

RF TRANSLATOR PLUG IN490004 LE

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1. DESCRIPTION

This circuit subtracts 10,7 MHz (intermediary frequency given by an Xtal oscillator) from the local oscillator frequency to produce the RF frequency.

A double balanced mixer (Mini Circuit SBL1) is used to operate this translation. L and R inputs are driven by the current buffers LH002 and a voltage divider decreases the R input level as recommended by the manufacturer. A Tchebycheff low pass filter (3 dB cut off frequency: 4,1 MHz, ripple 1 dB) is used to remove the unwanted intermodulation products from the mixer output. This filter is built in a separate tinned iron box and its output drives a wide band amplifier (PS RF type) wired on the same printed circuit board as the mixer; its gain is 24 dB. It gives 3 low impedance 50 Ω outputs on a high impedance test output.

2. ADJUSTMENTS

Only required for the wide band amplifier (see drawing).

3. SPECIFICATIONS

XO Input level	+ 10 dBm (+ 0/- 3 dB) / 50 Ω
LO Input level	+ 10 dBm (+ 0/- 3 dB) / 50 Ω
Output level	+ 10 dBm (+ 0/- dB) / 50 Ω
XO frequency	10,7 MHz
LO frequency	11,7 MHz up to 14,8 MHz
3 dB Band pass frequency output	0,4 MHz up to 4,2 MHz
2nd and 3rd Harmonic	< - 50 dB
Worst spurious level	< - dB
10,7 MHz reiection	70 dB

