

Intermec®

COMPONENT SPECIFICATION

APPROVED SUPPLIERS

Manufacturer	Address/Telephone	805-615	Manufacturer's Part No.
Centurion International, Inc.	P.O. Box 82846 Lincoln, NE 68501 (402) 467-4491	-001	CAF94490
		-101	CAF94720
		-102	CAF94736
		-201	CAF94857
		-301	CAF94866
		-302	CAF94856
		Or	CAF94950
		-304	CAF94950

NOTE: -304 PART MUST CONFORM TO DOC #631869, INTERMEC RESTRICTED SUBSTANCES COMPLIANCE REQUIREMENTS, MOST CURRENT REVISION.

- 1.0 Scope:** This specification describes the requirements for antenna assemblies designed for use in Model CV60 applications which includes two antennas for 802.11b/g or dual band a/b/g, an optional antenna for PicoLink, and a reverse polarity SMA connector for a remote antenna interconnection.

<u>Intermec P/N</u>	<u>Nominal Frequency</u>	<u>RoHS Compliant</u>
-001	2.45 GHz	No
-101	2.45GHz & 5.5GHz	No
-102	2.45GHz & 5.5GHz	No
-201	2.45 GHz	No
-301	2.45GHz & 5.5GHz	No
-302	2.45GHz & 5.5GHz	No
-304	2.45GHz & 5.5GHz	Yes

- 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.

REVISION HISTORY

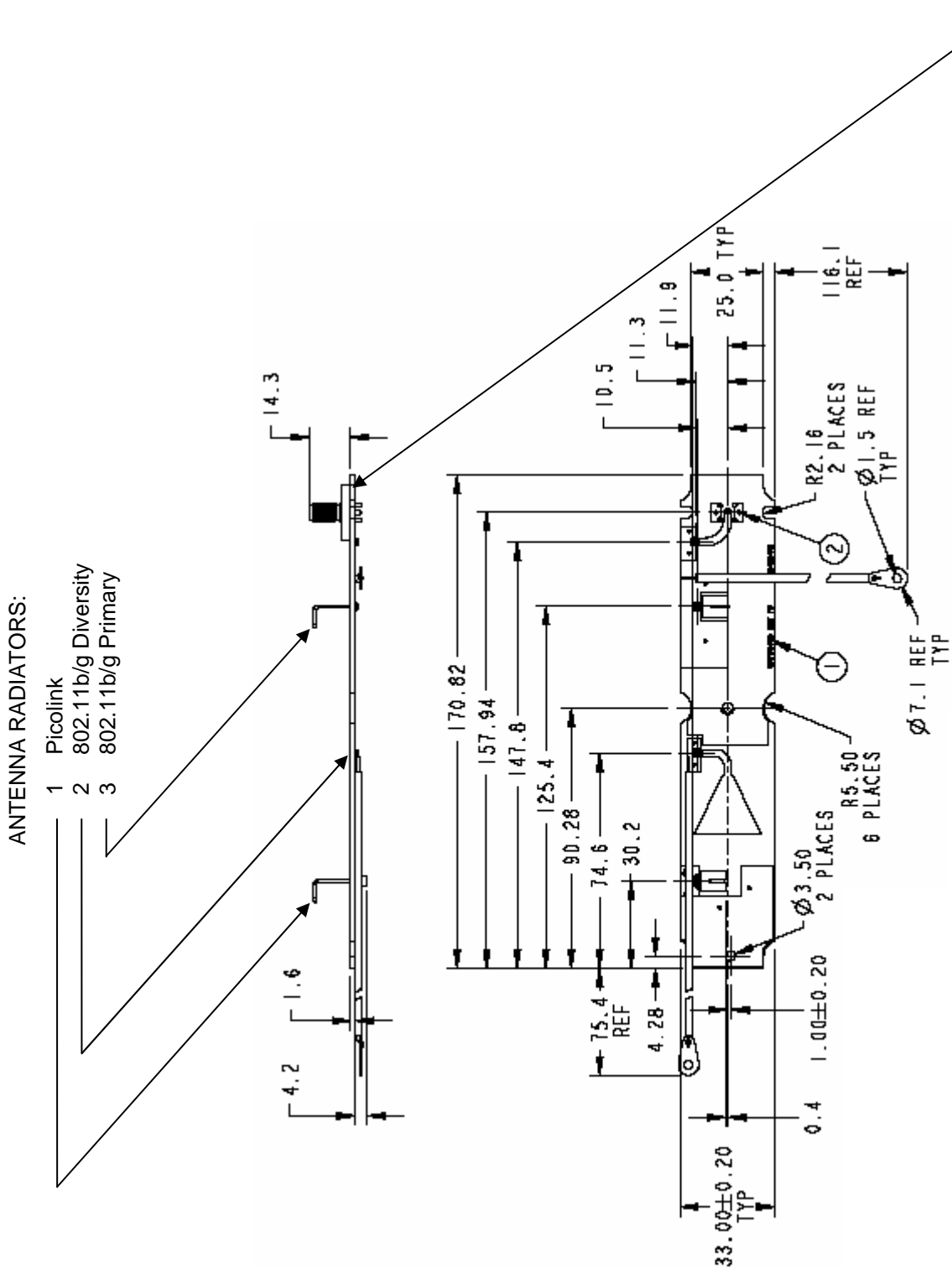
Rev.	File No.	Description of Change	Date	Approved
1	- - -	Prerelease	6/16/03	T S
A	C3880	Release specification, Revise ¶1.0, ¶7.3 Add manufacturer's name & P/N, ¶7.4 Was Poron 4701-40-20125-04 3.0mm thick, ¶8.0 Add drawing, ¶8.6 Add drawing & mat'l	8/06/03	J S
B	C3940	Insert ¶7.5 & ¶7.6, ¶8.0 Delete top view & add gnd wire assemblies & assoc dims	10/13/03	J S
C	C4000	¶8.0 Add grounding thru holes, add graphics, & add notes	1/16/04	J S
D	C4455	Add -101 and -102 parts, Revise ¶1.0, ¶5.1, ¶5.2, ¶5.6 & ¶7.1, Insert ¶8.1 & ¶8.2	10/11/04	L H
E	C4850	Add -201, -301 & -302 parts, Revise ¶1.0, ¶5.1, ¶5.2, ¶5.6 & ¶7.1, Insert ¶8.3 thru ¶8.5, ¶8.6 7.6 was 7.7, ±0.25 was ±0.1, (3.18) was 3.25±0.25, & Add -201 & -3XX parts	6/17/05	L H
F	308351	Add -304 part, Add alt mfr P/N, Add compliance note, Revise ¶1.0, ¶5.1, ¶5.2, ¶5.6, ¶7.1, ¶7.6 & ¶8.5	2/15/06	S J

