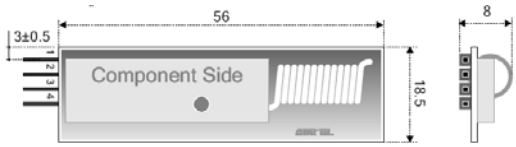
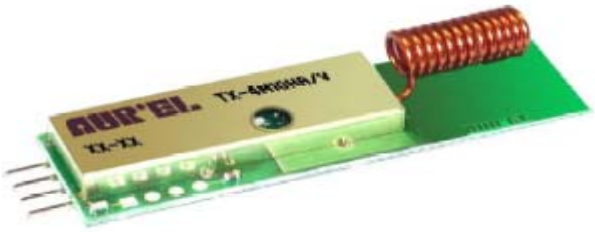
TX-8L25IA/V Transmitter

Transmitter module with integrated antenna, for utilisations with ON-OFF modulation of an RF carrier with digital data.

Pin-out





Connections

Pin 1	***TX Dati***	Data input with minimum 50 kΩ input resistance.
Pin 2-3	***Ground***	GND Connections. To be externally connected to a single ground plate.
Pin 4	***+V***	Connection to the positive pole of the 3V supply

Technical features

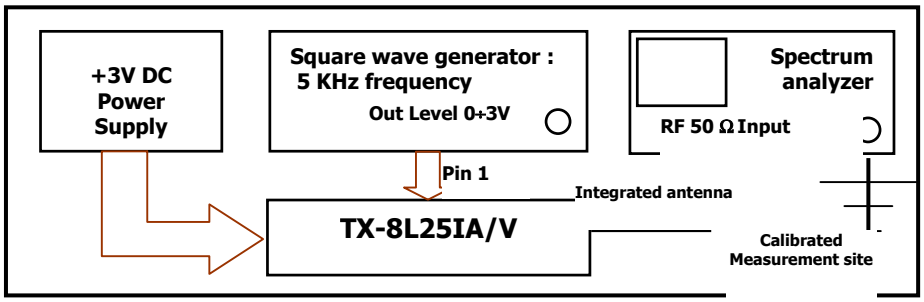
Description	Min	Tipic	Max	Unit	Remarks
Working frequency centre		868.3		MHz	See notes 1 and 2
Voltage supply (Vs)	2.5	3	3.3	V	
Absorbed current		27		mA	See note 1
RF output power (E.R.P.)		+14		dBm	See note 1
RF spurious emissions			-32	dBm	See note 1
Modulation frequency			5	KHz	
Input high logic level	2.5	3	3.3	V	
Input low logic level	0		0.2	V	
Working temperature	-20		+80	°C	See fig.5-6-7
Working temperature [EN 300 220]	-20		+55	°C	See fig.5-6-7
Dimensions	56 x 18.5 x 5 mm				See Pin-out

Note1: *Values have been obtained by applying the test system shown in Fig. 1 and maximum 3,3 V power supply.*
Note2: *The minimum and maximum showed values are determined by the device's construction tolerance. To define the working frequency of the device, add to these values the deviation caused by the thermal variations (see fig. 6).*
Note3*: To keep the parameters within the limits established by the rules in force, (see para. "Reference Rules"), it is recommended to supply the circuit with not more than 3,3V and to comply with all the recommendations*

Messrs AUR°EL declines all responsibilities in case the a.m. recommendations are disregarded.

The declared technical features have been obtained by applying the following testing system:

Fig.1



Device usage

In order to obtain the performances described in the technical specifications and to comply with the operating conditions, which characterize the Certification, the transmitter has to be mounted on a printed circuit, and keep into consideration what follows:

Voltage supply:

1. The transmitter must be supplied by a very low voltage source, safely protected against short circuits. Maximum voltage variations allowed: 2,5÷3,3V.
2. De-coupling, next to the transmitter, by means of a minimum 100.000 pF ceramic capacitor.

Ground:

It must surround at the best the welding area of the transmitter. Ground plane must be on bottom layer and it doesn't must be present near integrated antenna to avoid coupling.

Other components :

1. De-coupling, next to the data input pin (pin 1), by means of a 100 pF ceramic capacitor.
2. Keep the transmitter separate from all other components of the circuit (more than 5 mm).
3. Keep particularly far away and shielded all microprocessors and their clock circuits.

Reference rules

The **TX-8L25IA/V** transmitter complies with the EU Rules EN 300-220 and EN 301-489**,** with a 3,3V max. supply. The equipment has been tested according to rule **EN 60950** and it can be utilized inside a special insulated housing that assures its compliance with the above mentioned rule. The transmitter must be supplied by a very low voltage source, safely protected against short circuits.

The use of the transmitter module is foreseen inside housings that assure the overcoming of the rules EN 61000 not directly applicable to the module itself. In particular, it is left at the User's care, the insulation of the external antenna connection, and of the antenna itself, since the RF output of the transmitter is not built to directly bear the electrostatic charges foreseen by the EN 61000-4-2 rules.

