

BK18

SRD	TRX	SAW	ISM 868 – 870 MHz
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TABLE 1 – BK17 VERSIONS

BK18A5-M2	(1) 868.350 MHz 5Vdc	38.4 KB
BK18A3-M2	(1) 868.350 MHz 3.6Vdc	38.4 KB
BK18A5-M5	868.950 MHz 5Vdc	38.4 KB
BK18A3-M5	868.950 MHz 3.6Vdc	38.4 KB
BK18S5-M2	868.350 MHz 5Vdc	64 KB
BK18S3-M2	868.350 MHz 3.6Vdc	64 KB
BK18S5-M5	868.950 MHz 5Vdc	64 KB
BK18S3-M5	868.950 MHz 3.6Vdc	64 KB

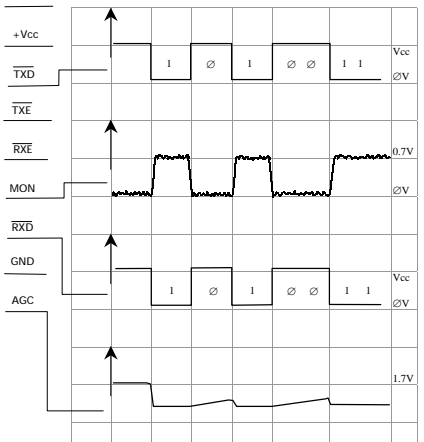
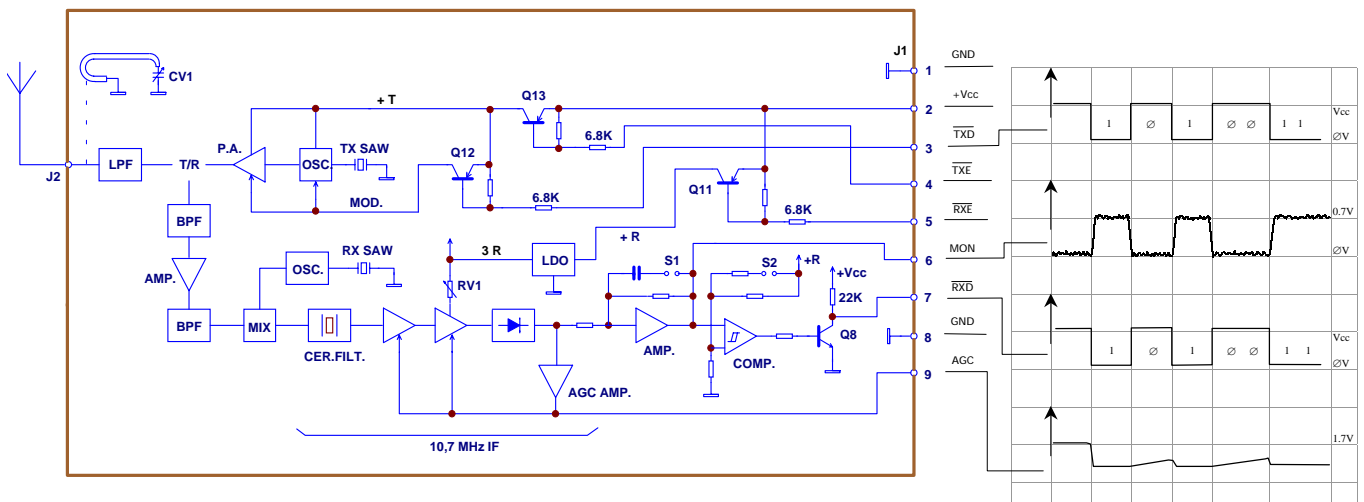
NOTE (1): STANDARD VERSIONS WITH EX STOCK AVAILABILITY. PLEASE CONTACT THE FACTORY FOR SAMPLES AND AVAILABILITY OF NON STANDARD VERSIONS.
NOTE (2): LOOP ANTENNA EQUIPPED.



- SAW RESONATOR CONTROLLED
- HIGH TX POWER (20 mW)
- HIGH RX SENSITIVITY (-100 dBm)
- GASK MODULATION
- HIGH DATA RATE (To 64KB)

DESCRIPTION:

