated measurement"***; f < 1 GHz: < -57 dBm; f > 1 GHz: < -47 dBm

APPLICATION NOTE

N.A.

REVISION HISTORY

Revision	Date	Description
1.4	08-10-2020	Final release

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