CEPT 70-03 Recommendation

In order to comply with such rule, the device must be used only for a 1% of an hourly duty-cycle. The device utilisation inside the italian territory is governed by the *Codice Postale* and *Telecomunicazioni* rules in force (art. no. 334 and subsequents).

Reference curves

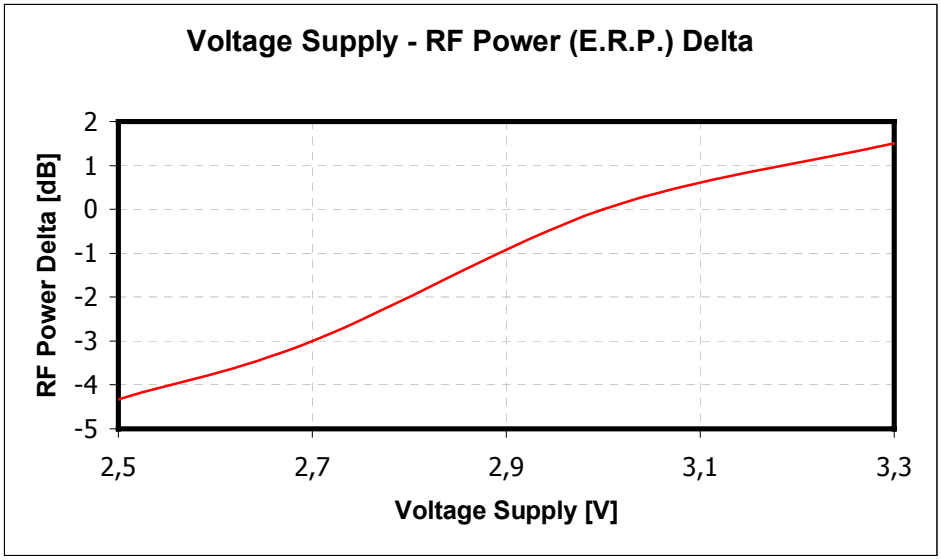


Fig.2 RF Power (E.R.P.) delta Vs Voltage Supply

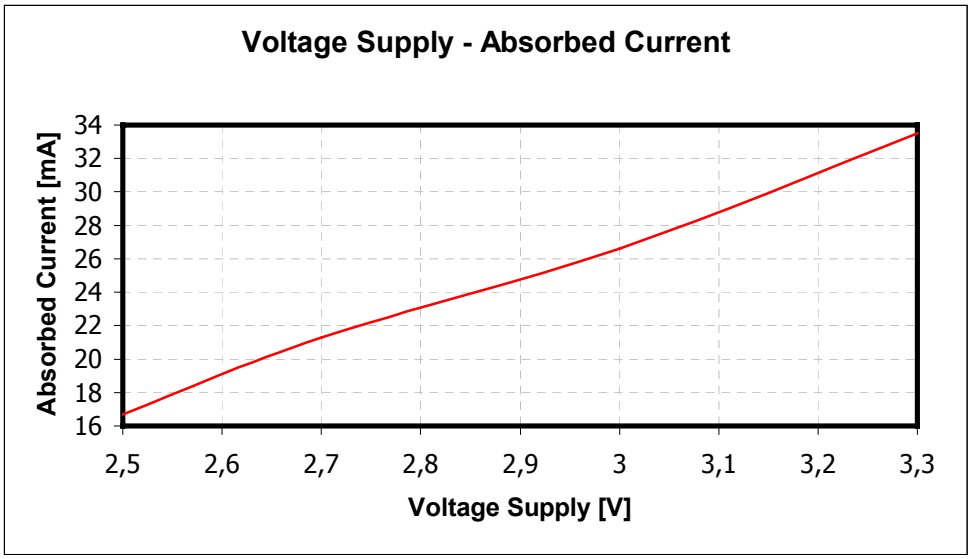


Fig. 3 Absorbed current Vs Power Supply
The curve has been obtained by the testing system shown in Fig.1