REVISION LEVEL	F	F	C	D	D	E	E	F	E																						
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.	DATE				Intermec Technologies Corp.									TITLE																	
J. McROBERTS	6/18/03													CV60 MULTIPLE ANTENNAS, 2.4/5.5GHZ																	
COGNIZANT ENGR.	DATE				550 Second Street S.E.									DRAWING NO.																	
T. SCHUSTER	- - -				Cedar Rapids, IA 52401									805-615-XXX																	
APPROVED	DATE				Telephone No. (319) 369-3100																										
K. VORHIES by JS	8/06/03				Facsimile No. (319) 369-3453									Sheet 1 Of 9																	

- 4.0 Markings:** Each container will be labeled or otherwise marked with the manufacturer's name or trademark, and the catalog designation. Major shipping cartons will be marked with the Intermec part number.
- 5.0 Antenna Specifications:**
- 5.1 Nominal Frequency,**
-001 & -201: 2.45 GHz
-101 & -301: 2.45 GHz and 5.5 GHz
-102, -302 & -304: 2.45 GHz and 5.5 GHz
- 5.2 Frequency Range,**
-001 & -201: 2400 MHz to 2485 MHz
-101 & -301: 2400 to 2495 MHz and 5150 to 5825 MHz
-102, -302 & -304: 2400 to 2495 MHz and 5150 to 5825 MHz
- 5.3 Peak Antenna Gain:** +1 dBi nominal
- 5.4 VSWR:** 2.0:1 max over frequency range when installed
- 5.5 Power:** Not specified
- 5.6 Polarization,**
-001 & -201: Picolink & primary 802.11b/g antennas - linear vertical, 802.11b/g diversity antenna - linear horizontal
-101 & -301: Picolink - linear vertical, primary 802.11a/b/g - antenna linear, 802.11a/b/g diversity antenna - linear horizontal
