

FCC requirements § 2.1033 (b)(4)

**CIRCUIT DESCRIPTION.
SCHEMATIC DIAGRAM**

This page is followed by the RW-T42/43 transmitter description, schematic diagram, parts list and layout drawings.

Technical Description: RW-T42/43 Transmitter

Circuit Operation

The RW-T42/43 Transmitter is a portable transmitter used as a three channel transmitter.

The transmitter has two push buttons, S1 and S2, identified by one or two embossed dots respectively.

The transmitter has two parts: digital and RF.

The digital part consists of a microcontroller, two push button switches, a voltage detector and an LED.

The microcontroller will start to operate consequent to a push button activation. It will check the voltage detector output (to verify the level of the battery voltage), the status of the push button switches and it will send a signal to the LED and to the RF part of the circuitry. According to the depressed push buttons, the microcontroller sends 'Alarm', 'Restore', or 'Write' messages.

The RF section consists of a key on/off transmitter (oscillator), buffer, output amplifier and a loop high 'Q' resonant antenna.

The oscillator is a SAW stabilized Colpitts with resonant circuit.

The buffer is a common emitter amplifier, with a gain of about 3dB, second harmonic rejection of about -6dBC.

The antenna is a high "Q" (about 60) type, tuning by C19 trimmer capacitor. The total RF part current consumption is about 8 mA.

The information transmitted by the RF part will depend upon which push button switch was depressed (S1, S2 or both).

A 'low battery' signal will be sent as well in case that condition is detected (battery voltage lower than 2.6V), and this will be indicated also by blinking the LED. During 'normal transmission' the LED operates continuously.

Frequency of operation: 318 MHz.

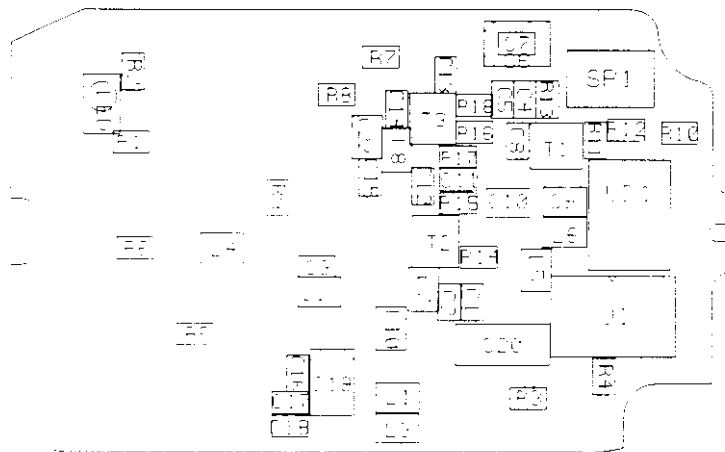
The RW-T42/43 Transmitter is powered by one internal battery, type CR2032 (3V, 200 mA/hr).

Intended Use

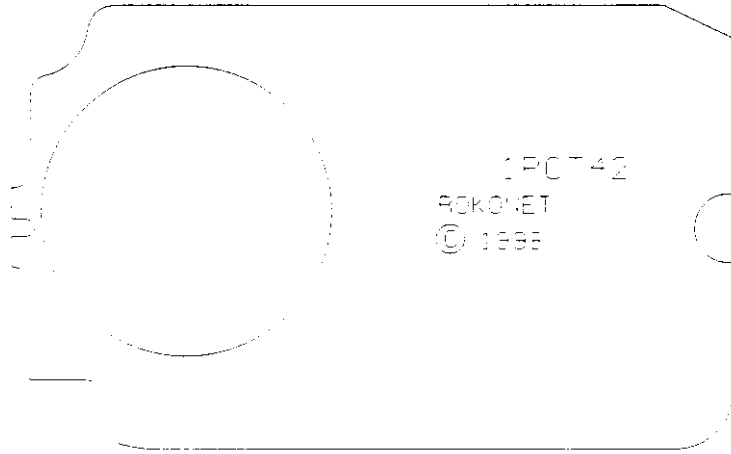
The RW-T42/43 Transmitter is used as a three channel transmitter, used to arm and disarm a security system and as a two-button panic alarm, or as a three channel general purpose transmitter.

