

433.92 MHz SUPER-REGENERATIVE ASK RECEIVER

Mod. "CASCODE+" 3V VERSION / Cod. 3-2000810V3

PRELIMINARY

DESCRIPTION:

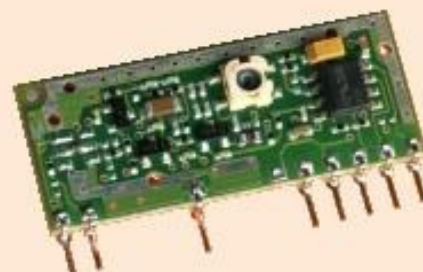
Super regenerative ASK receiver manufactured in SMT technology on printed circuit. Cascoded input stage improves separation between antenna and oscillator-detector; the receive frequency tuning is achieved through a lowered variable coil.

HIGHLIGHTS:

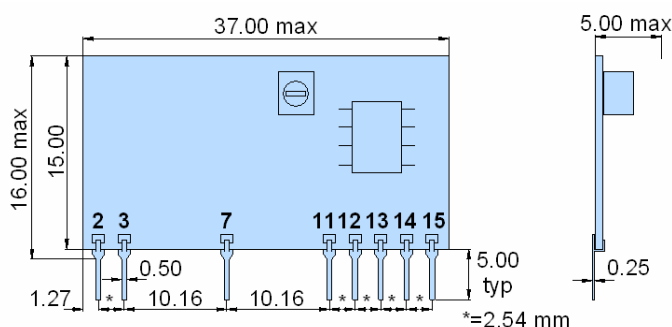
Developed according to I-ETS 300 220 e ETS 300 683 European Standard.

APPLICATIONS:

Anti-theft systems, door openers, security systems, data transmission and more.



MECHANICAL CHARACTERISTICS



Pin functions

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

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	-	mA	
Receiver Frequency	-	433.92	-	MHz	
Sensitivity	-	-100	-	dBm	Note 1
RF Bandwidth -3dB	-	±1000	-	kHz	
S/N Ratio @ -100dBm	-	13	-	dB	
Baud rate	-	-	4800	Baud	
Logic Low	0	0.02	0.05	Volt	
Logic High	Vcc-0.2V	-	-	Volt	
Max. output load (on Pin 14)	-	-	47	Kohm	



- Note 1:** AM modulation 100%, square wave, 1KHz frequency. **Sensitivity maintains within -3dB on the whole temperature range considered (-20 ÷ +80°C) with respect to value measured at 25°C.**
- Note 2:** 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 1M Ω (-2dB) and 150k Ω (-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 1M Ω , +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.

RF
WIRELESS

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