



February 19, 2007

AmericanTCB
6731 Whittier Avenue
McLean VA 22101

Attn: Director of Certification

RE: FCC ID: AU792407B06821 / IC: 125A-0028 submittal as modular device

1. The modular transmitter must have its own RF shielding. This is intended to ensure that the module does not have to rely upon the shielding provided by the device into which it is installed in order for all modular transmitter emissions to comply with FCC Part 15 and Industry Canada limits. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in non-compliant operation.

RF shielding is installed and shipped with the MT800SWM. See attached shield drawings (252b02M1 & 252b01M1).

2. The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with Part 15 and Industry Canada requirements under conditions of excessive data rates or over-modulation.

MT800SWM packets are buffered in the LPC2138 before going in/out of UART for both RX and TX in the memory.

3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 and Industry Canada requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.

The MT800SWM uses a voltage regulator in circuit. The regulator manufacture is MicroChip Technology, MFG's P.N. TC1262-3.3VDB.

4. The modular transmitter must comply with the antenna requirements of FCC Sections 15.203 and 15.204(c) and Industry Canada requirements. The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). Any antenna used with the module must be approved with the module, either at the time of initial authorization or through a Class II permissive change. The "professional installation" provision of FCC Section 15.203 may not be applied to modules.

The MT800SMW is supplied with a 6 inch reverse SMA to MMCS 50 ohm Coax cable. See drawing 209a03c1.

5. The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing. This is intended to demonstrate that the module is capable of complying with FCC Part 15 and Industry Canada emission limits regardless of the device into which it is eventually installed. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in FCC Section 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see FCC Section 15.27(a)). The length



of these lines shall be length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified or commercially available (see FCC Section 15.31(i)).

The MT800SMW was tested in a MultiTech development board in an open air environment. No shielding was part of the configuration, except for the necessary shielding as is required per FCC requirements for the module itself.

6. The modular transmitter must be labeled with its own FCC ID / IC number, and, if the FCC ID / IC number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1 / IC: XXX-YYYY" or "Contains FCC ID: XYZMODEL1 / IC: XXX-YYYY." Any similar wording that expresses the same meaning may be used. The Applicant may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.

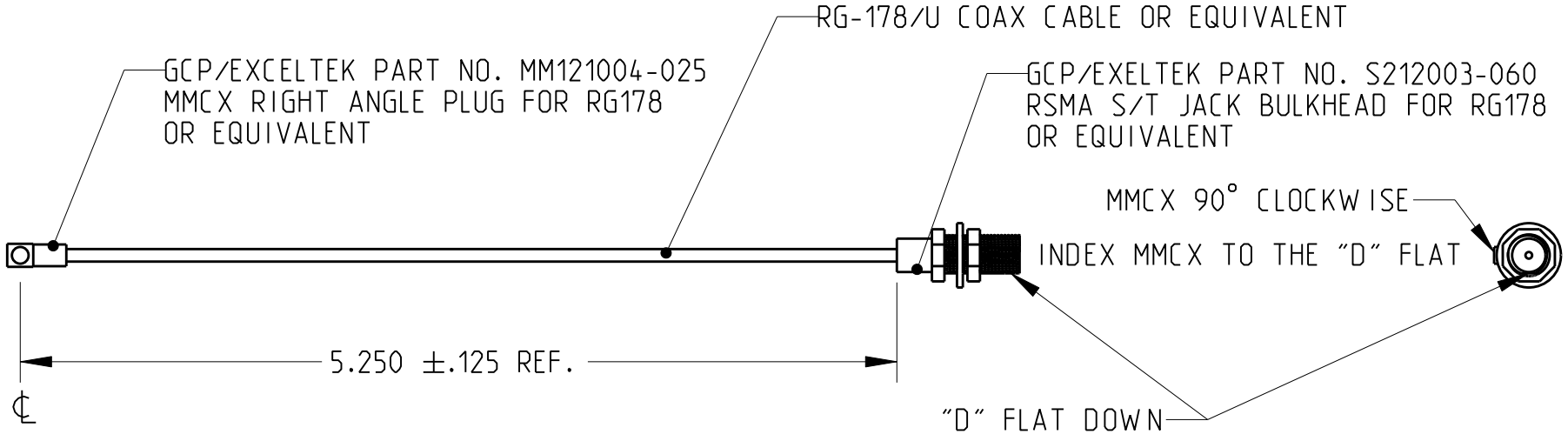
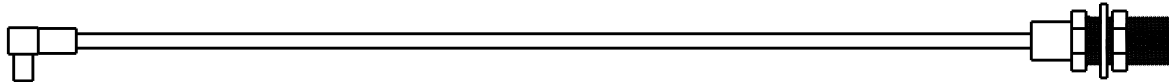
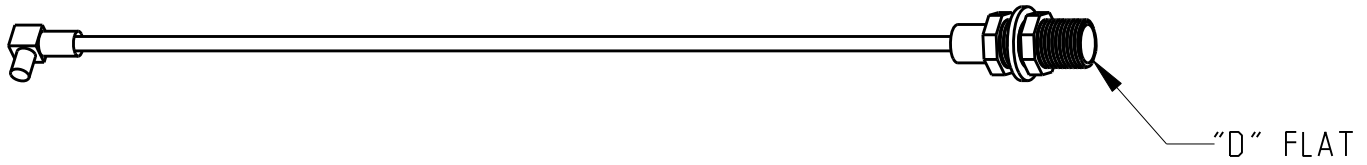
The FCC/IC ID is affixed to the module as per required. There is information provided in the MultiTech developers guided explaining the requirement that the ID be displayed on the exterior of the end device.