N°	QTY.	DESCRIPTION	ROKONET CAT. N°	REFERENCE DESIGNATOR	REM
				COMPONENT SIDE (RIFLOW) FCC ID: JE4WT4X	
1	1	C 0603 COG 0.5pF±0.25pF		C8	
2	2	C 0603 COG 3.3pF± 0.25pF	1CCM3R3	C12 C15	
3	2	C 0603 COG 6.8pF± 0.25pF	1CCM6R8	C4 C17	
4	1	C 0603 COG 330pF±10%	1CCM331	C1	
5	1	C 0805 COG 0.5pF± 0.25pF	1CCS33	C10	
6	1	C 0805 COG 3.3pF± 0.25pF	1CCS25	C22	
7	1	C 0603X7R 10nF± 10%	1CCM103	C2	
8	1	C 0805 COG 820pF± 10%	1CCS40	C9	
9	1	C TANTALUM 47uF/ 6.3V	1CT47M6R3	C20	
10	1	TRIMMER CAPACITOR SMD 3.5...10 pF		C19	
11	1	INDUCTOR 0805 SMD 33nH±10%	1IN33D	L8	
12	1	INDUCTOR 0805 SMD 56nH±10%	1IN27	L7	
13	1	INDUCTOR 0805 SMD 68nH±10%	1IN68D	L6	
14	6	INDUCTOR 0805 SMD 470nH±10%	1IN470D	L1 L2 L3 L4 L5 L10	
15	1	R 0603 47 Ohm± 5%	1RM470	R18	
16	1	R 0603 100 Ohm± 5%	1RM101	R1	
17	1	R 0603 330 Ohm± 5%	1RM331	R2	
18	2	R 0603 1K ± 5%	1RM102	R13 R15	
19	5	R 0603 3.3K ± 5%	1RM332	R5 R6 R7 R8 R9	
20	1	R 0603 4.7K ± 5%	1RM472	R3	
21	1	R 0603 10K ± 5%	1RM103	R11	
22	1	R 0603 15K ± 5%	1RM153	R12	
23	4	R 0603 47K ± 5%	1RM473	R4 R10 R14 R16	
24	1	SAW RESONATOR SMD RO2118A	1SA18	SR1	
25	1	RED LED SMD	1LD30	LED	
26	1	VOLTAGE DETECTOR 2.6V	1IC80726D	VD1	
27	1	MICROCONTROLLER SMD PIC12C509	1ICPIC509	U1	
28	3	TRANSISTOR SMD MMBR901	1TR15	T1 T2 T3	
29	1	PCB	1PCT42		
30	10	NOT MOUNTED		C3 C5 C6 C7 C11 C13 C14 C16 C18 R17	

