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SAR Test Report for Motorola The 800MHz Linear RF Compensator (FCC ID IHDA5ZK1).

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The Motorola Personal Communications Sector Product Safety Laboratory has reviewed the 800MHz Linear RF Compensator product, FCC ID IHDA5ZK1, for the need to conduct SAR evaluation. Due to the design and installation of this product, it qualifies for the exclusion called out in Federal Communications Commission section 47 CFR § 2.1091 titled "Radiofrequency radiation exposure evaluation: mobile devices."

In section § 2.1091, paragraph (b) defines a mobile device as "a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons." The 800MHz Linear RF Compensator is intended to be installed into a vehicle such that the unit is physically secured at one location. In the users guide supplied with the product, Motorola recommends that the antenna be installed such that there is at least 20 cm of separation between the occupants of the vehicle and the antenna." Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 centimeters from the user. Thus, 800MHz Linear RF Compensator is a "mobile device" as defined in section § 2.1091 paragraph (b).

Paragraph (c) gives the descriptions of types of mobile devices that are subject to routine environmental evaluation for RF exposure based on frequencies of operation and transmit EIRP. The 800MHz Linear RF Compensator operates at a transmit frequency of 824 to 894MHz. It has a transmit conducted power of 0.63 Watt. The mobile antenna supplied with the transceiver has a maximum gain of 2.1 dBi, and minimum cable loss of -1.0 dB, together resulting in a maximum EIRP of 1.29 Watts. Since the transceivers transmit frequency is below 1.5 GHz and its EIRP with the supplied antenna is below 1.5 Watts, the 800MHz Linear RF Compensator is "categorically excluded from routine environmental evaluation" per paragraph (c), and thus SAR evaluation is not required.

A picture of the 800MHz Linear RF Compensator product is shown in figure 1 below.



Figure 1.