

BK77

SRD	TRX	SAW	ISM	433.050 – 434.790 MHz
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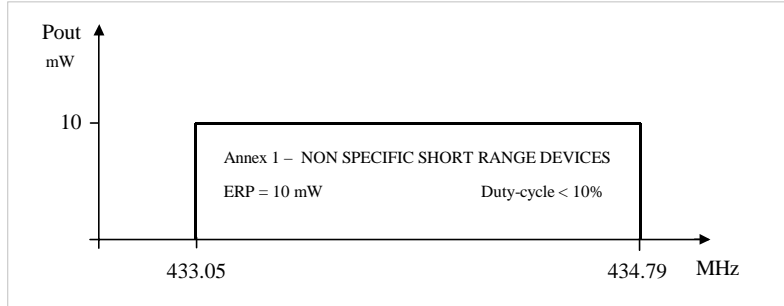


Fig. 1 CEPT ERC/REC 70-03 SRD 434 MHz Band.

General Description

The BK77A5 and the BK77B5 are “PLL” synthesized UHF transceivers for use in Wireless “Voice” (Analogue Signal) or Data transmission applications. The transceivers operate on the 433.05-434.79 MHz ISM Band and are designed to comply to the European Standards EN 300-220-3 (class I) and EN 301-489-3.

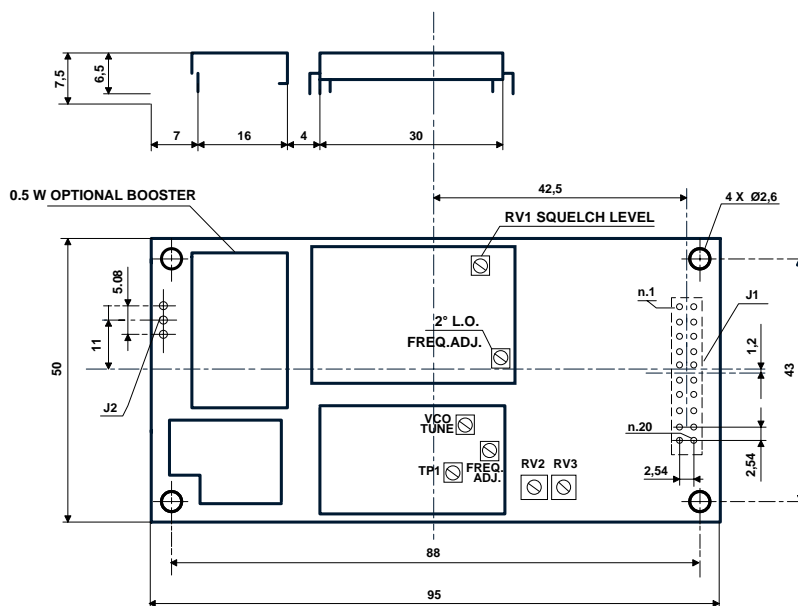
The transceivers employ NBFM (Narrow Band Frequency Modulation) with a 25 KHz channel separation.

A) BK77A5

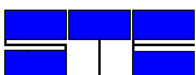
The BK77A5 is designed in accordance with CEPT-ERC/REC 70-03 recommendation (Annex 1 – Non specific short range devices) for applications employing a 10 mW max radiated power (ERP).

B) BK77B5

The BK77B5 has 500 mW output RF power (100mW in “ Low Power”) and it is programmable from 432 MHz to 436.1 MHz (to cover also the Italian 436.000-436.100 MHz telemetry and Data transmission band).



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BK77A5 – BK77B5 Specifications

GENERAL	Min	Typ	Max	Units	Notes
FREQUENCY RANGE	432.000		436.100	MHz	(1)
CHANNEL SPACING		25		KHz	
FREQUENCY PROGR. STEP		12.5		KHz	
FREQUENCY STABILITY		±2.5	±4	ppm	(2)
DATA RATE (DATA MODE)	1200		9600	Baud	
ANTENNA IMPEDANCE		50		Ω	
FREQ. RESPONSE (VOICE MODE)	100		7000	Hz	
SUPPLY VOLTAGE	4.75	5	5.25	V	
SUPPLY CURRENT - Rx MODE		50	60	mA	
SUPPLY CURRENT - Tx MODE : a) BK77A5 (100 mW) b) BK77B5 (500 mW)		120 250		mA mA	
OPERATING TEMPERATURE	- 20		+ 60	°C	
DIMENSIONS			95 x 50 x 7.5	mm	
WEIGHT			25 g		
TRANSMITTER					
RF OUTPUT POWER :					
a) BK77A5 low	10	15		mW	(3)
high	80	100		mW	
b) BK77B5 low	80	100		mW	
high	400	500		mW	
SPURIOUS EMISSION		-40	- 36	dBm	
FM DEVIATION			5	KHz	
R/T SWITCHING TIME		5	10	ms	(4)
MODULATION :					
VOICE MODE (PM MOD.)	100		3000	Hz	(5)
VOICE MODE (FM MOD.)	100		5000	Hz	
DATA MODE (GMSK MOD.)	DC		4800	Hz	
RECEIVER					
SENSITIVITY :					
VOICE MODE (PM MOD.)			-125	dBm	(6)
VOICE MODE (FM MOD.)			-115	dBm	(6)
DATA MODE (4800 Baud)			-115	dBm	(7)
SELECTIVITY	65	70		dB	(8)
IMAGE REJECTION		50		dB	
DYNAMIC RANGE	100	110		dB	
BLOCKING	+84	+85		dB	(9)
T/R SWITCHING TIME		5	10	ms	(4)
NOTE :					
(1) CEPT SRD BAND LIMITS = 433.05 – 434.79 MHz		(6) 20dB SINAD – 1KHz dev. 3KHz			
(2) OVER OPERATING TEMPERATURE RANGE		(7) 1/10E2 BER			
(3) CEPT MAX ERP = 10 mW		(8) ADJACENT CHANNEL SELECTIVITY			
(4) PLL LOCK-UP TIME		(9) Fc ± 1 MHz			
(5) SQUARE WAVE 0-5 Vdc LEVEL					

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