-102, -302 & -304: Primary 802.11a/b/g - antenna linear, 802.11a/b/g diversity antenna - linear horizontal
- 5.7 Nominal Impedance:** 50 Ohms
- 6.0 Mechanical Ratings:**
- 6.1 Antenna Weight:** Not specified
- 6.2 Ambient Operating Temperature:** Not specified
- 6.3 Antenna Interconnection Means:** Hirose U.FL or equivalent, MMCX, and reverse polarized SMA
- 7.0 Materials:**
- 7.1 Radiator Element,**
-001 & -201: 18 gauge wire, and PCB embedded
-101 & -301: D-Puck element, PCB embedded, and 18 gauge wire
-102, -302 & -304: D-Puck element, and PCB embedded
- 7.2 Coaxial Interconnection Means:** Hirose U.FL receptacle or equivalent (for 802.11 antennas), reverse polarized SMA receptacle (for remote antenna), and MMCX receptacle (for PicoLink antenna)
- 7.3 Reverse Polarized SMA Receptacle:** Centurion P/N CAP34270 or equivalent
- 7.4 Reverse Polarized SMA Gasket Material:** Poron™ urethane gasket material, 3.0 mm thick with adhesive coating on one side (see Paragraph 8.1)
- 7.5 Ground Wires (2 ea.):** Undefined insulated wire

- 7.6 Ring Terminals (2 ea.),
 -001 thru -302: Solder style, uninsulated, tin or tin-lead plated brass terminals, 1.5 mm (ref.) diameter clearance hole size
 -304: Solder style, uninsulated, tin plated brass terminals, 1.5 mm (ref.) diameter clearance hole size

8.0 Outline Drawing (mm): 2.4GHz Antenna Assembly, -001 Part



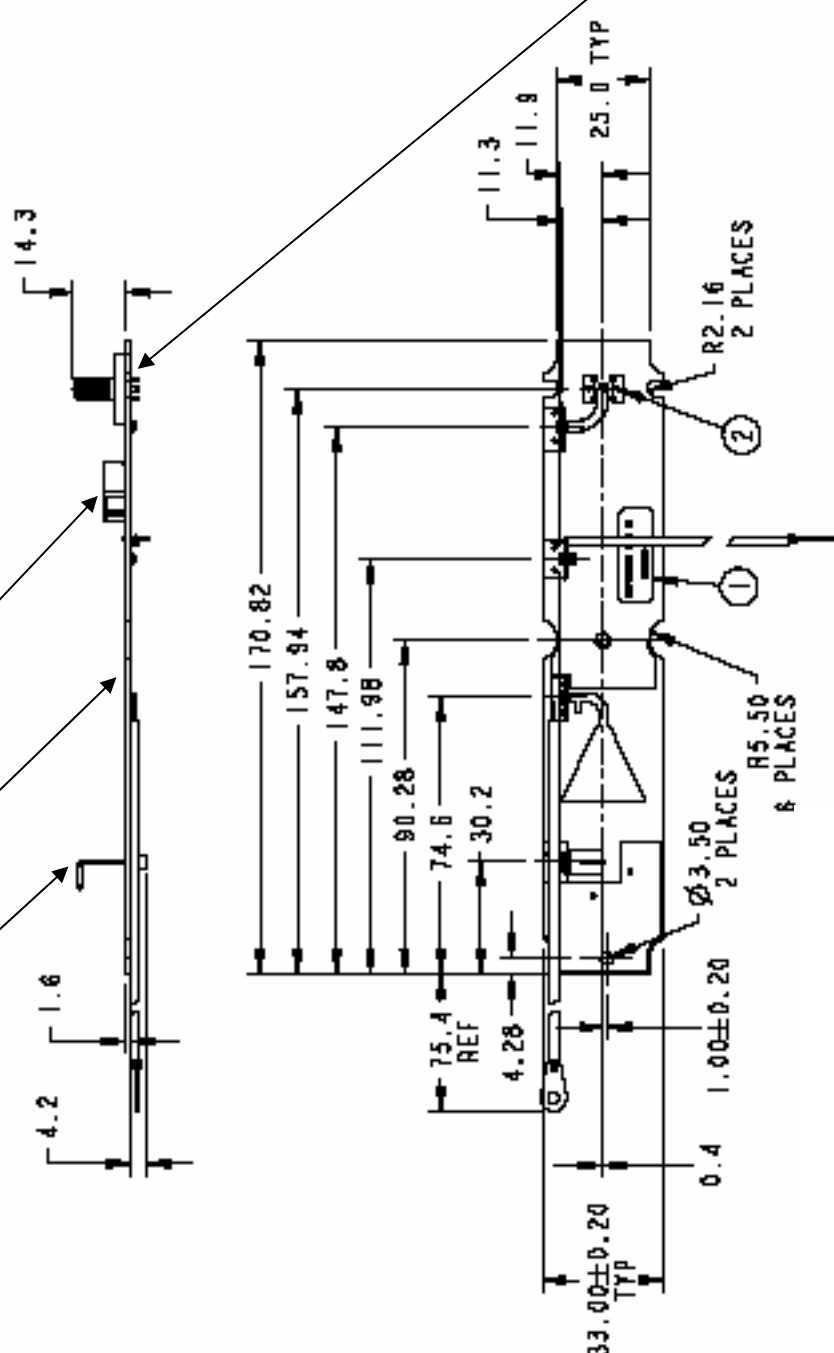
RP SMA Receptacle Gasket
 (See Detail Paragraph 8.1)

