TBLTXB3A_TRANSMITTER TUNE UP PROCEDURE
PERFORMANCE TEST

 The procedure in this chapter allows the verification of the electrical performance of transmitter. These tests do not require access to the interior of the instrument.

Recommended test equipment

Description	Minimum specification	Model
Power meter	+ / − 0.2dB, − 60 to −20dBm. 100 KHz to 1GHz	HP-436A/8481D
Spectrum analyzer	100KHz to 12GHz, up to −120 dBm	HP-8591E
Measuring receiver	0.2 to 1300MHz, 0 to −125dBm, Freq Counter	HP-8902A
Oscilloscope	DC to 100MHz, 5mV to 1V/div, Rise Time capavility	TEK TDS360
Frequency Counter	+ / − 0.1ppm, 10Hz ~ 1GHz, 9digit	HP-53181A
Attenuator	10W, 20dB Att, DC to 1GHz	Tescom 99910

1. Frequency Accuracy
      Frequency : 457.575MHz
      Stavility : Same as reference oscillator accuracy. Internal 1ppm 0 to 50degC

   1.Test Setup (Connect TBLTXB3A RF Line without case)

HP-8902A

DC block
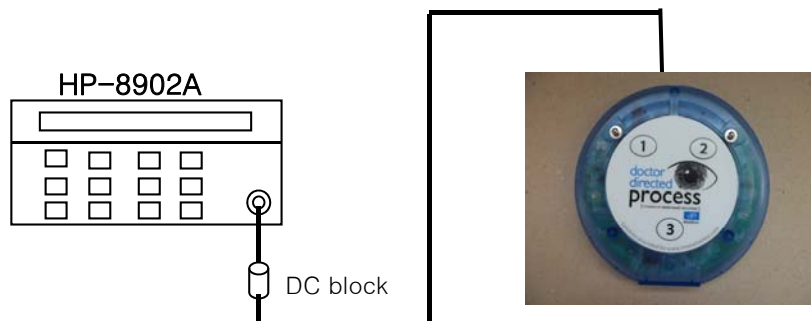
Carrier frequency accuracy test

  2. HP-8902A : auto tuning, frequency display

  3. TBLTXB3A TRANSMITTER
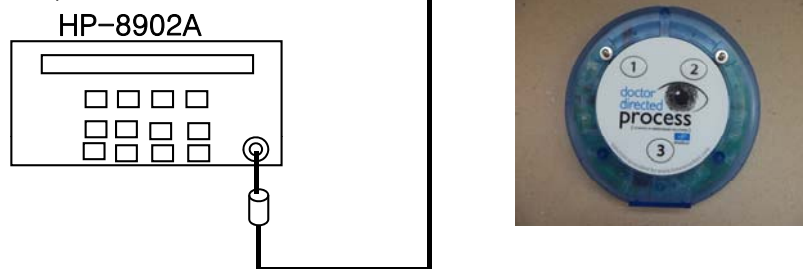   1) Push button
    2) check frequency accuracy

2. RF Output Level Accuracy
      RF level : 13dBm 미만
      Accuracy : +/−1dB

1.Test Setup

HP-8902A

(Connect TBLTXB3A RF Line without case)

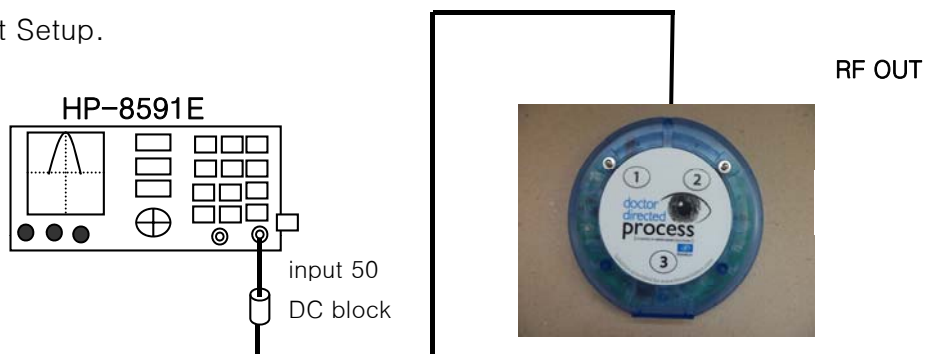2. HP-8902A : Auto-tuning, RF Power
3. TBLTXB3A TRANSMITTER
   1) Connect DC block
   2) Push button and check RF Level

3. Harmonic Spurious

Harmonic Level at 2xFOUT : <-40dBc

1. Test Setup.

HP-8591E

RF OUT

input 50
DC block

Harmonice test
(Connect TBLTXB3A RF Line without case)

2. HP 8591E : Span = 500KHz, RBW = 10KHz, VBW = 30KHz.
3. TBLTXB3A TRANSMITTER:
   1) Connect DC block
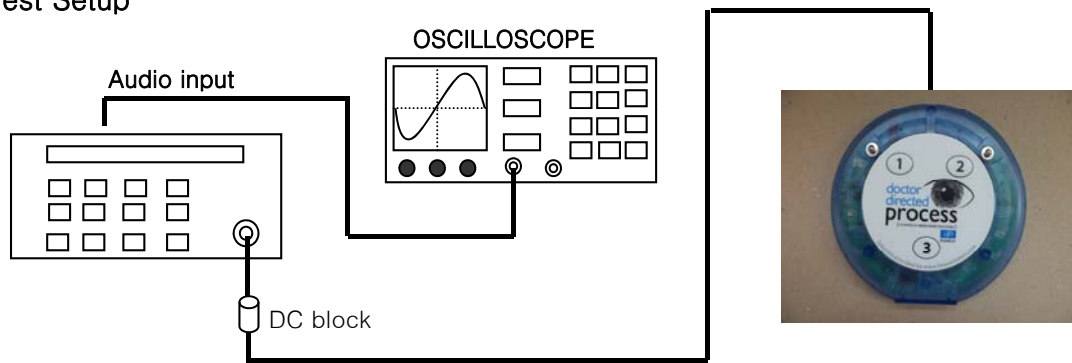   3) Push button and check harmonic

TBLTXB3A TRANSMITTER Harmonic Spurious

Fout(MHz)	Spurious(MHz)	Level(dBm)	Fout-2*Fout	Limit	Remark
457.575MHz	867.84Mhz			-40dbc	

4. Modulation
    4.1. FM(RECT) (Internal FSK Test Patterns)

    1.Test Setup

OSCILLOSCOPE
Audio input
DC block

FSK Deviation and Noise Test
(Connect TBLTXB3A RF Line without case)

    2.Equipment
        HP-8902A : FM
        TDS360 : 250us/div, 500mV/div Average : 16

3. TBLTXB3A TRANSMITTER:
    1) Connect DC block
    2) Push button and check modulation