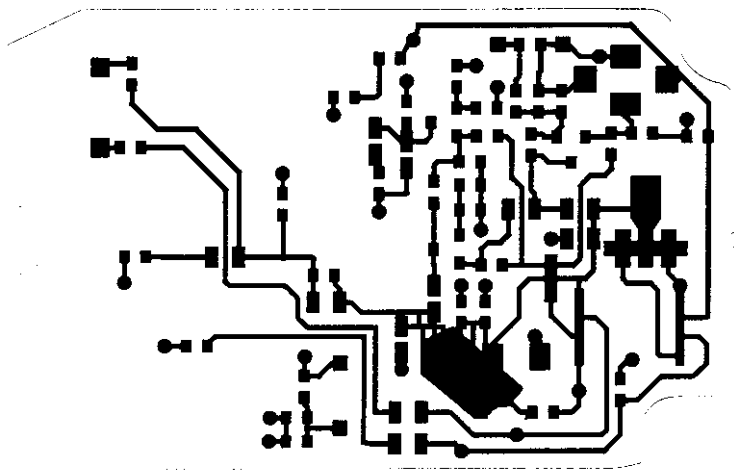
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Design	6.12.98	<i>[Signature]</i>	
Draft	6.12.98	INNA <i>[Signature]</i>	
Check	6.12.98	<i>[Signature]</i>	
Appr.			
ROKONET ELECTRONICS LTD			RW-T4X-FAMILY-10
© 1998			Sheet 1 Rev A Sheets 1
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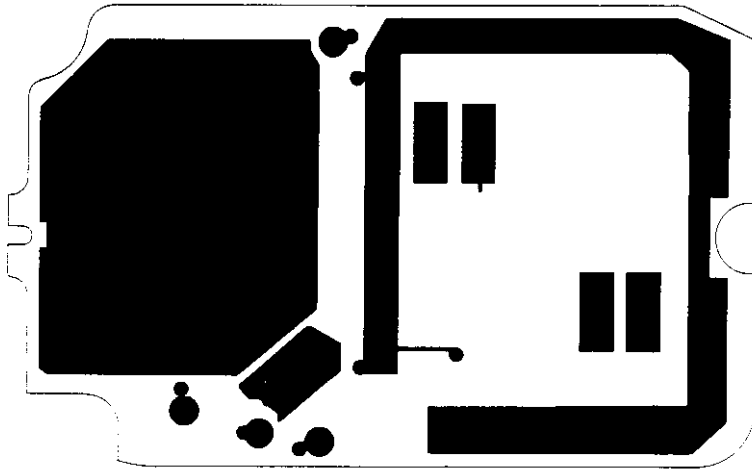
Date	Name	Signature	PCB ASSEMBLY PS		
Design	16.12.18	James			
Draft	30.11.98	INNA			
Check	16.12.18	James			
Appr.					
ROKONET ELECTRONICS LTD			RK-T4X-FAMILY-05	Sheet 1	
© 1999			FILE:4X105.PCB	Rev A	
Project number:1328				Sheets 1	



	Date	Name	Signature		
Design	16.12.11	Spencer	<i>[Signature]</i>	PCB LAYOUT CS	
Draft	25.11.98	ITINA	<i>[Signature]</i>		
Check	16.12.11	Spencer	<i>[Signature]</i>		
Appr.					
ROKNET ELECTRONICS LTD.				RN-T4X-FAMILY-04	Sheet / Rev 1 / A
Project number: 13218				© 1998	FILE: T4X_04.PCB Sheets 1



Date	Name	Signature	
Design 16.12.98	Jim	<i>[Signature]</i>	PCB LAYOUT PS
Draft 32.11.98	JAN	<i>[Signature]</i>	
Check 16.12.98	Jim	<i>[Signature]</i>	
Appr.			
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			Sheet Rev 1 2 Sheets 1

