

To: Commission Reviewer
From: Richard King
Certification Department Coordinator
Elite Electronic Engineering

RE: FCC ID: ABZ89FC5794
Applicant: Motorola, Inc.
Corr. Ref. #:
731 Confirm. #:
Date:

In reference to a request for certification from Motorola, Inc of a Enhanced Base Transceiver System (EBTS). Elite performed a certification of the above referenced product manufactured by Motorola, Inc. Deficiencies were discovered during the certification process. The noted deficiencies were addressed in correspondence between the appropriate test facilities and Elite Electronic Engineering. The correspondence is indicated below.

Questions from Elite dated January 18, 2001.

We have reviewed the Enhanced Base Transceiver System (EBTS), which was presented for certification.

Upon review of the Enhanced Base Transceiver System (EBTS) it was determined that additional information is required before the certification can continue. Please address the following issues:

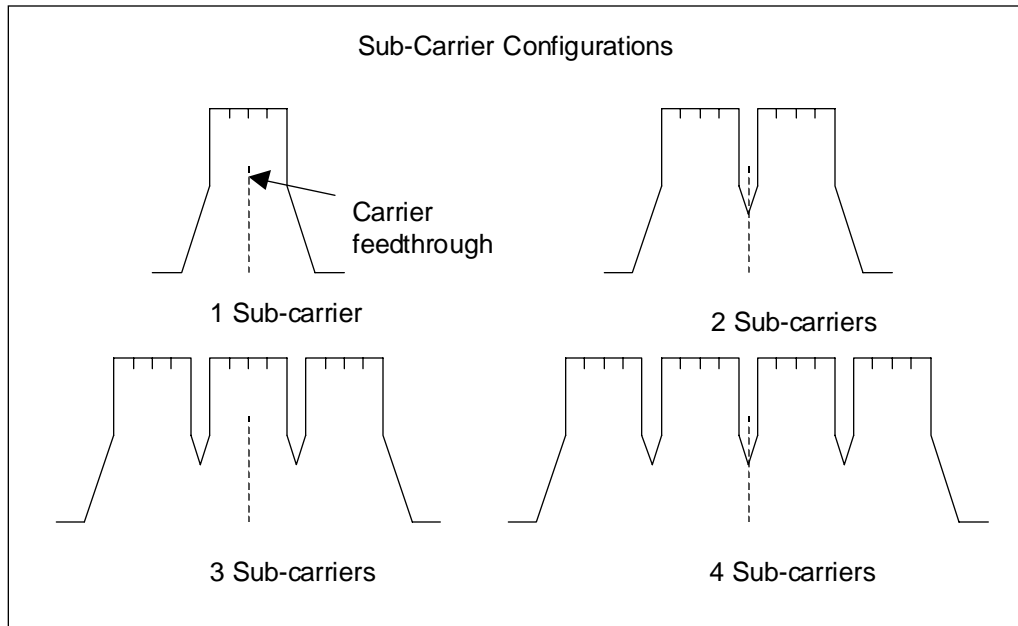
1. Exhibit E - 2.1049 Occupied Bandwidth. The mask used for the occupied bandwidth plot is based on the 10.5 watt per carrier level. The mask calculation should be based on the 42-watt composite carrier. See attachment labeled "occBWplot.pdf" for a corrected mask limit.
2. The emission designator per 2.201 indicated in the application should be 92K7D7W for the 4-channel function and 17K7DXW for the single channel function. Please justify the use of 92K7W7W for the 4-channel and 17K7W7W for the single channel function.

Response to Elite's questions dated January 18, 2001.

Thank you for your quick review of our filing package, ABZ89FC5794. We have provided the following in response to your correspondence dated January 18, 2001.

- Q1. Exhibit E - 2.1049 Occupied Bandwidth. The mask used for the occupied bandwidth plot is based on the 10.5 watt per carrier level. The mask calculation should be based on the 42-watt composite carrier. See attachment labeled "occBWplot.pdf" for a corrected mask limit.
- A1. As we discussed on the phone earlier, the occupied bandwidth data for quad carrier was remeasured using the 42 Watt / Quad carrier reference. I have sent via FAX a copy of the resulting spectrum plot with the revised mask limits drawn in. I will have the revised exhibit available probably on Monday and will send it to you via email.
- Q2. The emission designator per 2.201 indicated in the application should be 92K7D7W for the 4-channel function and 17K7DXW for the single channel function. Please justify the use of 92K7W7W for the 4-channel and 17K7W7W for the single channel function.
- A2. The 'D7W' designator (emission in which the main carrier is amplitude and angle modulated...) is acceptable and is in fact probably more appropriate than 'W7W'. The 'W7W' had been requested simply to be consistent with some of our previous radios. I will revise all exhibits that change as a result of the different emission designators, and will send the revised exhibits to you by Monday.

In addition, we discussed whether the single and quad modes for this radio would ‘bracket’ the performance of the radio in two and three carrier modes. The radio is actually capable of operating with 1, 2, 3, or 4 carriers active, as shown in the diagram below. The number of channels in a given unit are not dynamically changed – for example on a per call basis. Rather, the number of channels are set up per the frequency planning / customer channel allocation. This may change for a given radio, but very infrequently, and only as a result of operation and maintenance functions of the system.



Measurements show that the occupied bandwidth of a single carrier is 17.7 kHz. Accordingly, the necessary bandwidth (NBW) for the single carrier configuration would be 17.7 kHz and the 2-4 carrier configurations NBW would be increased by 25 kHz for each additional carrier. In addition, the maximum power of the radio for the various modes varies slightly due to the peak to average requirements of the composite signal. The carrier configuration vs. NBW and power rating is summarized below:

Number of Carriers	Emission Designator	Power Rating (Watts)
1	17K7D7W	52
2	42K7D7W	52
3	67K7D7W	48
4	92K7D7W	42

All two and three carrier performance pertinent to the measurements included in the filing package is bracketed by the performance of the single and quad configurations shown in the package. Should you feel it necessary to show the additional two-channel and three-channel modes in the package, we would welcome your suggestions as how best to do that. Upon further consideration, we feel the resulting grant should show the four emission designators that are noted in the table above.

Rick King
Elite Electronic Engineering