MIPOT HI-TECH COMPANY

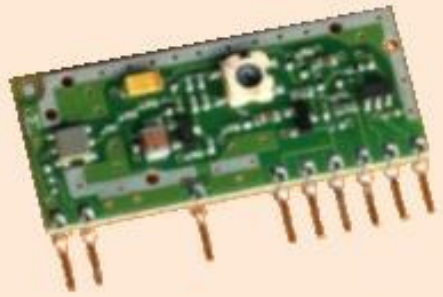
RF WIRELESS

# 433.92 MHz SUPER-REGENERATIVE ASK RECEIVER

## Mod. "LOW CONSUMPTION" - 3V VERSION / Cod. 3-2000758V3 PRELIMINARY

### DESCRIPTION:

Low consumption OOK/ASK receiver with high performance, reliability and compact dimensions based on super-regenerative principle in SMT technology. Makes use of **SAW filter** to enhance selectivity and suppress out-of-band interference.
**New Toko lowered coil assures stability** while a complete metallic shield (optional) improves immunity to noise.



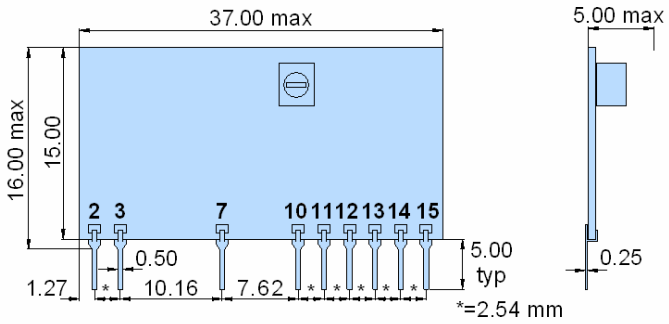
### HIGHLIGHTS:

Developed according to I-ETS 300 220 e ETS 300 683 European Standard.

### APPLICATIONS:

Security systems, car and motorcycle anti-theft systems, data-collection mobile radio-systems, battery-feeded radio-controlled devices, data transmission and more.

## MECHANICAL CHARACTERISTICS




*Pin functions*

2 = GND
3 = RF Input (50 Ω)
7 = GND
10 = + Vcc
11 = GND
12 = + Vcc
13 = T.P. / Slicer Threshold Control(**)
14 = TTL Data Output
15 = + Vcc

## ABS: MAX: RATINGS

| | |
|---|---|
| Power Supply, Vcc, PIN 10, 12, 15: | + 6 Volt |
| Radio Frequency Input, pin 3: | + 10 dBm |
| Voltage of output pins with respect to GND: | + Vcc |
| Storage Temperature: | - 40 ÷ + 100 °C |
| Operative Temperature: | - 20 ÷ + 55 °C |

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

| *Parameter* | *Min.* | *Typ.* | *Max.* | *Unit* | *Notes* |
|---|---|---|---|---|---|
| Supply Voltage (Vcc) | 2.7 | 3.0 | 3.3 | Volt | |
| Current Supply | - | 97 | 110 | µA | |
| Receiver Frequency | - | 433.92 | - | MHz | |
| Sensitivity | - | -95 | - | dBm | Note 1 |
| RF Bandwidth – 3dB | - | ±500 | - | kHz | |
| Antenna Spurious RF Emission | - | - | -60 | dBm | |
| Baud rate | - | - | 2400 | Baud | |
| Start-up Time | - | - | 1200 | ms | Note 2 |
| Settling Time | - | - | 50 | ms | Note 3 |
| Logic Low | 0 | 0.02 | 0.05 | Volt | |
| Logic High | +Vcc–0.2V | - | - | Volt | |
| Max. output load (on Pin 14) | - | - | 47 | Kohm | |

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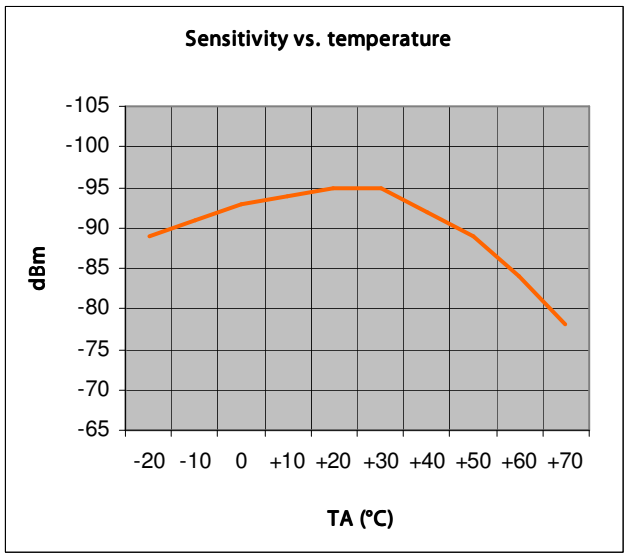
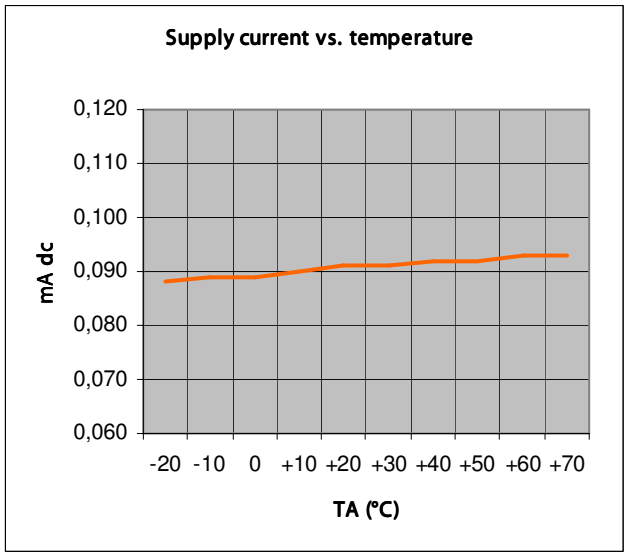
*Mipot S.p.A. reserves the right to modify the specifications without notice.*

Cormòns, 01.01.2008

## TYPICAL CHARACTERISTICS (*)




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

**Note 1:** AM modulation 100%, square wave, 1KHz frequency.
**Note 2:** Time by power-on to valid data reception.
**Note 3:** Time by activation after stand-by to valid data reception.
**Note 4:** All RF parameters measured with input (pin 3) connected to 50 Ohm impedance signal source or load.

## (**): APPLICATION NOTE

Output data-slicer threshold can be controlled connecting a resistor with values between 6.8MOhm (-3dB) and 2.2MOhm (-10 dB) between T.P. and GND pins to decrease sensitivity (obtaining a muting effect on TTL output), or between T.P. and +Vcc increasing even further the sensitivity (about 36MOhm).

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