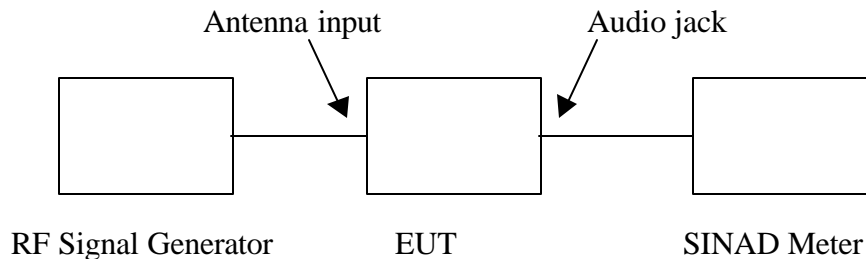


AOR – AR8200MKIII Scanning Receiver

Test Results: Cellular Image Rejection

15.121(b)

Test setup:



RF Signal Generator Settings:

RF Level: 66 dBuV
FM tone: 1 kHz sine wave
Deviation: +/- 3.0 kHz peak
Frequencies: 824.5, 836.5, 848.5, 869.5, 881.5, 893.5 MHz

The EUT is placed in scan mode. Each of the cellular frequencies listed is injected into the antenna input connector of the EUT one by one. At each frequency input signal tested, the frequencies at which the EUT stops at are recorded in the data table.

Once this is completed, we have a list of “received” frequencies the scanner was tuned to in order to receive image and spurious responses to each of the cellular frequencies listed as input signals.

The next step is to measure the scanner’s sensitivity to image and spurious responses to cellular band signals. The following procedure is followed:

1. Tune the signal generator to one of the cellular test frequencies listed above.
2. Tune the scanner to each “received” frequency recorded in the data tables.
3. Adjust the signal generator output level to determine the scanner’s 12 dB SINAD sensitivity to the cellular signals which appear at the “received” frequencies. Record these levels.
4. Without changing the scanner’s frequency, re-tune the signal generator to the “received” frequency that was used in step 2. Adjust the signal generator output level to determine the scanner’s primary 12 dB SINAD sensitivity at this frequency. Record this level.
5. Repeat steps 1 thru 4 with the signal generator tuned to each of the cellular test frequencies.

6. Subtract the scanner's primary sensitivity measured in step 4, from its sensitivity to image and spurious signals measured in step 3. Record this value.

In order to comply with Section 15.121(b), when the scanner is tuned to any of the "received" frequencies tested in step 3, its 12 dB SINAD sensitivity to any image and spurious signals in the cellular bands must be at least 38 dB poorer than its primary sensitivity as measured in step 4.

Test Equipment:

Navair Model SL-105 SINAD meter; Boonton SG-1200 RF signal generator

Test Data

Cellular Frequency (MHz)	Received Freq. (Image)	Image Rejection Ratio dB
824.5	741.335	49.0
	521.489	54.0
836.5	637.554	59.0
848.5	340.200	45.0
869.5	754.359	55.5
	766.321	62.2
	798.089	52.0
881.5	233.118	48.0
893.5	489.369	57.0
	789.46	58.0