

<b>BK67</b>			
SRD	TRX	PLL	433.05-434.79 MHz ISM BAND

**TABLE 1 – BK67 VERSIONS**

<b>BK67F5 (1)</b>	<b>433.050 – 434.790 MHz</b>	<b>20 mW</b>	<b>5Vdc</b>
<b>BK67F3 (1)</b>	<b>433.050 – 434.790 MHz</b>	<b>15 mW</b>	<b>3Vdc</b>

Note (1) STANDARD VERSIONS WITH EX STOCK AVAILABILITY.  
 PLEASE CONTACT THE FACTORY FOR SAMPLES AND AVAILABILITY OF NON STANDARD VERSIONS.



- PLL Synthesized
- Data rate to 64 KB
- -106dbm Rx Sensitivity

**General Description**

The BK67F5 is a synthesized UHF transceiver for use in wireless data transmission applications. The transceiver operates on the 433.05 – 434.79 MHz ISM band and it is designed to comply to the European Standards EN 300-220-3 and EN 301-489-3, in accordance with the CEPT-ERC-REC 70-03 recommendation (Annex 1 – Non Specific Short Range Devices). Together with a precision and low phase-noise crystal controlled PLL architecture, the transceiver has high reception sensitivity (-105 dBm) and high RF output power (20 mW). High RF output power allows to employ poor efficiency antennas (helical, patch, loop or a trace on a PCB) to remain under legal 10 mW ERP (Effective Radiated Power) limit. The BK67F5 is designed to be directly interfaced to a microcontroller (MCU) to control and to monitor the receive and transmit mode and to program (through a 3 wires serial interface) the appropriate Rx and Tx frequencies. In a typical application the MCU manages also the communication protocol i.e. the switching between transmit and receive mode, the preamble, the start byte, the bit encoding and decoding and other important operations.

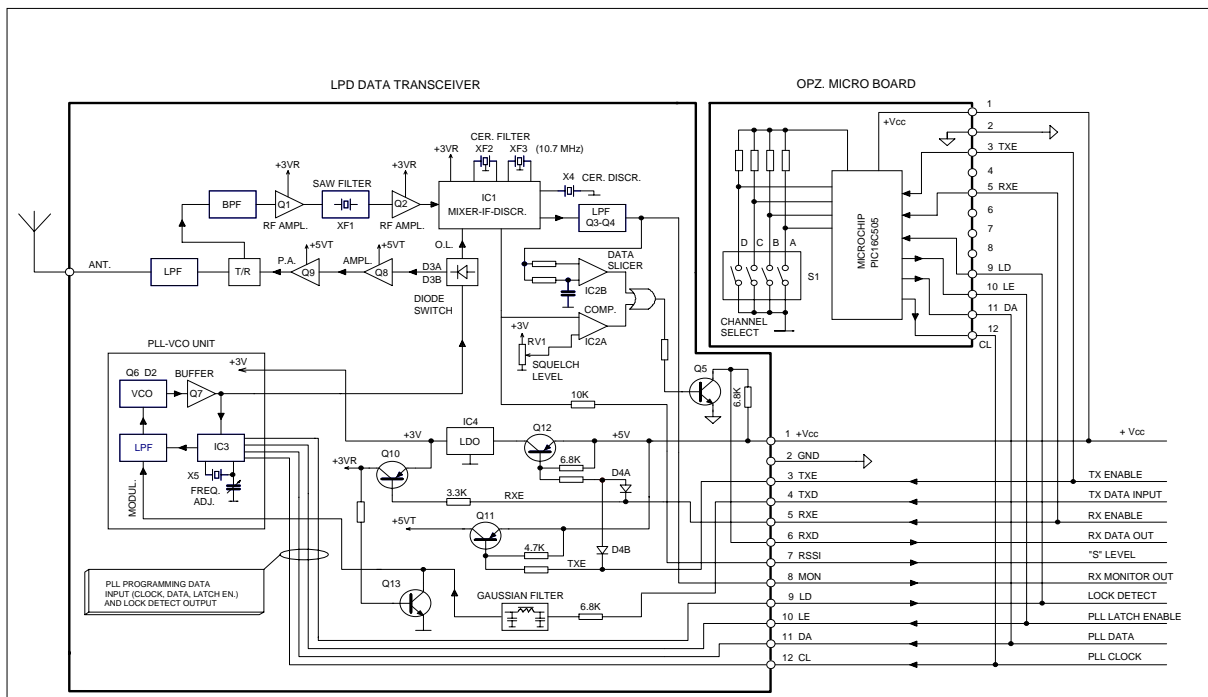


Fig. 1: Functional block diagram.

