



COMPONENT SPECIFICATION

APPROVED SUPPLIERS

Manufacturer	Address/Telephone	805-606	Manufacturer's Part No.
Mobile Mark, Incorporated	3900-B River Road Schiller Park, IL 60176 (847) 671-6690	-001 -002 -003 -004 -101 -102 -103 -104 -204	Replaced by -101 part Replaced by -102 part Replaced by -103 part Replaced by -104 part PSTG0-2400RSCI PSTG0-900/1900SCI PSTG0-925/1800SCI Replaced by -204 part PSTG0-1900SCI

1.0 Scope: This specification describes the requirements for a family of dual band, stubby portable wide area network antennas with SMA plug mounting as follows:

Part No.	Antenna Application/Type	Nominal Frequency	Color Dot
-001	802.11b	2400 MHz	green
-002	North American CDMA/GSM/GPRS	900/1900 MHz	red
-003	European GSM/GPRS	925/1800 MHz	blue
-004	North American CDMA/GSM/GPRS	1900 MHz	white
-101	802.11b	2400 MHz	green
-102	North American CDMA/GSM/GPRS	900/1900 MHz	red
-103	European GSM/GPRS	925/1800 MHz	blue
-104	North American CDMA/GSM/GPRS	1900 MHz	white
-204	North American CDMA/GSM/GPRS	1900 MHz	white

REVISION HISTORY

Rev.	File No.	Description of Change	Date	Approved
A	C3233	Release	4/22/02	D V
B	C3332	¶1.0 Blue was yellow; ¶6.2 Was TBS; ¶6.3 Was TBS; ¶6.4 Was TBS; ¶7.2 Was fractional wave; ¶7.3 -30° to +60°C was TBS; ¶9.0 Blue was yellow; ¶10.0 Was TBS	6/10/02	J S
C	C3463	Add -004 part; Revise ¶1.0, ¶6.2, ¶6.3 & ¶7.2; ¶8.4 Was not specified; ¶9.0 Add length & -004 status; ¶10.0 Redrawn, L was 2.23, add 0.34, add 0.19 & add 0.09 (typ)	10/31/02	J S
D	C3534	¶6.2 3dBi & 4dBi were TBS; ¶6.3 3.0:1 was TBS; ¶9.0 1.10 was .90, & add white	12/16/02	J S
E	C3685	Add -101 thru -104 parts; Revise ¶4.0; Insert ¶5.0, ¶6.2, ¶6.3 & ¶7.2 Add -1XX parts; ¶8.1 Was not specified; Insert ¶8.2 & ¶8.3; ¶8.4 Add TPE blk color; ¶9.0 Add -1XX parts; ¶10.0 Add plug detail, Add 0.46 ±0.02, Add -0XX style ..., Add ¼ - 36 UNS ...	3/24/03	J S
F	C3796	Add -204 part; Revise ¶1.0, ¶6.2 thru ¶6.4, ¶7.2 thru ¶8.2 & ¶9.0; Add ¶11.0	6/11/03	J S

REVISION LEVEL	F	F	F	E	F																					
SHEET NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
COMPONENT ENGR. J. McROBERTS	DATE 3/28/00	Intermec Technologies Corp.											TITLE DUAL BAND ANTENNA, SMA MOUNT													
COGNIZANT ENGR. S. HOFSTETTER	DATE - - -	550 Second Street S.E. Cedar Rapids, IA 52401											DRAWING NO. 805-606-XXX													
APPROVED K. VORHIES by DV	DATE 4/22/02	Telephone No. (319) 369-3100 Facsimile No. (319) 369-3453											Sheet 1 Of 5													

