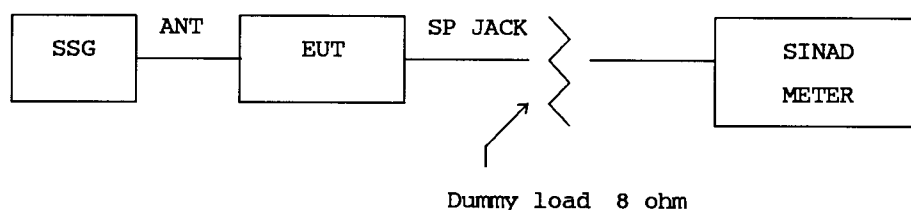


5-3 Test Result: Cellular image rejection

15.121(b)

Rationale:

In order for measuring image(spurious) rejection ratio on scanning receiver, use of one SSG method would be suitable rather than two or three SSG method since cellular image rejection would be considered as unwanted reception solely at outside of cellular band.

Test set-up:

Conditions: AF Signal : 1 kHz
 Deviation : +/- 3kHz (for frequency modulation)
 Modulation : 60 % (for amplitude modulation)

Test frequencies: 824.01MHz, 836.52MHz, 849.00MHz
 869.01MHz, 881.52MHz, 894.00MHz

A) Initial screening

- A-1) Disable the output signal of SSG. Disconnect dummy load and enable the EUT to confirm the presence of audio noise on speaker.
- A-2) Set the EUT with "Squelched Threshold" to prevent audio signal.
- A-3) Set the frequency of SSG to cellular band, and apply 60dBuV of RF output to EUT. Note that 60dBuV signal level corresponds approx. 66dB above the "Squelched Threshold" sensitivity of -6dBuV (not, receiving sensitivity). This is approx. 28dB (= 66 - 38) above the FCC limit.
- A-4) Enable EUT and search the cellular frequencies on the all of receiving range.
- A-5) List the all of detected frequencies if EUT detects them, and the following steps shall be taken to determine the actual image rejection ratio individually.
- A-6) Repeat the above procedure for remaining frequencies.
- A-7) Go to Part B of the test.

B) Measuring the image rejection ratio

- B-1) Based on Initial screening, both of EUT and SSG shall be set to the frequency at which obtained in A-5) in the above. Connect the dummy load and set the squelch volume of EUT to unsquelched for obtaining the audio signal.
- B-2) Adjust and record the RF output of SSG to obtain 12dB SINAD on EUT. SSG level at which obtaining the 12dB SINAD is receiving sensitivity of EUT (not, tight squelch sensitivity).
- B-3) Adjust the frequency of SSG to the corresponded cellular frequency associated with A-5. Adjust and record the RF output of SSG to obtain 12dB SINAD on EUT.
- B-4) Image rejection ratio is obtained as differences between B-2) and B-3).

C) Test Data

Spec. : At least 38dB

UB-269Z (BC895XLT)

Cellular Frequency (MHz)	Image/spurious (Frequency stopped on EUT) (MHz)	Image Rjection Ratio (dB)
824.01	315.2000	49.2
	315.3875	72.0
836.52	227.9125	60.8
	227.9250	60.8
	327.8750	59.2
	327.8875	57.6
849.00	29.2000	54.9
	819.8000	65.6
	849.9000	72.2
869.01	910.4875	69.5
881.52	120.2750	43.3
	120.2875	49.6
	250.4125	65.3
	250.4250	63.8
	372.8750	66.1
	372.8875	65.4
	903.2125	62.9
	903.2250	64.6
894.00	849.8000	66.9
	894.9000	71.7
	915.7000	60.1

Note: All data not reported were more than 28 dB above the FCC limit.