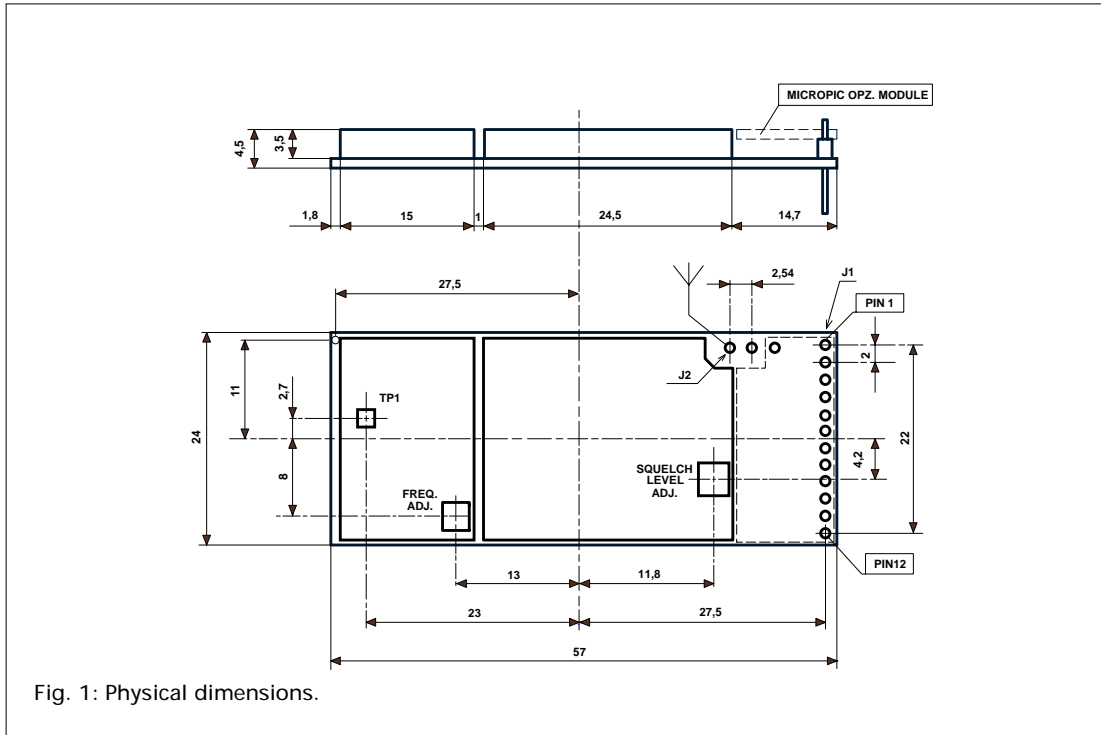
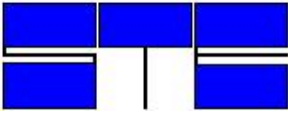


Fig. 1: Physical dimensions.

**Optional microboard.**

An optional small  $\mu$ C board ( Micropic Module – part.n° 015917) can be directly mounted on the transceiver J1 connector. The Micropic Module eliminates the necessity of an external programming of Tx and Rx frequencies. Up to 16 factory pre-programmed RF channels can be easily selected by means of a four positions dip-switch.

