

WIRELESS POINT OF SALES

Antenna Specification

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1 Scope

This document specifies an antenna for a wireless point of sales (POS) application. This antenna will be connected to a bulkhead feedthru connector mounted on the side of the housing of the wireless POS terminal. The antenna will provide radio reception and transmission for a TPRM 130C CDPD modem located inside the wireless POS terminal housing. A coaxial cable assembly will connect from the TPRM 130C to the bulkhead feedthru connector. The material of the wireless POS housing is ABS plastic.

2 General

The antenna must be a dipole type with a 50 ohm connector. Two options are specified. The option 1 antenna is both removable and rotatable. The option 2 antenna is removable but not rotatable.

Cost of the antenna is a very important consideration. Although option 1 is the preferred configuration, option 2 may be considered based on the cost.

3 Electrical Requirements (Option1 or Option 2)

The antenna minimum performance requirements are as follows:

Frequency Range: 824 to 894 MHz

Impedance: 50 ohms nominal

VSWR: 2.0 : 1 maximum

Gain: 2dBi \pm 1.5dB

Power Rating: 1 watt

Radiation Pattern: Omnidirectional

4 Mechanical Requirements

(Option 1):

Length: 5 inches (127.0 mm) maximum

Connector Type: SMA-Male

Rotation angle: 180 degrees minimum

Number of rotation cycles: 500 cycles minimum of 180 degree rotation

(Option 2):

Length: 5 inches (127.0 mm) Maximum

Connector Type: TBD

5 Environmental Requirements

Operating Temperature: 0 degrees C to +40 degrees C

Non-operating Temperature: -20 degrees C to +60 degrees C

Operating Altitude: 10,000 feet

Non-operating Altitude: 40,000 feet