



To: File
From: Tim Walters
Subject: 40-1077 Limited Modular Approval Request

7/26/07

1 Scope

FCC Public Notice **DA 00-1407** released June 26, 2000 communicated guidelines for products requesting modular approval. In particular, 8 requirements were enumerated along with a request that each of the 8 be explained for any product requesting such approval.

It is the purpose of this document to respond to those 8 guidelines in regard to the Cellnet product: 40-1077.

2 Modular Approval Requirements

2.1 RF Shielding

The 40-1077 module is comprised of two radios. One operates at a frequency range of 902-928 MHz, the other at a frequency range of 2.400-2.4835 GHz. The 900 MHz radio is self-shielding and is not dependent on any component or characteristic of the device into which it is embedded. Shielding is accomplished through a combination of metallic self-shielding components, copper planes, guards, and vias in the PCB. The result is a design that has been proven to be neither sensitive to outside influence nor capable of introducing interference into outside components. The 2.4 GHz radio is not shielded.

2.2 Buffered Modulation / Data Inputs

The 40-1077 does not have external modulation or data inputs. Rather, the RF section is driven by an on-board microprocessor which directly controls the RF data lines and operates so as to not allow excessive modulation.

2.3 Power Supply Regulation

The 40-1077 uses a switching buck regulator to provide all the electronics with a supply that is fixed, even when the input voltage is varied.

2.4 Antenna Requirement

The 40-1077 includes integrated antennas for both radios and are not changeable. The 900 MHz antenna is a slot-type; the 2.4 GHz antenna is an inverted "F".

2.5 Stand-Alone Testing

All testing on the 40-1077 module was conducted standalone. No shields or enclosures were used, other than that fully integrated to the module itself. No ferrites were used on data or power lines during testing. The device is DC powered, and exceeds applicable conducted emission requirements.

2.6 Labeling

As indicated, each module will have its own FCC ID label. In addition, devices into which it is placed will have a sticker indicating that this module is contained within. Exact text will be as specified in the FCC Public Notice.

2.7 Specific Rules and Operating Requirements

The 40-1077 complies with all the pertinent rules for its section. Other than its reduced power level, it shares common code and is functionally equivalent to the 26-1055 product which is FCC certified as R7PIWRS3.



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2.8 RF Exposure Requirements

The 40-1077 complies with all exposure requirements. As a component used in the Utility industry, this product is not intended for use near human operators. It is a reduced-power version of products that reside in the same locations and have already been approved for use.

3 Continued Compliance

The installation, usage and performance of this product can be maintained to comply with regulatory requirements such that the final configuration remains compliant. This will be accomplished by continued compliance testing for each end product to verify compliance.