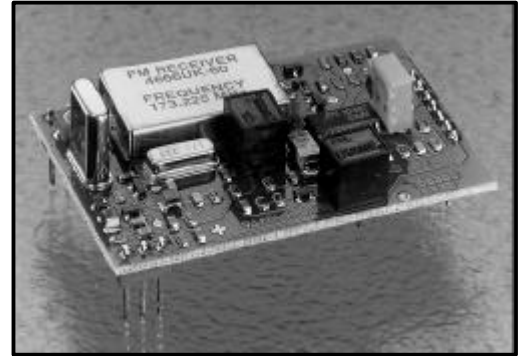


FEATURES

- **SUITABLE FOR DIRECT PCB MOUNTING**
- **LOW POWER REQUIREMENTS: TYPICALLY +5V @ 10mA**
- **HIGH SENSITIVITY TYPICALLY 0.4 μ V INTO 50 Ω FOR 1% BIT ERRORS**
- **SAW FITTER GIVES HIGH IMMUNITY FROM INTERFERENCE WITH SINGLE CONVERSION ARRANGEMENT**
- **OPEN COLLECTOR, TRUE DATA OUTPUT FOR EASY INTERFACE TO LOGIC CIRCUITRY**
- **SIGNAL STRENGTH OUTPUT WITH APPROXIMATELY 50dB RANGE**
- **ANTENNA TAMPER CIRCUIT DETECTS REMOVAL OF ANTENNA OR SHORTS TO GROUND.**

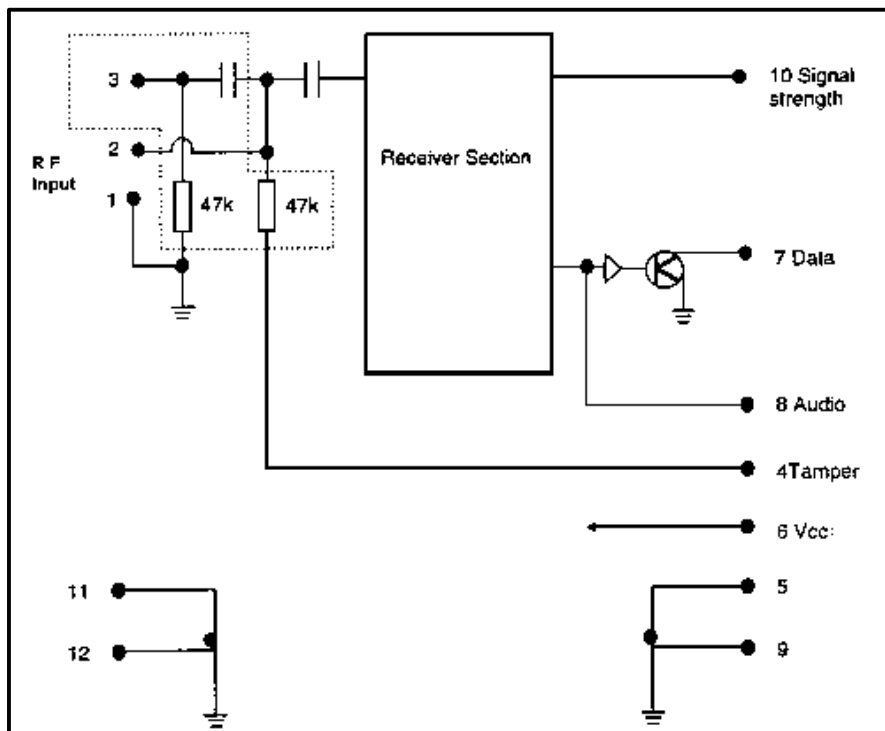


DESCRIPTION

The RXM-466-UK-60 is a single conversion Narrow Band Frequency Modulation (NBFM) superhetrodyne receiver using Surface Acoustic Wave (SAW) technology. It is designed for security and telemetry applications in the 173.25MHz and 173.225MHz band and is supplied on a frequency of 173.225MHz as standard. Other frequencies in the band are available to special order (please consult our sales office for details).

The RXM-466-UK-60 incorporates antenna tamper detection circuitry and a signal strength output, and is operable directly from +3.3V or +5V logic supplies.