7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under FCC Section 15.231 and Industry Canada specifications. For instance, data transmission is prohibited, except for operation under FCC Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured.

Transmit level is fixed and all necessary measurements have been made and recorded per FCC/IC requirements, as can be seen in the provided reports.

8. The modular transmitter must comply with any applicable RF exposure requirements. For example, FCC Rules in Sections 2.1091, 2.1093 and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f) and 15.255(g), require that Unlicensed PCS, UNII and millimeter wave devices perform routine environmental evaluation for RF Exposure to demonstrate compliance. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF Exposure compliance in accordance with Section 15.247(b)(4). Modular transmitters approved under other Sections of FCC Part 15, when necessary, may also need to address certain RF Exposure concerns, typically by providing specific installation and operating instructions for users, installers and other interested parties to ensure compliance. Refer to Industry Canada RSS-GEN Section 7.1.1 and 7.1.2 for Industry Canada requirements.

RF exposure requirements are listed in the developers guide. "Caution: Maintain a separation of at least 20 cm (6 inches) is normally maintained between the transmitter's antenna and the body of the user or nearby persons. The MT800SWM is not for or intended to be used in portable applications within 20 cm (8 inches) of the body of the user".



MTS# 45009625L

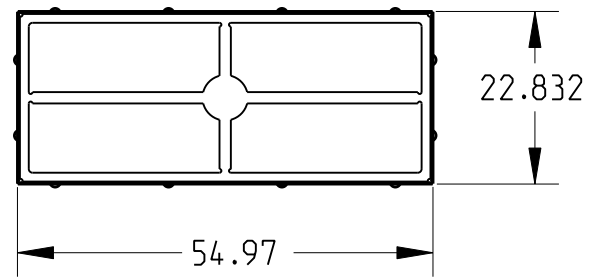
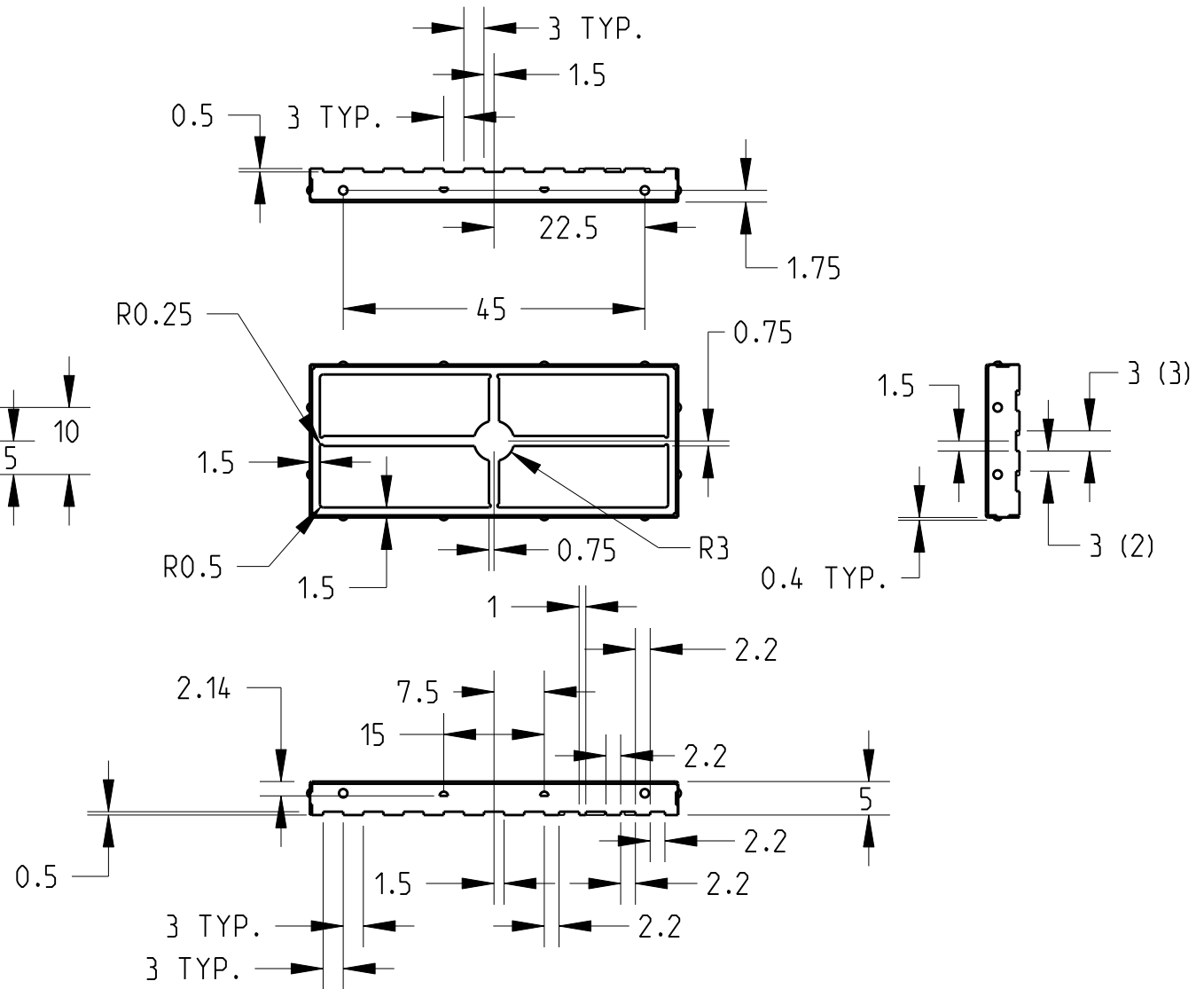
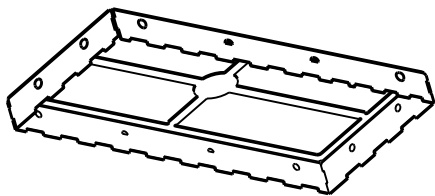
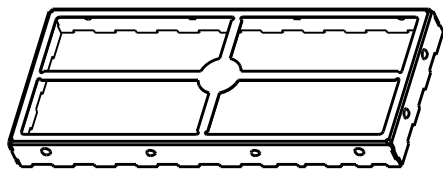
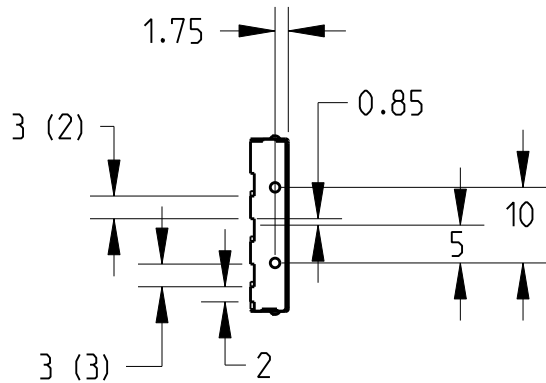
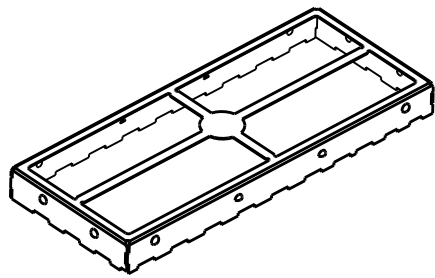


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Title
 RSMA JACK TO MMCX PLUG ANTENNA

Drawn K.VOJACEK 10/28/05
 Checked
 Approved

Scale 1:1	SHT 1 OF 1
Size A	Dwg. No. 20903C
Rev. A	



- NOTES:
1. ALL DIMENSIONS IN MILLEMMETERS ± 0.25 (NON-CUMULATIVE) UNLESS SPECIFIED.
 2. MATERIAL: 40 GAGE (.121mm) STEEL.
 3. FINISH: TIN MATTE.
 4. MATERIAL AND FINISH MUST BE ROHS COMPLIANT.