- NOTES:
1. Manufacturer's P/N & rev. level, and Intermec P/N
 2. Two through holes for grounding

8.1 Outline Drawing (mm): 2.4/5.5 GHz Antenna Assembly, -101 Part

ANTENNA RADIATORS:

- 1. Picolink
- 2. 802.11a/b/g Diversity
- 3. 802.11a/b/g Primary



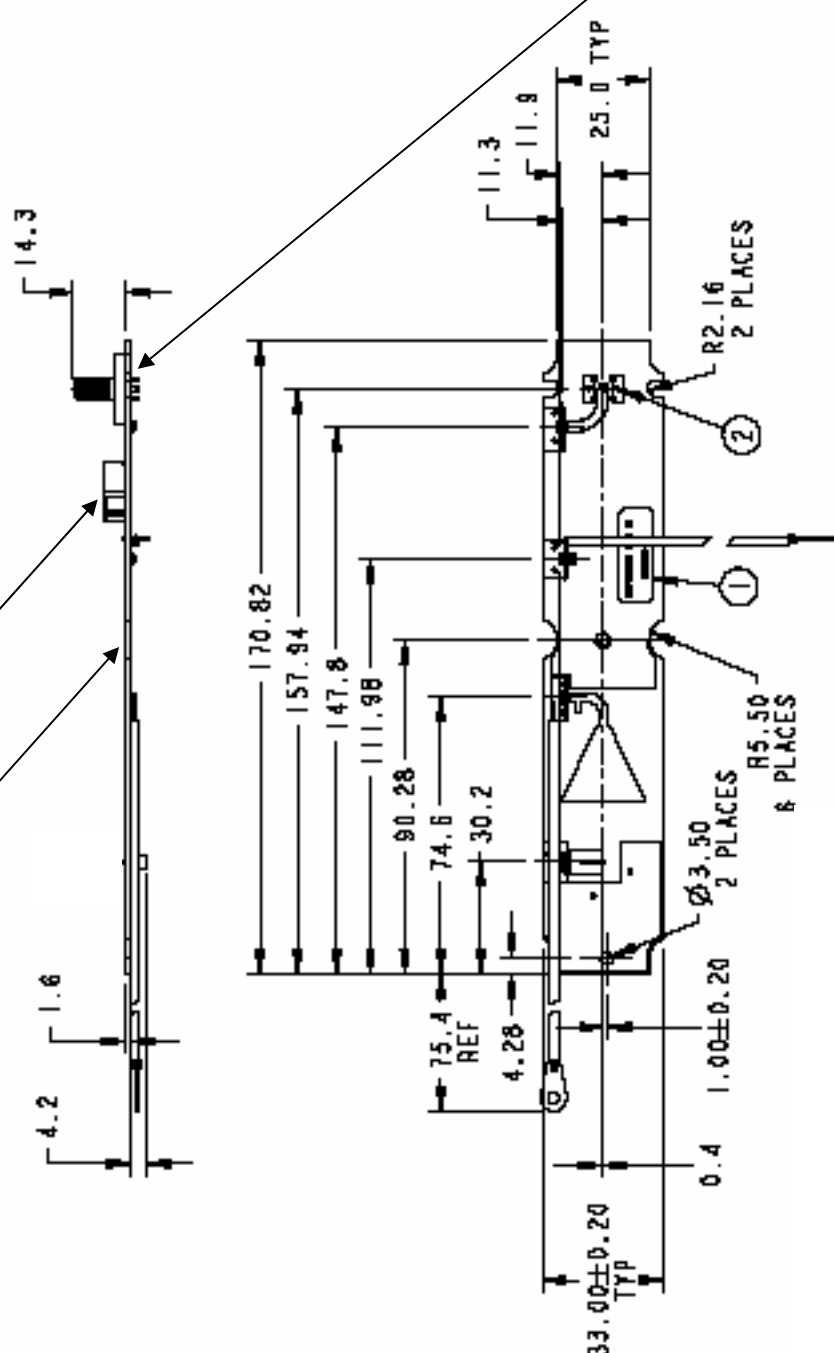
NOTES:

