

868.30 MHz SUPER-REGENERATIVE ASK RECEIVER

Mod. "ULTRA LOW CONSUMPTION" - 3V VERSION / Cod. 3-2000775V3

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.

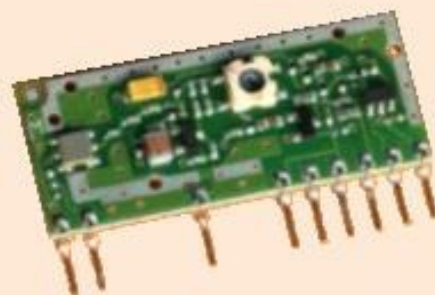
New Toko lowered coil assures stability while a complete metallic shield (optional) improves immunity to noise.

HIGHLIGHTS:

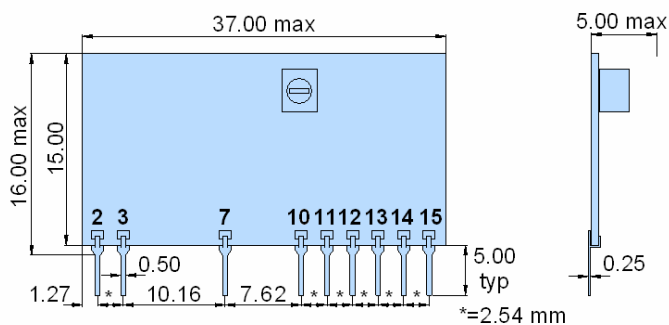
Developed according to I-ETS 300 220 e ETS 300 683 European Standard.

APPLICATIONS:

Security systems, car and motorcycle anti-theft systems, data-collection mobile radio-systems, battery-fed 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

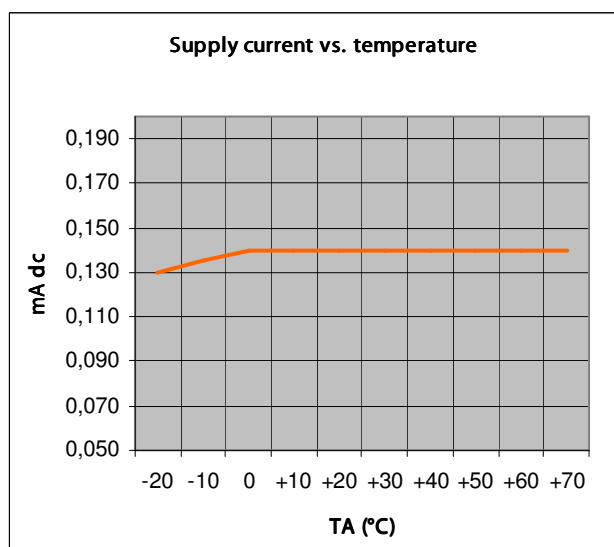
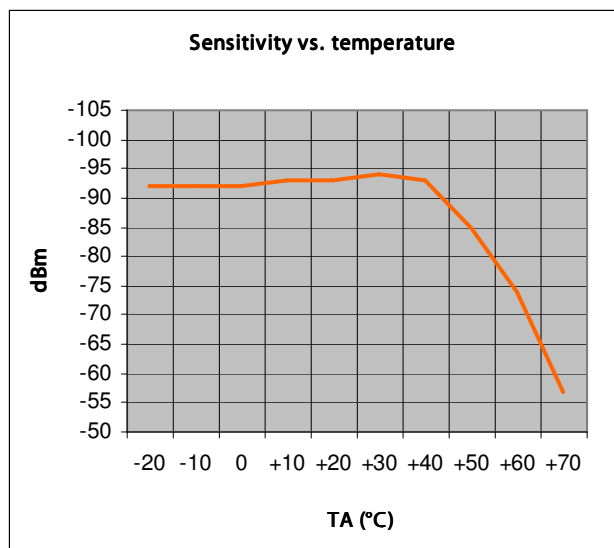
ABS: MAX: RATINGS

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	-	135	145	μA	
Receiver Frequency	-	868.30	-	MHz	
Sensitivity	-90	-93	-	dBm	Note 1
RF Bandwidth – 3dB	-	±2.0	-	MHz	
Antenna Spurious RF Emission	-	-	-65	dBm	
Baud rate	-	-	2400	Baud	
Start-up Time	-	-	900	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	

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 6.8M Ω (-3dB) and 2.2M 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 36M Ω).

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.