Reference thermal curves

The thermal curves have been obtained by the testing system shown in Fig.1

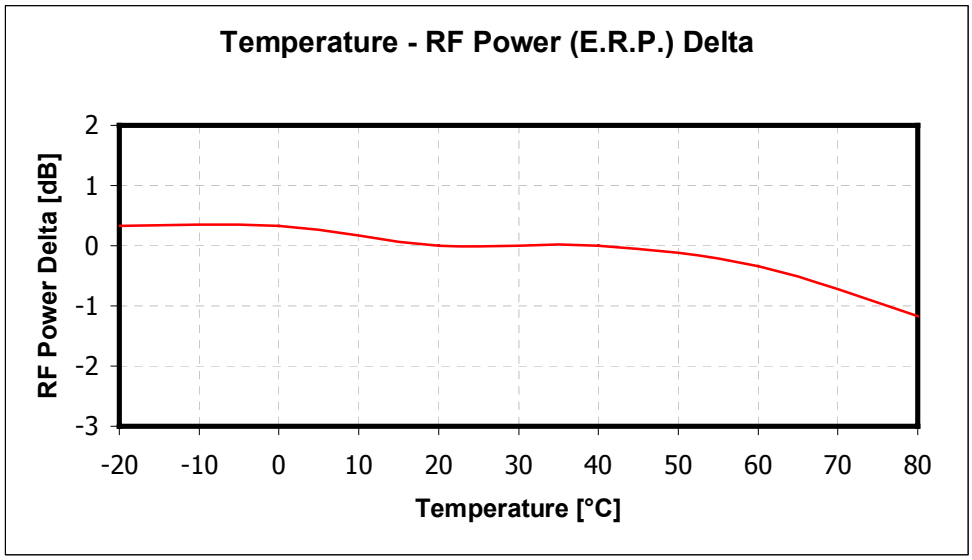


Fig. 4 RF Power (E.R.P.) delta Vs Temperature

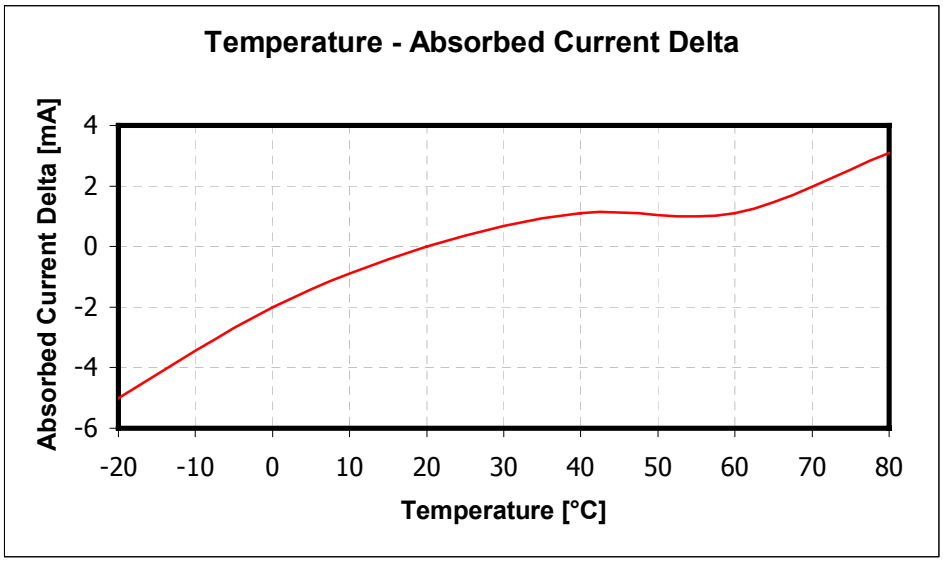


Fig. 5 Absorbed current delta Vs Temperature

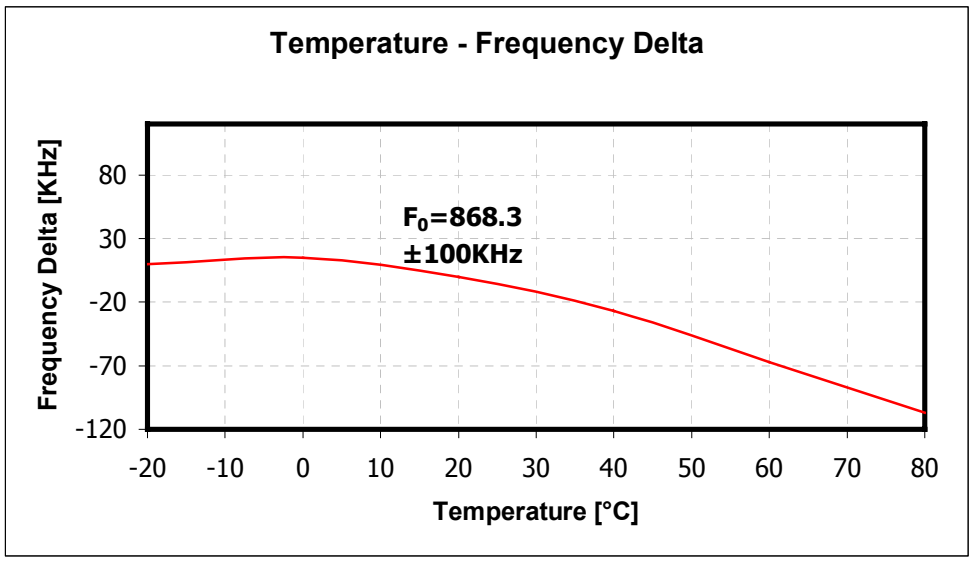


Fig. 6 Frequency delta Vs Temperature