- 1. Manufacturer's P/N & rev. level, and Intermec P/N
- 2. Two through holes for grounding

RP SMA Receptacle Gasket
(See Detail Paragraph 8.1)

8.2 Outline Drawing (mm): 2.4/5.5 GHz Antenna Assembly, -102 Part

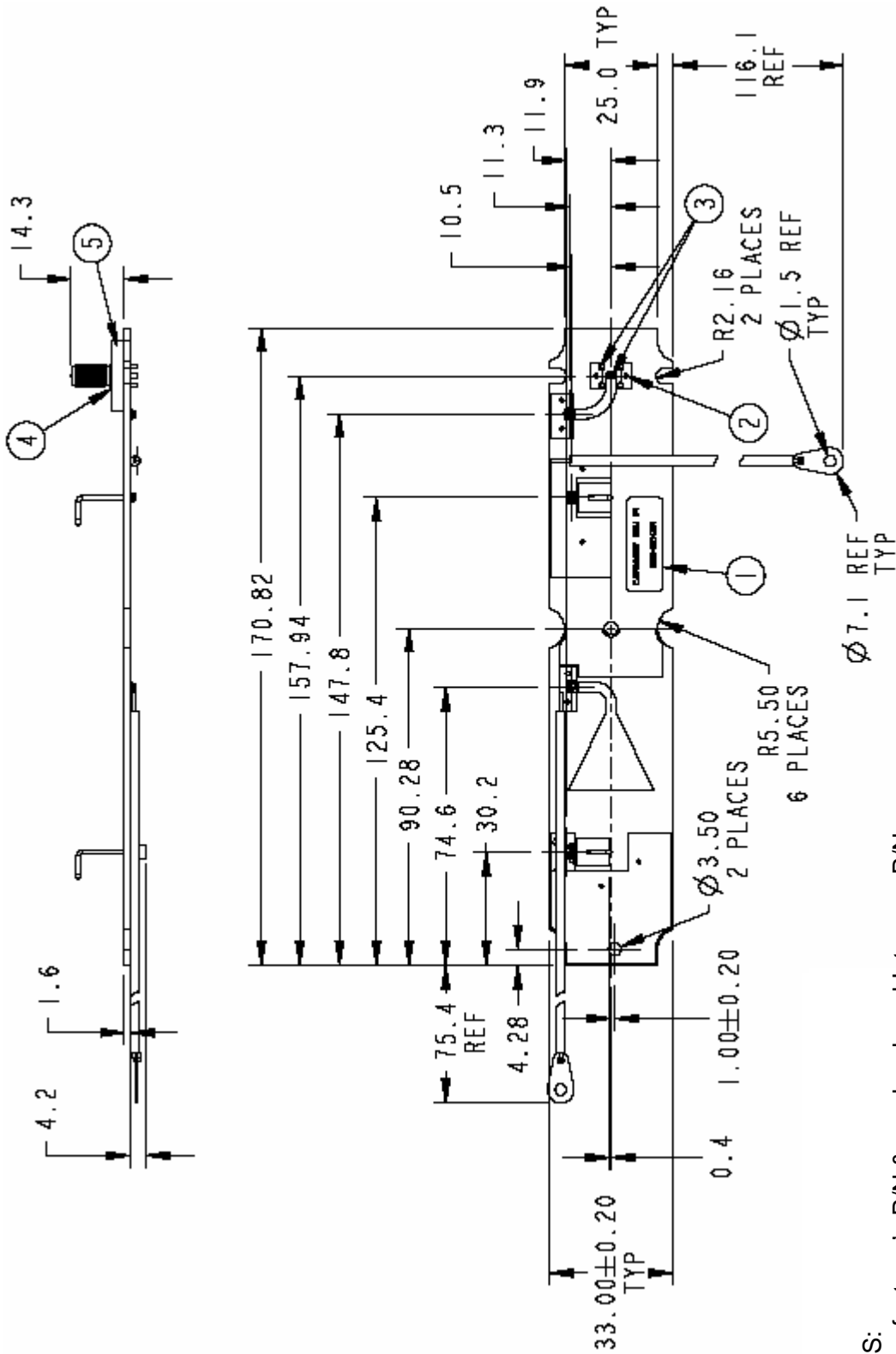
ANTENNA RADIATORS:
 1 802.11a/b/g Diversity
 2 802.11a/b/g Primary