- 2.0 Quality Assurance:** Intermec Receiving Inspection reserves the right to use AQL sampling techniques when inspecting a lot.
- 3.0 Packaging:** All antennas will be packaged in containers capable of protecting them from damage in common carrier shipping and handling.
- 4.0 Markings:** Individual antennas will be color coded with a color dot per Paragraph 1.0 on the antenna end opposite the connector. Each container will be labeled or otherwise marked with the manufacturer's name or trademark, the manufacturer's part number, and date code. Major shipping cartons will be marked with the Intermec part number. This information shall also be labelled in Bar Code 39 format.
- 5.0 Design Change Approval:** Any change in process, design, or materials affecting form, fit or function of the part described herein subsequent to the delivery of engineering evaluation samples, must be approved by the Intermec Technologies Corporation Engineering Department.
- 6.0 Antenna Specifications:**
- 6.1 Frequency:** See parts tabulation below
- 6.2 Antenna Gain:**
- 001 P/N - 1.3 dBi
 - 002 P/N - 3 dBi
 - 003 P/N - 3 dBi
 - 004 P/N - 4 dBi
 - 101 P/N - 1.3 dBi
 - 102 P/N - 3 dBi
 - 103 P/N - 3 dBi
 - 104 P/N - 4 dBi
 - 204 P/N - 4 dBi
- 6.3 VSWR:**
- 001 P/N - 2.0:1 upper band
 - 002 P/N - 3.0:1 lower band/3.0:1 upper band
 - 003 P/N - 3.8:1 lower band/2.5:1 upper band
 - 004 P/N - 3.0:1 upper band
 - 101 P/N - 2.0:1 upper band
 - 102 P/N - 3.0:1 lower band/3.0:1 upper band
 - 103 P/N - 3.8:1 lower band/2.5:1 upper band
 - 104 P/N - 3.0:1 upper band
 - 204 P/N - 3.0:1 upper band
- 6.4 Power:**
- 0XX P/Ns - 1 Watt
 - 1XX P/Ns - 1 Watt
 - 204 P/N - 3 Watts
- 6.5 Radiation:** Omnidirectional
- 6.6 Polarization:** Linear
- 6.7 Nominal Impedance:** 50 Ohms

7.0 Mechanical Ratings:

7.1 Mounting Means: SMA plug mount (mounts to SMA receptacle, per tabulation below)

7.2 Element Length: -001 P/N - $1/2\lambda$
-002 P/N - $1/4\lambda$
-003 P/N - $1/4\lambda$
-004 P/N - $1/4\lambda$
-101 P/N - $1/2\lambda$
-102 P/N - $1/4\lambda$
-103 P/N - $1/4\lambda$
-104 P/N - $1/4\lambda$
-204 P/N - $1/4\lambda$

7.3 Ambient Operating Temperature: -40°C to $+80^{\circ}\text{C}$

8.0 Materials:

8.1 Antenna Material: -001 P/N - #18 AWG tinned copper
-002 P/N - #23 AWG enameled copper
-003 P/N - #18 AWG tinned copper
-004 P/N - #18 AWG tinned copper
-101 P/N - #18 AWG tinned copper
-102 P/N - #23 AWG enameled copper
-103 P/N - #18 AWG tinned copper
-104 P/N - #18 AWG tinned copper
-204 P/N - 1/16 in. dia. stainless steel

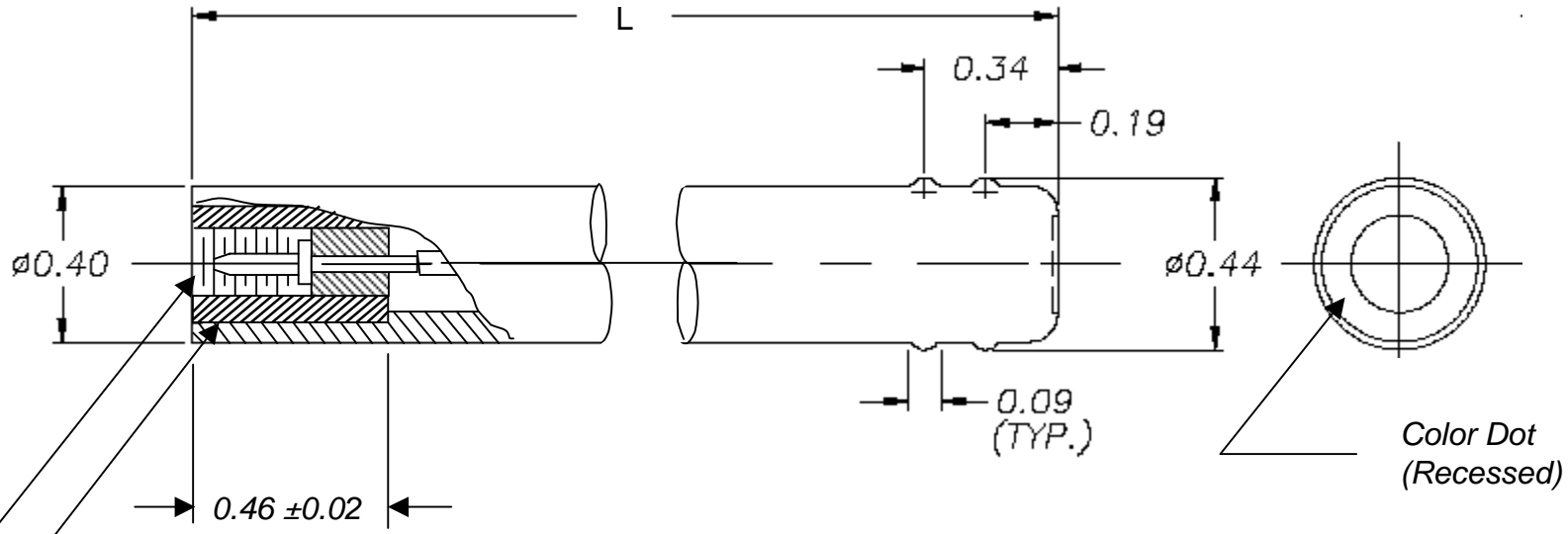
8.2 Ferrule/Plug: -0XX P/N's - Machined brass with integrated SMA plug
-1XX P/N's - Machined brass with knurled exterior and integrated SMA plug
-204 P/N - Two-piece machined brass with knurled exterior and integrated special SMA plug