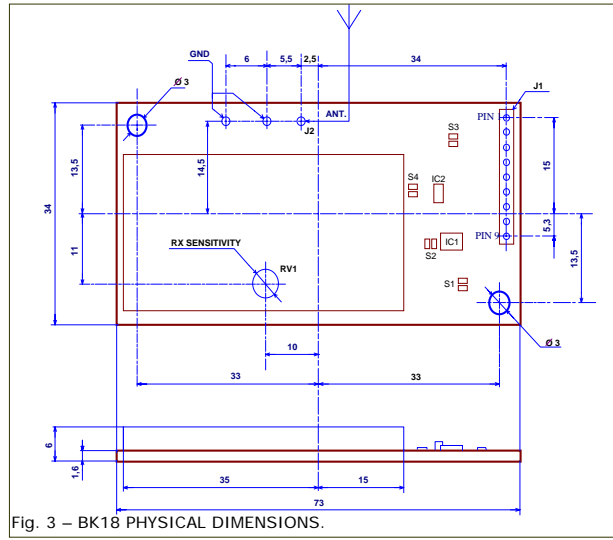
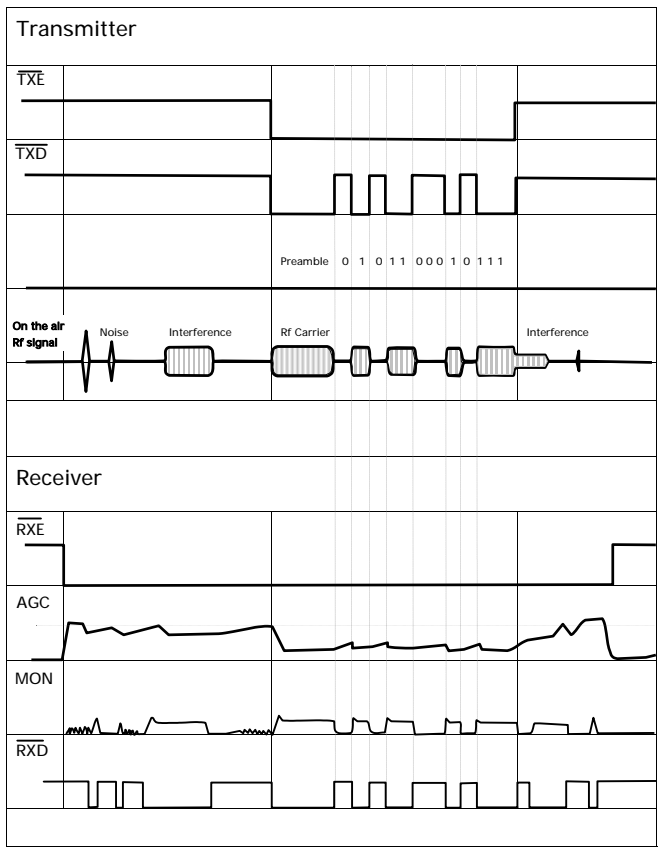
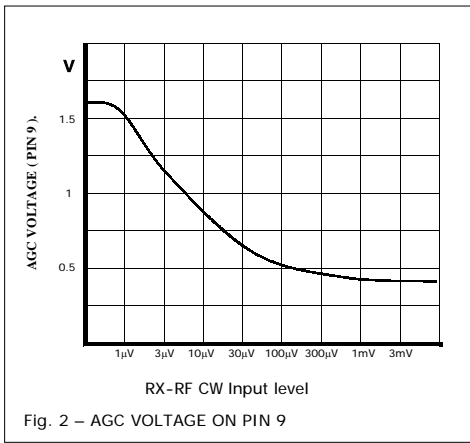
The BK18 is a radio transceiver module for use in bi-directional data transfer applications up to 64 KB. The module operates on the 868 MHz ISM band and is recognized as the ideal solution for wireless short range data transmission, wireless alarms, remote meter reading and many other wireless applications. The BK18 utilizes an advanced ASK Gaussian shaped (GASK) modulation for a better rejection of multipath propagation signal distortion. The transmitter section of the BK18 is provided by a "SAW" stabilized oscillator feeding a P.A. stage. The receiver is a superheterodyne with "SAW" stabilized local oscillator and with a very low current consumption. The BK18 is easily directly interfaced to microprocessors and is equipped by a proprietary demodulation system insensitive to the data's mean value.



BK18 - PERFORMANCE DATA

		Min	Typ	Max	Units	Notes
▪	FREQUENCY	BK18xx-M2 BK18xx-M5	868.200 868.800	868.350 868.950	868.500 869.100	MHz (1)
▪	ANTENNA IMPEDANCE		50		Ω	
▪	TX RF POWER	15	20		mW	
▪	TX SPURIOUS EMISSION			-45	dBc	
▪	RX SENSITIVITY	-95	-98		dBm	(2)
▪	RX SELECTIVITY		±100		KHz	
▪	RX DYNAMIC RANGE	80	90		dB	
▪	DATA RATE	BK18A BK18S		38.4 64	KB KB	(3) (3)
▪	T-R SWITCHING TIME		0.5	1	ms	
▪	SUPPLY VOLTAGE	BK18 x 5 BK18 x 3	4.5 3	5 3.6	V V	
▪	SUPPLY CURRENT	RX MODE TX MODE		9 20	mA mA	(4) (4)
▪	OPERATING TEMPERATURE		-20		+60	°C

NOTE:
 (1) OVER OPERATING TEMPERATURE RANGE.
 (2) 19.2KB - BER 1%.
 (3) 50/50 MARK/SPACE DATA PATTERN.
 (4) TYP. VALUE FOR 50/50 MARK/SPACE DATA PATTERN - MAX VALUE FOR CW EMISSION.



PIN DESCRIPTION		
PIN 1	GND	GROUND
PIN 2	VCC	+DC SUPPLY
PIN 3	TxD	TX DATA INPUT
PIN 4	TxE	TX ENABLE - ACTIVE LOW
PIN 5	RxE	RX ENABLE - ACTIVE LOW
PIN 6	MON	ANALOG OUTPUT
PIN 7	RxD	RX DATA OUTPUT
PIN 8	GND	GROUND
PIN 9	AGC	"AGC" VOLTAGE OUTPUT - [Fig.2]

NOTE:
 The data must be preceded by a "Preamble" (a "1" or a sequence 0-1-0-1-) 1 to 3 ms long to stabilize the "AGC" level. The "AGC" (Automatic Gain Control) is the system employed by the receiver to adapt its own sensitivity to the received peak RF level. Data must be "packetized" with no gaps between bytes and must be initialised with an "XON" and terminated by an "XOFF" a "CRC" or Check-Sum. Data can be detected sampling the middle of every bit period. Synchronization can be obtained controlling the edges of start byte or message taking into consideration that a weak signal at the receiver input will produce some "Jitter" effect on the rising and falling edge of the bits.