NOTES:
 1. Manufacturer's P/N & rev. level, and Intermec P/N
 2. Two through holes for grounding

RP SMA Receptacle Gasket
 (See Detail Paragraph 8.1)

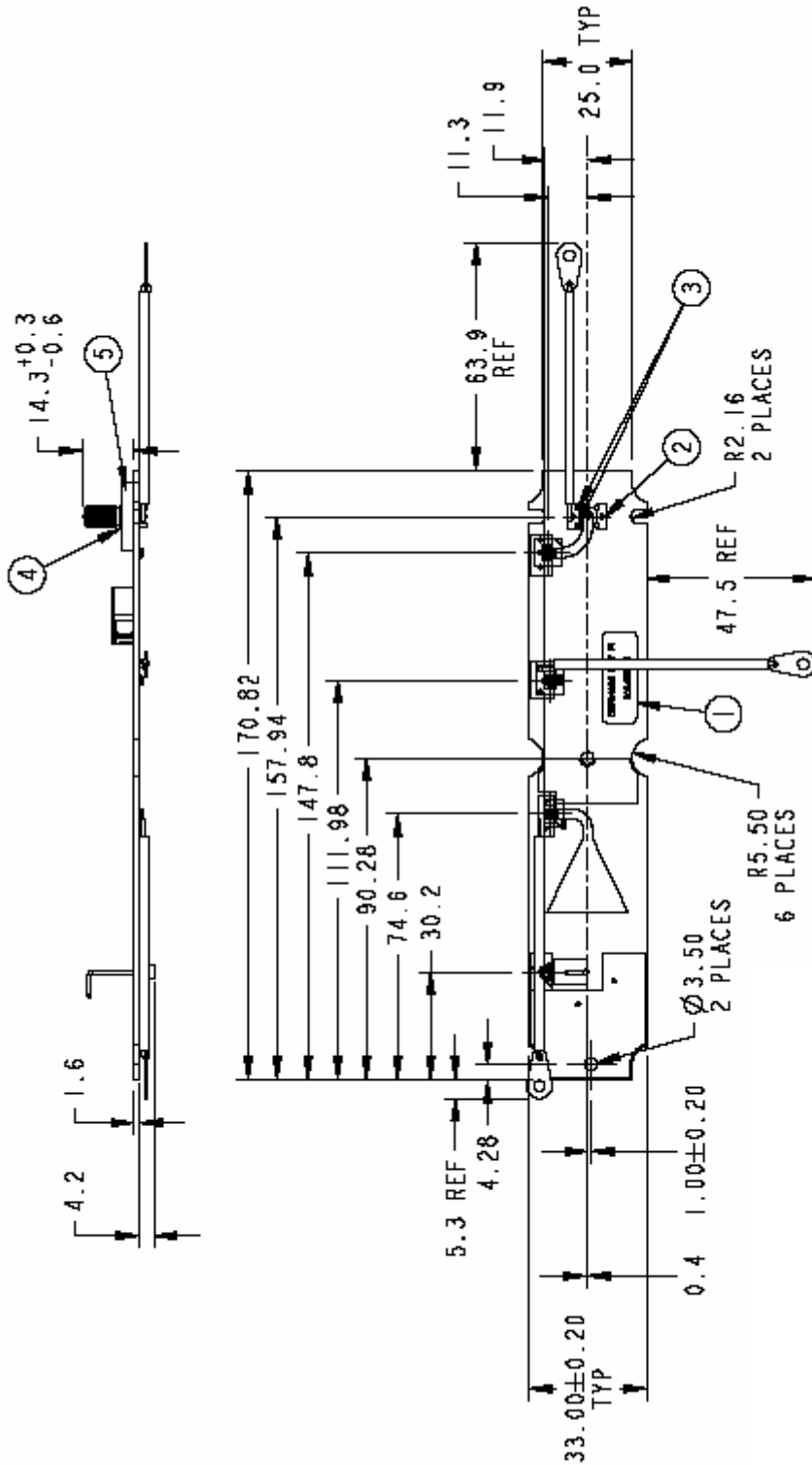
8.3 Outline Drawing (mm): 2.4GHz Antenna Assembly, -201 Part