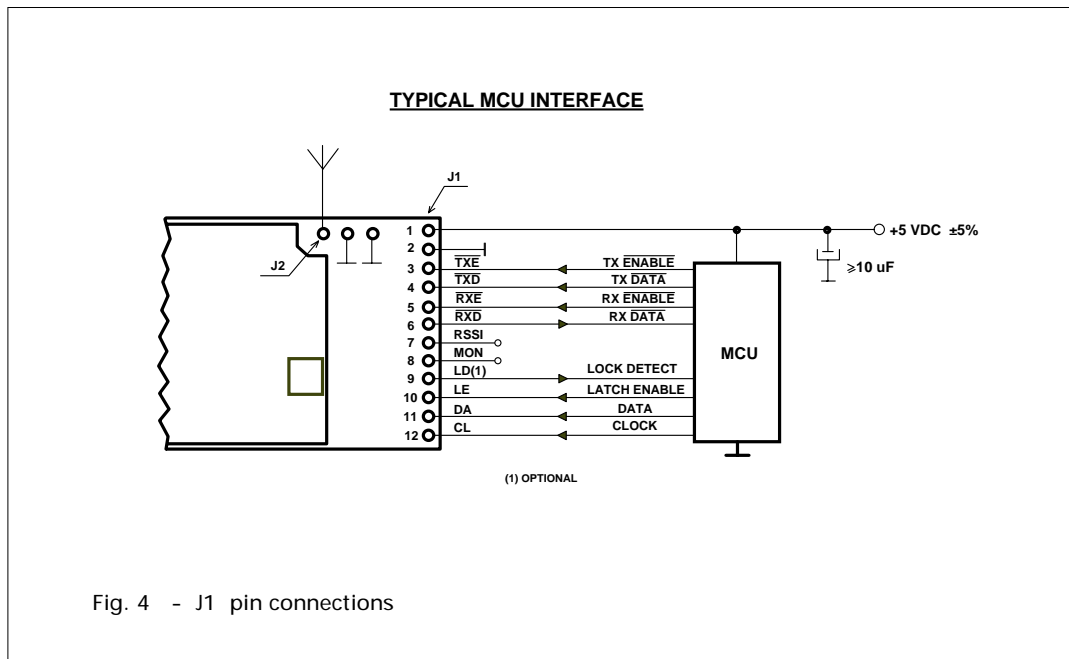


Fig. 4 - J1 pin connections

<b>BK67F5 Specifications</b>					
	<b>Min</b>	<b>Typ</b>	<b>Max</b>	<b>Units</b>	<b>Notes</b>
<b>GENERAL</b>					
FREQUENCY RANGE	432.000		436.000	MHz	( 1 )
CHANNEL SPACING	150	200		KHz	
FREQUENCY PROGR. STEP	25	50	100	KHz	
FREQUENCY STABILITY		±4	±7	KHz	( 2 )
DATA RATE	7.2		64	Kbaud	
ANTENNA IMPEDANCE		50		Ω	
SUPPLY VOLTAGE	4.75	5	5.25	V	
SUPPLY CURRENT - SLEEP		1	10	μA	
SUPPLY CURRENT - Rx MODE		21	24	mA	
SUPPLY CURRENT - Tx MODE		30	35	mA	
OPERATING TEMPERATURE	- 20		+ 60	°C	
<b>TRANSMITTER</b>					
RF OUTPUT POWER	15		20	mW	( 3 )
SPURIOUS EMISSION			- 50	dBc	
MODULATION FREQUENCY	3.5		32	KHz	( 4 )
FM DEVIATION		30		KHz	( 4 )
R/T SWITCHING TIME		2		ms	( 5 )
CHANNEL SWITCHING TIME		1		ms	( 5 )
<b>RECEIVER</b>					
SENSITIVITY	- 102	- 106		dBm	
SELECTIVITY		40	30	dB	( 6 )
IMAGE REJECTION		50		dB	
DYNAMIC RANGE		100		dB	
SQUELCH LEVEL ADJ. RANGE	- 115	- 110	- 70	dBm	
T/R SWITCHING TIME		1.5		ms	( 5 )
CHANNEL SWITCHING TIME		500		μs	( 5 )
DIMENSIONS	57 x 24 x 4.5 mm				
WEIGHT	10 g				
<p><b>NOTE :</b></p> <p>(1) CEPT SRD BAND LIMITS = 433.05 – 434.79 MHz</p> <p>(2) OVER OPERATING TEMPERATURE RANGE</p> <p>(3) POWER ON 50 Ω . CEPT MAX ERP = 10 mW</p> <p>(4) SQUARE WAVE 0-5 Vdc LEVEL</p> <p>(5) PLL LOCK-UP TIME</p> <p>(6) AT Fo ± 200 KHz</p>					

