February 27, 2001

FCC Application Processing Branch

Regarding: FCC ID MKRS556-EP
Form 731 Confirmation Number EA99662
Correspondence Reference Number 18221

Responding in turn to each of your questions:

1) *This device operates with 6 antennas. It is noted that no more than one antenna transmits at any given time. Each antenna has two cables. The operational description did not elaborate on this. Please elaborate on the function of the two cables going to each antenna.*

   Each antenna referred to is actually two identical helical antennas contained in one housing. In normal operation one of the pair is used as a transmit antenna, the other as a receive antenna. Because the system is transmitting and receiving at the same time, sufficient isolation between the transmitter and receiver is achieved by using separate antennas.

   The MKRS556-EP provides the capability to swap the pair around, so that the original transmit antenna in the pair is now the receive antenna and vice versa.

   To answer your question directly, each cable is an RF cable, capable of either being used for transmission or reception.

2) *In this application, MPE was for the Occupational/Controlled Environment limit. A previous application (EA99257) for a similar device used the General Population/Uncontrolled Environment limit. It is suggested that you submit new exhibits for this application using the General Population/Uncontrolled Environment limit and using the similar application as a model. This application does not have any information indicating that the Occupational/Controlled Environment limit would* be applicable for MPE.

   I am resubmitting the MPE calculations you requested for the General Population /Uncontrolled case only. Further, changes to the Operation Manual similar to those of the EA99257 application are being resubmitted.

The MPE in the uncontrolled/general population case is 1 mw/cm^2 (OET Bulletin 65 Appendix A). The gain of the antenna that is sold with this system is 7.8 dBi. Rewriting equation (3) from OET Bulletin 65 Section 2,

$$R = \tfrac{1}{2} * \text{sqrt}((P*G)/(\text{pi}*S)).$$

P = 5000 mW
G = 6.0 numeric (7.8dBi)
S = 1 mW/ cm^2

Solving, the range at which the field intensity falls below the MPE is 48.9 cm, or 19.2 inches. We rounded to 20 inches in our manual.

Regards,

Gary Bann
SCS Corporation
858-485-9196 x109
garyb@scs-corp.com