NOTES:

1. Manufacturer's P/N & rev. level, and Intermec P/N
2. Two through holes for grounding
3. Loctite 5140 RTV applied to ground & feed pins of SMA connector
4. Loctite 5140 RTV applied to area between gasket and SMA connector
5. Bisco silicone gasket HT800 or equivalent

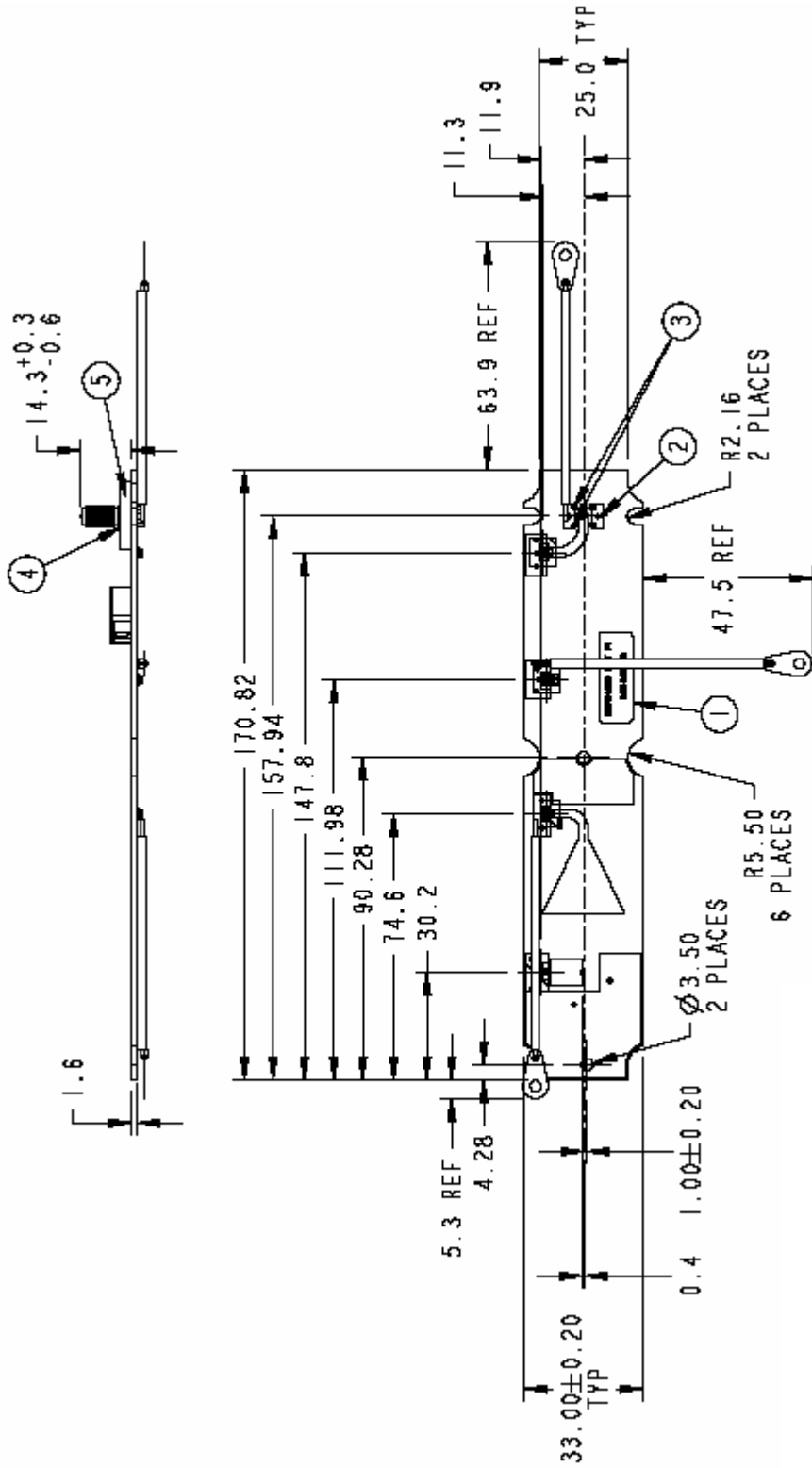
8.4 Outline Drawing (mm): 2.4/5.5 GHz Antenna Assembly, -301 Part



