

# 433.92 MHz SUPER-REGENERATIVE ASK RECEIVER

Mod. "NARROW-BAND" - 3V VERSION / Cod. 3-2000757V3

## 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:

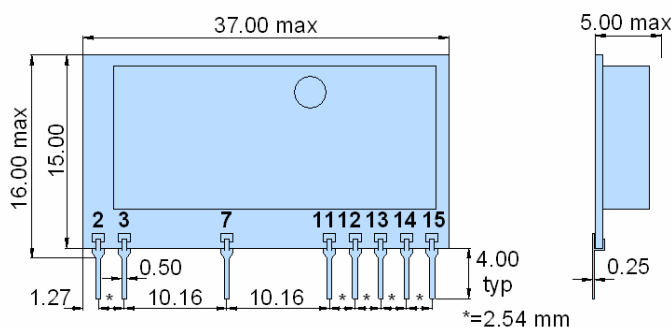
Developed according to I-ETS 300 220 e ETS 300 683 European Standard.

## APPLICATIONS:

Security systems, anti-theft systems, door openers, data transmission and more.



## MECHANICAL CHARACTERISTICS



### Pin functions

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

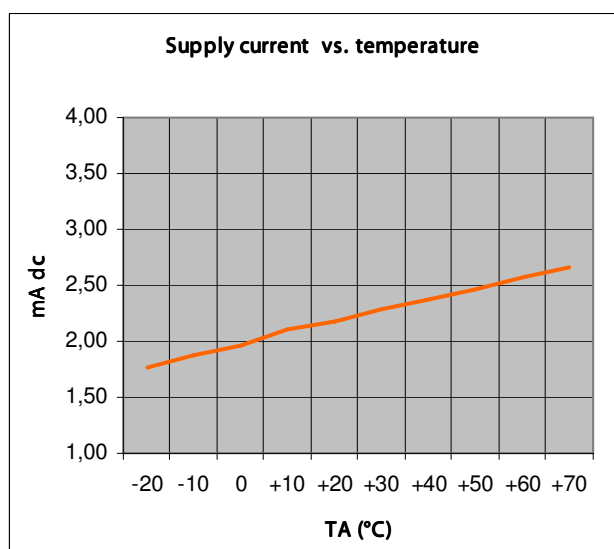
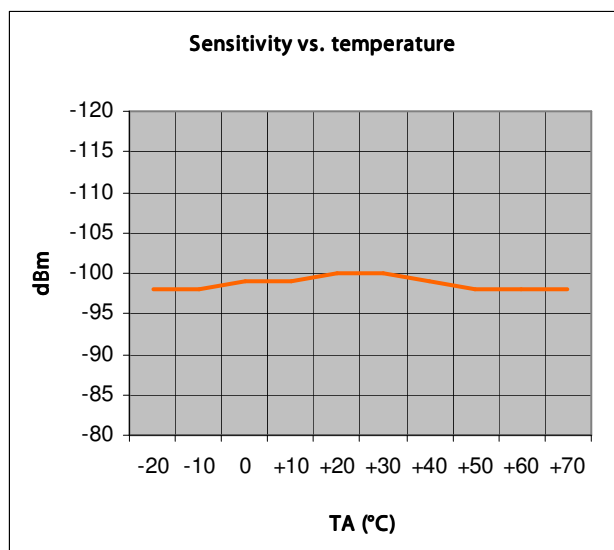
## ABS: MAX: RATINGS

Power Supply, Vcc, PIN 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 ÷ + 80 °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	-	2.0	3.0	mA	
Receiver Frequency	-	433.92	-	MHz	
Sensitivity	-	-100	-	dBm	Note 1
RF Bandwidth - 3dB	-	$\pm 200$	-	kHz	
Antenna Spurious RF Emission	-	-	-60	dBm	
Baud rate	-	-	4800	Baud	
Start-up Time	-	-	2500	ms	Note 2
Settling Time	-	-	220	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	

## 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 1MΩ (-2dB) and 150kΩ (-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 1MΩ, +3dB). If pin 13 is used like audio output, the signal on T.P. has to be taken by means of a 100nF decoupling capacitor in order to avoid to load the output.