BLOCK DIAGRAM

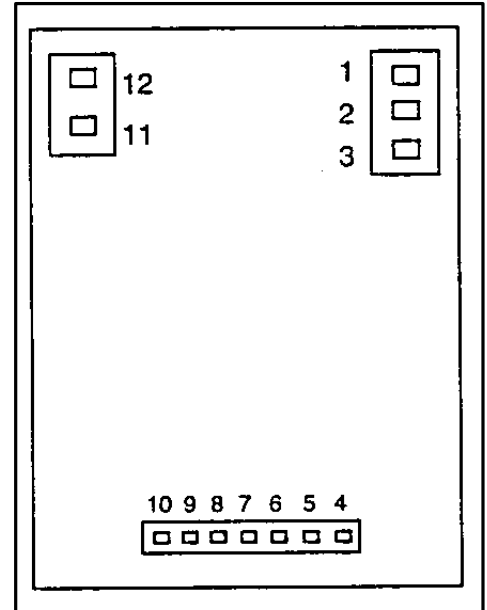


CONNECTIONS

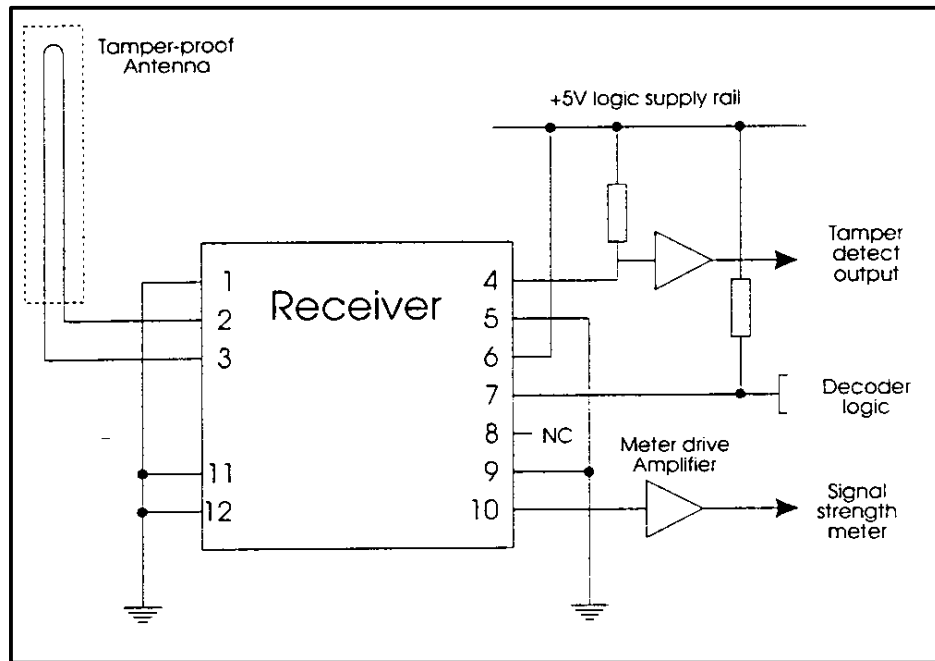
- 1. 0V/RF Ground
- 2. Antenna
- 3. Antenna Tamper
- 4. Tamper Output
- 5. 0V/Supply Ground
- 6. DC Input (Vcc)
- 7. Data Output.
- 8. Audio Output
- 9. 0V
- 10. Signal Strength Output
- 11. 0V
- 12. 0V

NOTE:

For maximum immunity to interference connect all 0V pins to a common ground plane on the main PCB.



TYPICAL CONNECTIONS



TECHNICAL DATA

Absolute maximum ratings:

Supply Voltage.....+10Vdc
 Data Output Voltage Hold off.....+30Vdc
 Operating temperature.....-10°C to +55°C

AF Input Level.....+10dBm, 50Ω
 Data output sink current.....5mA
 Storage Temperature.....-40°C to +100°C

Parameter	Min.	Typ.	Max.	Units	Notes
Supply Voltage VCC	3.0	5.0	6.0	V	1
Supply Current	6	10	12	mA	2
AF Input Sensitivity		0.25	0.6	μVpd	3
AF Input Sensitivity		0.15	0.25	μVpd	4
Nominal RF Input Impedance		50		Ω	
Image Rejection	55	65		dB	5,6
Adjacent Channel Rejection	65	70		dB	5,7
Other Spurious Responses	70	90		dB	5,8
Intermodulation Rejection		60		dB	9
-3dB Bandwidth		±6		kHz	
Frequency Error			±2	kHz	10
L.O. Level at R.F. Input		-75	-65	dBm	11
AF Output Level / Δf		100		mVrms/kHz	12
AF Bandwidth (-3dB)	5		2000	Hz	
Date Rate	50		1200	Bits/s	
Signal Strength/Carrier Detect	0		2	V	13
Tamper Circuit Resistance	89	94	99	KΩ	14

Notes:

1. Regulated and smoothed. Maximum ripple should be limited to
2. Figures given correspond to supply voltages in row above.
3. 512 Baud data. ±3kHz deviation, 1% bit error rate.
4. 1kHz tone, ±3kHz deviation 12dB SINAD.
5. Sensitivity at signal frequency.
6. Image frequency = Frf+910kHz.
7. For 3dB sensitivity degradation, interfering carrier ±25kHz.
8. As 7. above, for interfering carrier anywhere in the range 100kHz -1GHz.
9. Two interfering carriers of equal level (one modulated with 1kHz tone at ±3kHz deviation) on frequencies 25kHz and 50kHz away
SINAD at receiver
10. Temperature range -10°C to 55°C
11. General European approval limit = 2nW = -57dBm.
12. At audio output, fmod = 1kHz sine wave
13. Audio output impedance = 10kΩ approx, non dc-isolated. For test purposes only
14. Maximum output load current = 100μA

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