

# 868.30 MHz SUPER HETERODYNE AM/ASK RECEIVER

Cod. 3-2000547

## DESCRIPTION:

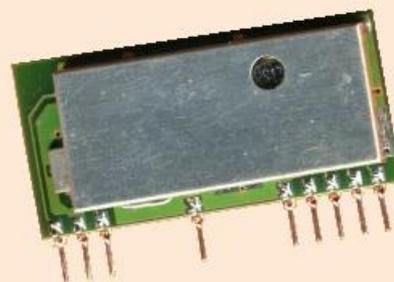
Super Heterodyne ASK receiver manufactured in SMT technology on printed circuit.

## HIGHLIGHTS:

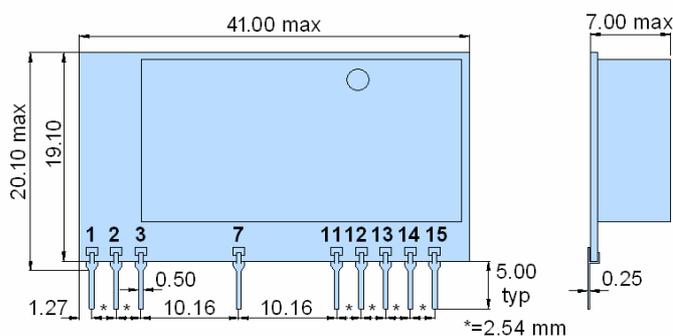
High sensitivity and stability, RSSI output proportional to the received signal level.  
Developed according to I-ETS 300 220 European Standard.

## APPLICATIONS:

Security systems, data transmission, industrial controls.



## MECHANICAL CHARACTERISTICS



### Pin functions

- 1 = + Vcc
- 2 = GND
- 3 = RF Input (50 Ω)
- 7 = GND
- 11 = GND
- 12 = + Vcc (Power Down)
- 13 = RSSI Out (\*\*)
- 14 = TTL Output – Data OUT
- 15 = + Vcc (Power Down)

## ABS. MAX. RATINGS

Power Supply, Vcc, PIN 1, 12, 15:	+ 6 Volt
Radio Frequency Input, pin 3:	+ 10 dBm
Output pins voltage with respect to GND:	+ Vcc
Storage Temperature:	- 40 ÷ + 100 °C
Operating Temperature:	- 20 ÷ + 70 °C

## ELECTRICAL CHARACTERISTICS AT THE TEMPERATURE OF + 25 °C

Parameter	Min.	Typ.	Max.	Unit	Notes
Supply Voltage(Vcc)	4.5	5.0	5.5	Volt	
Current Supply	-	5.2	5.5	mA	
Receiver Frequency	-	868.30	-	MHz	
Overall Frequency Accuracy	-	±30	-	kHz	
Sensitivity	-	-107	-	dBm	Note 1
Image Frequency Rejection	20	-	-	dB	Note 2
RF Bandwidth -3dB	-	300	-	kHz	
Antenna Spurious RF Emission	-	-	-65	dBm	
Baud rate	-	-	4800	Baud	Note 3
Start-up Time	-	-	100	ms	Note 4
Settling Time	-	-	30	ms	Note 5
Logic Low	GND	-	0.05	Volt	
Logic High	4.0	-	Vcc	Volt	
Power Down Supply Current	-	-	50	nA	
Output Impedance (Pin 14)	50	-	-	Kohm	