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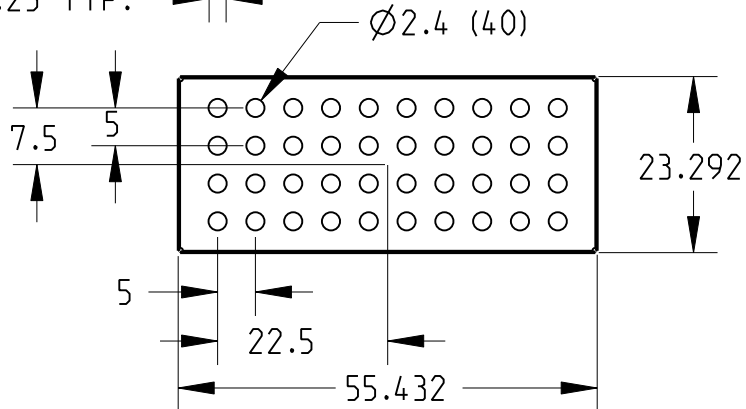
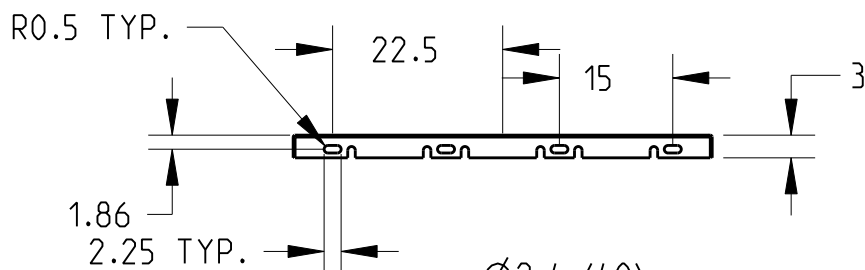
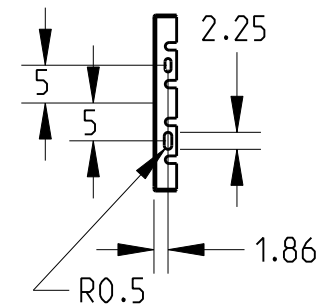
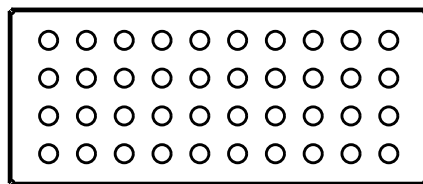
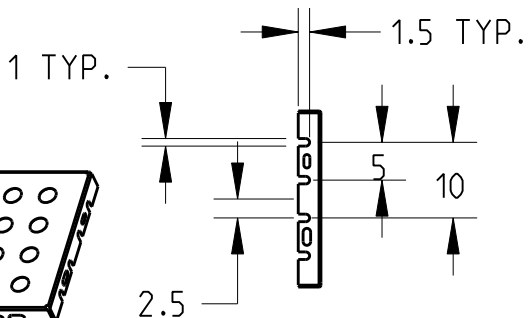
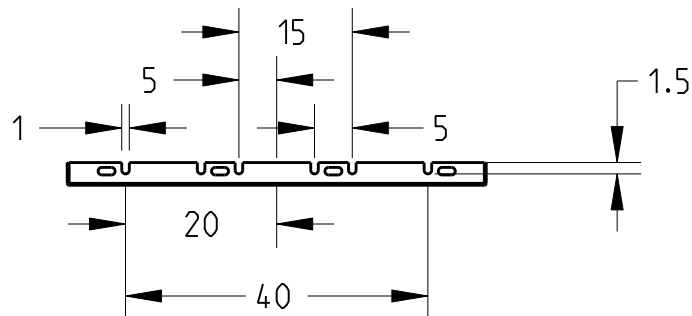
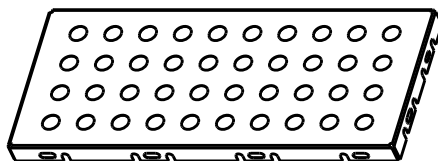
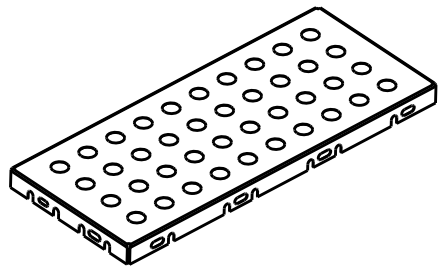
Title
 MT800SWM EMI SHIELD FENCE

Drawn D. BRANDT 1/9/07
 Checked
 Approved

Scale 1:1
 Size A
 Dwg. No. 25201M
 Rev. B

MTS# 01300142L

SHT 1 OF 1



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Title
MT800SWM EMI SHIELD COVER

Drawn D. BRANDT 1/9/07
Checked
Approved

Scale 1 : 1
Size A
Dwg. No. 25202M
Rev. B

MTS# 01300137L

SHT 1 OF 1