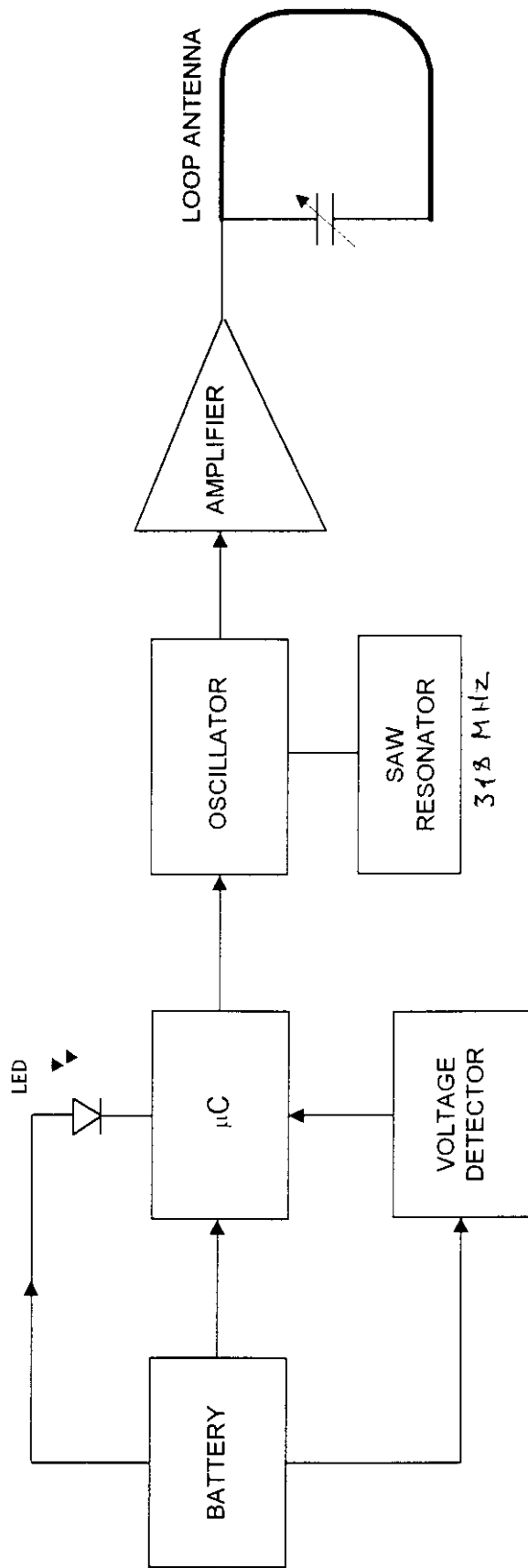


	Date	Name	Signature			
Design	16.12.98	Jimmy	<i>[Signature]</i>	PCB LAYOUT CS		
Draft	25.11.98	INNA	<i>[Signature]</i>			
Check	16.12.98	Jimmy	<i>[Signature]</i>			
Appr.						
ROKONET ELECTRONICS LTD.				RW-T4X-FAMILY-02	Sheet 1	Rev A
				Sheets 1		

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THE TRANSMITTER BLOCK DIAGRAM

The EUT block diagram follows this page.