NOTES:

1. Manufacturer's P/N & rev. level, and Intermec P/N
2. Two through holes for grounding
3. Loctite 5140 RTV applied to ground & feed pins of SMA connector
4. Loctite 5140 RTV applied to area between gasket and SMA connector
5. Bisco silicone gasket HT800 or equivalent

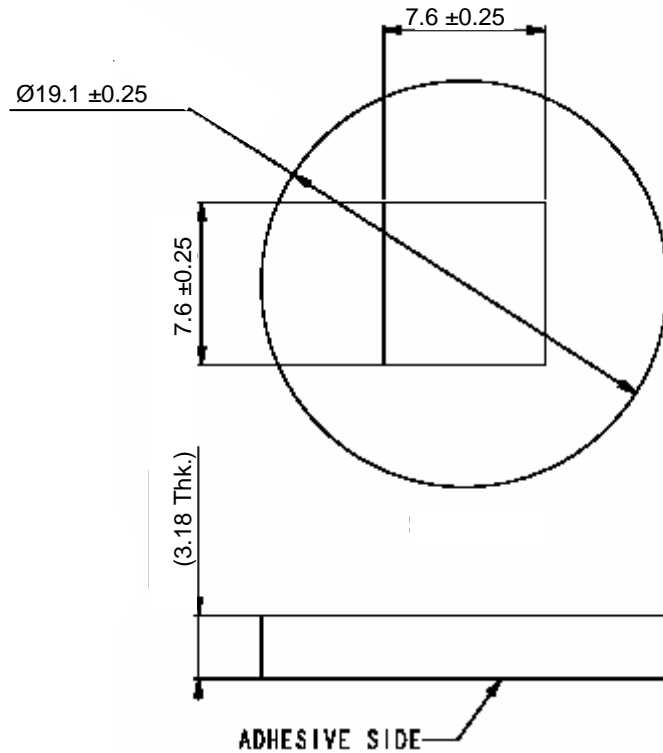
8.5 Outline Drawing (mm): 2.4/5.5 GHz Antenna Assembly, -302 & -304 Part



NOTES:

1. Manufacturer's P/N & rev. level, and Intermec P/N
2. Two through holes for grounding
3. Loctite 5140 RTV applied to ground & feed pins of SMA connector
4. Loctite 5140 RTV applied to area between gasket and SMA connector
5. Bisco silicone gasket HT800 or equivalent

8.6 SMA Gasket Detail Drawing (mm):



Materials:

- 001 & -1XX Parts: Die-cut, flame retardant polyurethane, 3.18 ± 0.76 manufactured thickness, dark gray color, Rogers Poron #4701-40-20125-04 or equivalent with 3M #9425PC double coated polyester tape (one side)
- 201 & -3XX Parts: Die-cut silicone foam, 3.18 ± 0.76 manufactured thickness, black color, Bisco silicone HT800 or equivalent with 3M #468 pressure sensitive adhesive (one side)