4.4.4 Testing

4.4.4.1 Measuring the Gain

Measuring set-up:



Measure the gain in the frequency range from 1 to 30 MHz either by selective single measurements or with a wobbulator equipment. The amplifier must be repaired or replaced if the actual gain readings deviate greatly from the nominal values specified in the technical data.

4.4.4.2 Measuring the Intermodulation

Measuring set-up:



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Preparations:

Set the signal generator signal levels and the calibration line attenuation values according to the specifications given in the sketch of the measuring set-up above.

Receiver settings:

Service type A2/A3, bandwidth ±1.5 kHz, manual gain control.

Tune the signal generator I and the receiver for combination frequency 5 MHz. Tune the signal generator II to a non-interfering frequency.

With the receiver manual gain control, adjust for IF signal level reading of 0 dB or -5 dB on meter (5) in the measuring ranges 30 or 100 mV as reference level.

Measuring process for IM 2:

Tune signal generator I to 9 MHz and signal generator II to 14 MHz (giving combination frequency $f_2 - f_1 = 5$ MHz).