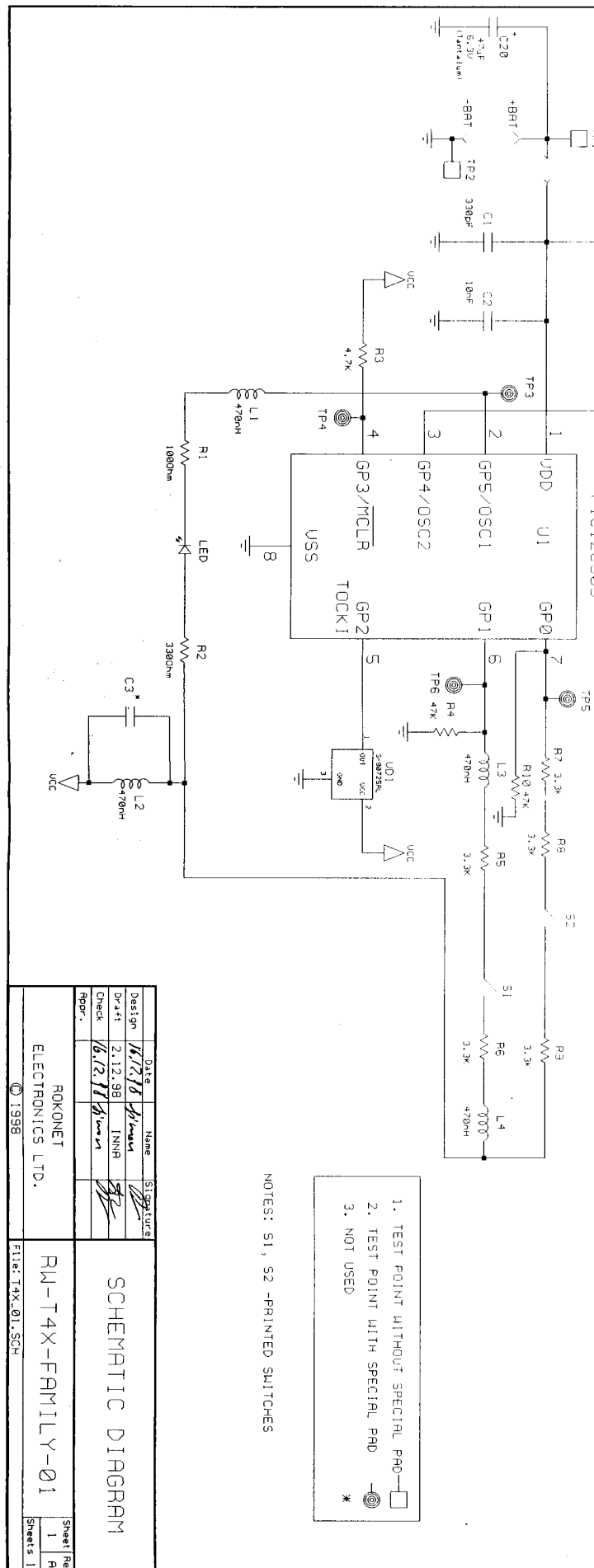
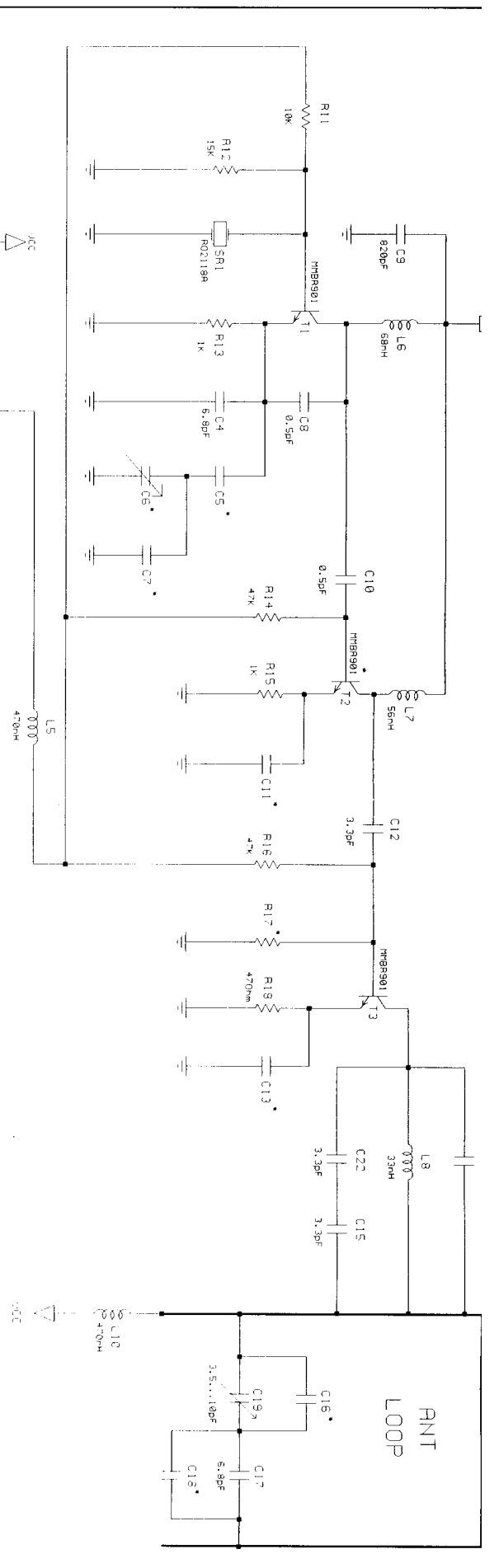


FCC ID: JE4W		FUNCTIONAL BLOCK DIAGRAM	
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TEST MEASUREMENT REPORT

Contains 31 pages and follows this page.



Date	Name	Signature
16/12/18	H. H. H.	<i>[Signature]</i>
2.12.98	INNR	<i>[Signature]</i>
16/12/11	<i>[Signature]</i>	<i>[Signature]</i>

SCHEMATIC DIAGRAM

R1M-T4X-FAMILY-01

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ELECTRONICS LTD.
1998

File: T4X_01_SCH

Sheet Rev
1 R
Sheets 1

1. TEST POINT WITHOUT SPECIAL PAD
2. TEST POINT WITH SPECIAL PAD
3. NOT USED

NOTES: S1, S2 -PRINTED SWITCHES