



Response to Inquiry to FCC (Tracking Number 466872)

oetech

to:

mtucker

07/11/2014 02:07 PM

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From: <oetech@fccsun27w.fcc.gov>

To: <mtucker@murata.com>,

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## Office of Engineering and Technology

### **Inquiry on 06/27/2014 :**

#### **Inquiry:**

We produce a wireless transceiver that operates in the 902-928 MHz ISM band. This device is called the DNT90. FCC ID is HSW-DNT90. The Power Amplifier in this device went obsolete over a year ago. We have designed in a substitute power amplifier and requesting guidance on whether or not this change can fall under a C2PC or require a new Grant.

The obsolete power amplifier in question is being replaced by a new device consisting of a power amplifier plus integrated Transmit/Receive (T/R) switch. We propose to replace our PA and external T/R switch with this integrated version of the same. The functionality will remain unchanged - PA followed by T/R switch - only the physical location of the switch will be different. I've attached a block diagram outlining the differences we are proposing.

We are requesting a C2PC rather than a new Grant for this change. Our reasons are as follows.

The lifetime of our radio products is 10+ years. This PA is just the first component in our transmitter that will go obsolete in that period of time. It is very difficult for us and our customers to deal with a new Grant and new FCC ID every time a component in our transmitter goes obsolete. For that reason, we take great pains to ensure that any substitution falls under the guidelines of "178919 Permissive Change Policy DR02". Since we're making a one-to-one substitution in this case, we think our argument for the C2PC is valid.

Output power of the new design is set at production to match that of the original grant. No additional changes are being made to the RF circuitry.

Please see the attached block diagram for a detailed view of the change we are proposing.

Regards,

Mark Tucker  
Manager, Hardware Engineering Group  
Murata Americas

#### **FCC response on 07/03/2014**

Before we provide an answer please confirm the following:

- The new replacement which includes a PA and T/R has no effect on the functionality of the device, basically electrically equivalent as sold but not electrically identical design.
- The change only affects a minor portion of the layout. Provide an example of the physical change.

---Reply from Customer on 07/08/2014---

Per your requests in the response on 7/3/2014.

Item 1 - we confirm that the replacement has no effect on the functionality of the device. The proposed design change is basically electrically equivalent to that of the current design.

Item 2 - I'm attaching two placement diagrams showing the differences. Note that the layout changes are largely constrained to the upper left-hand quadrant of the module (the section containing the PA and switch). U5 and U6 in the current layout are being replaced by U14 in the proposed layout. Note that there are slightly fewer passive components (Rs, Ls and Cs) in the proposed layout because the new device requires very little external impedance matching.

**FCC response on 07/11/2014**

This change is acceptable as a C2PC.

**Attachment Details:**

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