Scott McCutchan

From: Mike [mike@celectronics.com]
Sent: Friday, May 20, 2005 3:42 PM
To: Scott McCutchan
Subject: FW: Response to Inquiry to FCC (Tracking Number 165903)

Here is the Duty Cycle question I asked the FCC.

Best Regards,

Mike Christensen
Lab Manager
Compatible Electronics, Inc. - Brea Division
Phone: 714-579-0500
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-----Original Message-----
From: Generic Office of Engineering Technology [mailto:oetech@fccsun27w.fcc.gov]
Sent: Friday, May 20, 2005 1:39 PM
To: mike@celectronics.com
Subject: Response to Inquiry to FCC (Tracking Number 165903)

Inquiry:
I have a customer who has a device that uses pulse modulation on a 433 MHz 15.231 device. I know that for testing we need to have the device in its worst case duty cycle to use the appropriate duty cycle correction factor. However, the particular encoder being used in this device has the capability of using more than 16 million different addresses, all of them random. I have talked to the manufacturer of the encoder and have been told that the duty cycle will range between approximately 40 and 45 percent which calculates to about a 1 dB swing. Is there a FCC policy on what to do in this case? Is it permitted to provide plots of the duty cycle that we get and use the correction factor of 45 percent, even though the duty cycle may appear to be 43 percent? Thank you for your help. Best Regards Mike Christensen Lab Manager Compatible Electronics, Inc. - Brea Division Phone: 714-579-0500 Fax: 714-579-1850 www.celectronics.com

Response:
A customer who has a device that uses pulse modulation on a 433 MHz 15.231 device. I know that for testing we need to have the device in its worst case duty cycle to use the appropriate duty cycle correction factor. However, the particular encoder being used in this device has the capability of using more than 16 million different addresses, all of them random. I have talked to the manufacturer of the encoder and have been told that the duty cycle will range between approximately 40 and 45 percent which calculates to about a 1 dB swing.
Please use the worse case duty cycle of 45 percent. You may show a plot of 40 percent duty cycle with this explanation.

Do not reply to this message. Please select the Reply to an Inquiry Response link from the OET Inquiry System to add any additional information pertaining to this inquiry.