8.3 Adhesive: Cyanoacrylate, Loctite #404, applied between the radome and the ferrule

8.4 Radome Material: 50/50 blend of K-Resin and Santoprene 7311 thermoplastic elastomer, black color

9.0 Parts Tabulation:

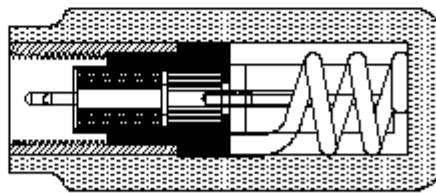
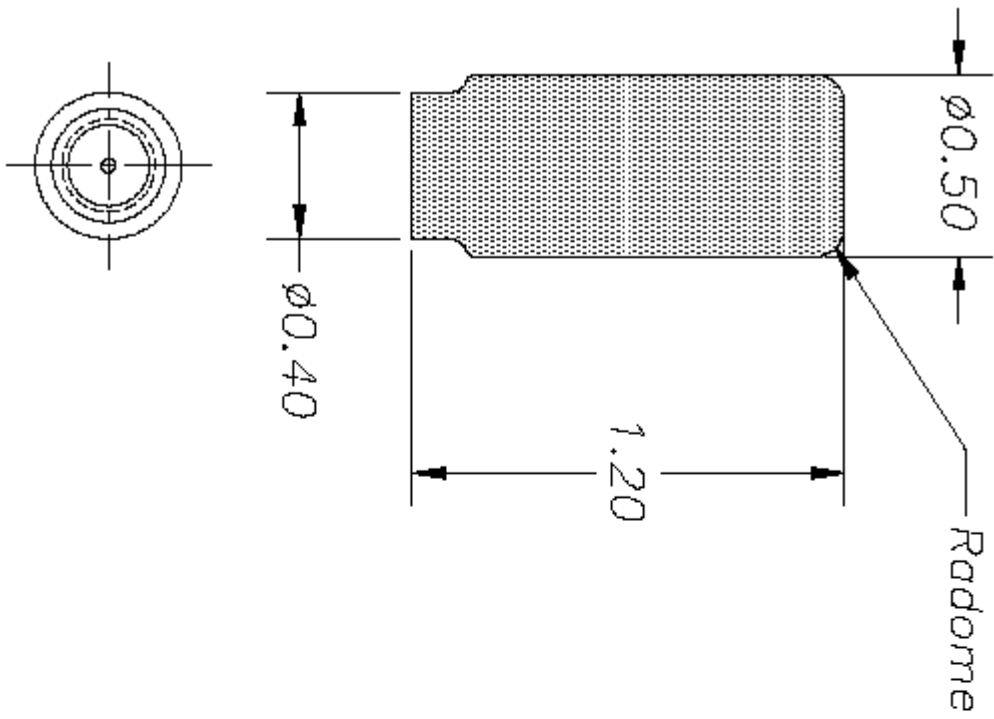
Part Number	Lower Band Freq. (MHz)	Upper Band Freq. (MHz)	Interconnection	Length L (inch)	Color Dot
-001	none	2400 to 2483.5	rev. sex SMA plug	2.23	green
-002	824 to 894	1850 to 1990	std. sex SMA plug	2.23	red
-003	890 to 960	1700 to 1880	std. sex SMA plug	2.23	blue
-004	none	1850 to 1990	std. sex SMA plug	1.10	white
-101	none	2400 to 2483.5	rev. sex SMA plug	2.23	green
-102	824 to 894	1850 to 1990	std. sex SMA plug	2.23	red
-103	890 to 960	1700 to 1880	std. sex SMA plug	2.23	blue
-104	none	1850 to 1990	std. sex SMA plug	1.10	white
-204	none	1850 to 1990	std. sex SMA plug	1.20	white



-0XX style part is shown, -1XX parts have knurled ferrule

1/4 - 36 UNS - 2B threads to be clear of burrs & particulate material

11.0 Outline Drawing (inches): -204 part number



Sectional
Cutaway