

January 23, 2005

Via Electronic Filing

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Shared Use of the 2496-2500 MHz Band Between Industrial, Scientific and Medical (“ISM”) Devices and Broadband Radio Service (“BRS”); IB Docket No. 02-364 and ET Docket No. 00-258; WRITTEN EX PARTE COMMUNICATION of the Association of Home Appliance Manufacturers (“AHAM”)

Dear Ms. Dortch:

Pursuant to the provisions of Section 1.1206 of the rules of the Federal Communications Commission (“FCC” or “Commission”), AHAM submits this correspondence for inclusion in the record of the above referenced proceedings. In particular, AHAM provides this letter in response to the January 10, 2005 *ex parte* letter submitted to the FCC by Motorola, Inc. (“Motorola”). As discussed more fully below, Motorola continues to mischaracterize the FCC’s rules and the data generated by the National Telecommunications and Information Administration (“NTIA”). Motorola also ignores critical assertions made by AHAM in this proceeding. Therefore, the FCC should disregard the Motorola letter and retain in place the current regulations governing the use of the band 2400-2500 MHz by ISM devices in general and microwave ovens in particular.

Motorola states that “AHAM fails to address the problem of interference from microwave ovens to BRS systems...” Motorola’s assertion belies the principal difference between Motorola and AHAM. Unlike Motorola, AHAM believes that there is *no problem of interference* from microwave ovens to BRS system. There are no BRS operations today and there can be no interference to BRS from microwave ovens. Therefore, absolutely no evidence of such interference exists. As AHAM has demonstrated several times, the only purported evidence of such interference is based on theoretical conclusions derived from an outdated and discredited NTIA study. That slim reed is hardly sufficient for the FCC to overturn its existing scheme for regulating microwave ovens, in derogation of the international treatment of those devices.

Motorola also states that AHAM fails to address “the larger picture -- that the current rule allows unlimited power for ISM devices, creating an uncertain and unacceptable operating environment for a primary licensed service such as BRS.” It is Motorola, and not AHAM, that fails to address the larger picture. The international scheme governing bands dedicated for Industrial, Scientific and Medical (“ISM”) use does not envision in-band emission limits *and specifically states that licensed services must accept interference from ISM devices*. Therefore, based on outdated and

discredited information, Motorola would have the FCC impose regulations that are inconsistent with those adopted internationally.

Motorola mischaracterizes in-band emission limits in the same manner that the Wireless Communications Association (“WCA”) and Sprint Nextel (“Sprint”) did before it. Motorola asserts that without the emission limits it proposes, microwave ovens will operate with “no upper limit.” That argument ignores the fact that there are out of band emission limits to which microwave ovens and other ISM devices are subject. Motorola certainly understands that the existence of out-of-band limits (even in the absence of in-band limits) means that microwave ovens cannot operate with “no upper limit.”^{1/}

Motorola’s other technical assertions also continue to be suspect. For example, Motorola continues to defend its inaccurate portrayal of Part 18 limits. As Motorola notes, it used the “upper limit” of the sliding scale contained in Section 18.305 of the rules to assess whether microwave ovens may meet in-band limits. As Motorola admits, it used this upper limit “for simplicity’s sake.” However, using this shortcut is not what the rule envisions and by doing so, Motorola overstates the permitted limits at levels between 501 watts and 2276 watts.^{2/}

Similarly, Motorola asserts that it did not use the erroneous data developed by WCA in presenting arguments generated by the NTIA study; it states that it generated data itself directly from the NTIA study. However, AHAM has conclusively demonstrated that the NTIA study was never designed to measure the level of acceptable emissions.^{3/} The measurement methods and the size and shape of the load in the oven cavity were different than those specified in Part 18. AHAM’s criticism of the NTIA study remains unchallenged, yet Motorola continues to rely on data derived from the study.

Motorola also fails to address the significant embedded base of approximately 115 million microwave ovens that no party has suggested be required to discontinue operations. BRS equipment manufacturers are required to take the existence of those devices into consideration today. There is no evidence to suggest that future generations of microwave ovens will have any more of an impact on BRS devices than those that BRS devices are already required to accommodate.

Motorola challenges AHAM’s assessment that there is unlikely to be interference between microwave ovens and BRS devices because microwave ovens are in use less than 1% of the day.

^{1/} Motorola’s arguments are self contradictory, in any case. On the one hand, it states that microwave ovens will cause harmful interference to BRS devices. On the other hand, it asserts that most microwave ovens already meet the in-band limits that it would impose. There is no evidence that because (as Motorola would portray it) of the unlimited in-band emissions permitted, microwave oven manufacturers will materially deviate from current emission characteristics.

^{2/} Therefore, Motorola continues to erroneously conclude that microwave ovens will comport with the in-band limits it proposes. 2276 watts is the power level at the upper end of the sliding scale using the formula in Section 18.305 of the rule.

^{3/} AHAM’s *ex parte* letter of September 27, 2005 detailed the deficiencies of the NTIA study for the purposes that they are being used by Motorola, WCA and Sprint. None of those parties have challenged AHAM’s assessment.

Instead, Motorola asserts that there are ISM devices in use 100% of the time. Motorola's arguments are disingenuous. On the one hand, its *ex parte* letter is designed principally to address perceived interference from consumer devices, like microwave ovens, and on the other, the only ISM devices that are operated anywhere close to 100% of the time are non-consumer devices.

Finally, Motorola misstates the current state of international regulation of ISM devices and the impact of a U.S. only standard for microwave ovens. There have been no international efforts to establish in-band emission limits for ISM devices. While there may have been a recommendation to *conduct studies* regarding this matter, there is a material difference, particularly in the international context, between conducting studies and the imposition of any limits that may or may not be derived from those studies. To the contrary, international rules still require that licensed services in the 2400-2500 MHz band accept harmful interference from ISM devices, a requirement that Motorola would have the FCC ignore in this case.

Motorola also erroneously concludes that there would be little impact on the international marketing and production of microwave devices based on its proposal. First, microwave oven manufacturers could not "choose whether to have a US-only product line, or whether to use a single line that meets all international requirements." Products that meet international requirements will not meet new U.S. only standards. Therefore, manufacturers will certainly be required to maintain two product lines and will not have the choice that Motorola posits. Second, contrary to Motorola's suggestion, AHAM has never supported the need for manufacturers to maintain two product lines. In the proceeding that Motorola cites, AHAM urged the FCC to permit microwave oven manufacturers to continue to produce existing products in a case where other administrations had already adopted an international standard not yet incorporated in the FCC's rules. However, AHAM certainly did not support the creation of two standards in the first instance; it only urged the FCC to continue to permit the marketing of existing equipment to allow manufacturers additional time to sell that equipment and to retrofit manufacturing facilities.^{4/}

^{4/} Ironically, Motorola missed the main point when it cited to AHAM's comments in the Docket No. 98-80 proceeding. There, the FCC proposed to conform its regulations to international standards, which is exactly what AHAM urges here (and Motorola argues against). Had administrations adopted that international standard in a more coordinated fashion, microwave oven manufacturers would not have been in the unattractive position of having multiple product lines, compliant with different standards.

Based on the foregoing, AHAM continues to urge the FCC to reject the petitions for reconsideration of the decision in these proceedings and retain the regulatory scheme, used on a world-wide basis, for the band 2400-2500 MHz.

If there are any questions regarding this matter, please contact the undersigned directly.

Sincerely,



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