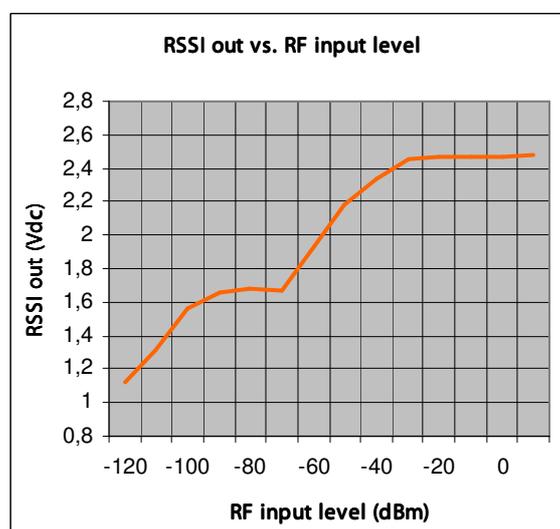
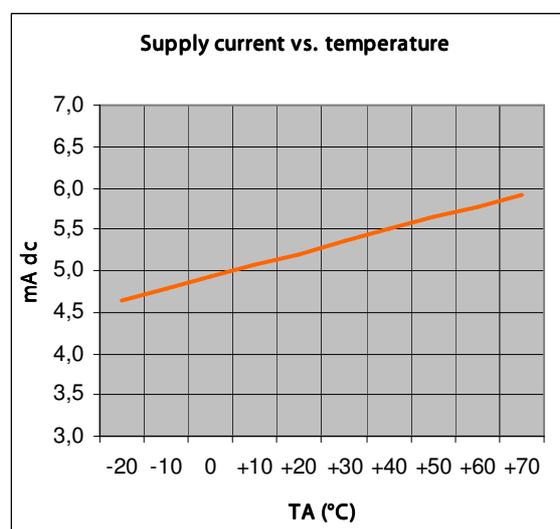
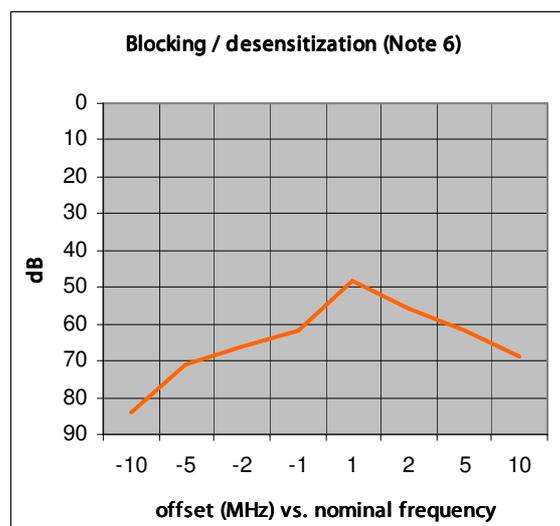
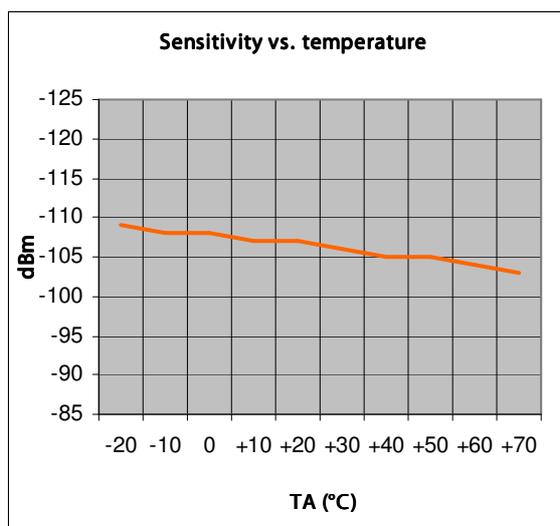
Mipot S.p.A. reserves the right to modify the specifications without notice.

Cormòns, 01.01.2008

## TYPICAL CHARACTERISTICS (\*)



RF  
WIRELESS



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

\*\* : RSSI measurement has been done using an oscilloscope with a 10 MOhm probe to distort as little as possible the measured level (pin 13).

**Note 1:** AM modulation 100%, square wave, 1KHz frequency.

**Note 2:** Measurement compliant to ETSI EN 300-113-1 V 1.6.1 (2006-08) par. 8.7.4  
Wanted signal 3dB above the maximum usable sensitivity level, AM jammer (400 Hz sine, mod. depth. 100%) at image frequency (846.90 MHz). Result at BER =  $10^{-2}$  or better.

**Note 3:** On request, available versions up to 19200 Baud.

**Note 4:** Time by power-on to valid data reception. It's possible to obtain on demand till to 15 ms start-up time.

**Note 5:** Time by activation after stand-by to valid data reception.

**Note 6:** Measurement compliant to ETSI EN 300-113-1 V 1.6.1 (2006-08) par. 8.9.2

Wanted signal 3dB above the maximum usable sensitivity level, CW jammer +/- 1, 2, 5, 10 MHz away the wanted signal. Result at BER =  $10^{-2}$  or better.

**Note 7:** All RF parameters measured with input (pin 3) connected to 50 Ohm impedance signal source or load.

**Note 8:** Pins 12 and 15 have to be 0 Volt to enter in power down mode, keeping supply voltage on pin 1.

## MIPOT S.P.A.

Via Corona, n.5  
(Zona Ind.)  
34701 Cormons (GO)  
Italy  
Tel. +39 0481 630200 ra.  
Fax +39 0481 62387  
mipot@mipot.com