Test Report:	3W06722
Applicant:	Infinition Inc. 3630 Jean Talon Trois Rivieres, Quebec G8Y 2G7
Equipment Under Test: (EUT)	35.5 GHz Doppler Radar BR-3502
FCC ID:	PDGBR-3502
In Accordance With:	**FCC Part 90.103**
Tested By:	Nemko Canada Inc. 303 River Road, R.R. 5 Ottawa, Ontario K1V 1H2
Authorized By:	Kevin Carr, EMC Specialist
Date:	17 January 2003
Total Number of Pages:	12

Table of Contents

Section 1. Summary of Test Results

General

All measurements are traceable to national standards.

These tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with FCC Part 90.103.

☒ New Submission ☒ Production Unit

☐ Class II Permissive Change ☐ Pre-Production Unit

T	N	B

Equipment Code

THIS TEST REPORT RELATES ONLY TO THE ITEM(S) TESTED.

TESTED BY: _____ DATE: 17 January 2003

Russell Grant, Wireless Technologist

Summary Of Test Data

Name Of Test	Para. No.	Result
RF Power Output	2.1046	Complies
Audio Frequency Response	2.1047	N/A
Audio Low-Pass Filter Response	2.1047	N/A
Modulation Limiting	2.1047	N/A
Occupied Bandwidth	2.1049	Complies
Spurious Emissions at Antenna Terminals	2.1051	Complies
Field Strength of Spurious Emissions	2.1053	Complies
Frequency Stability	2.1055	Complies
Transient Frequency Behavior	——	N/A

Indoor Temperature: 20°C
Humidity: 5%

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Section 2. General Equipment Specification

Manufacturer:	Infinition Inc
Model No.:	BR-3502
Serial No.:	P3704-35-4
Date Received In Laboratory:	Jan 13, 2003
Nemko Identification No.:	1

Transmitter

Supply Voltage Input:	120 VAC, 60Hz
Frequency Range:	35.5 GHz ± 300 MHz
Tunable Bands:	Fixed 35.5 GHz
Type(s) of Modulation:	CW, unmodulated
Gain:	TX antenna gain 20dBi
RF Power Output (rated):	0.1 W

Section 3. RF Power Output

Para. No.: 2.1046

Test Performed By: Russell Grant	**Date of Test: Jan 16, 2003**

Minimum Standard: ±1dB

Test Results: Complies. The measured RF power output is within ±1 dB of the manufacturer's rating of RF power output.

Measurement Data: Measured 19.3 dBm
Manufacturer's rating 20dBm

Section 4. Occupied Bandwidth

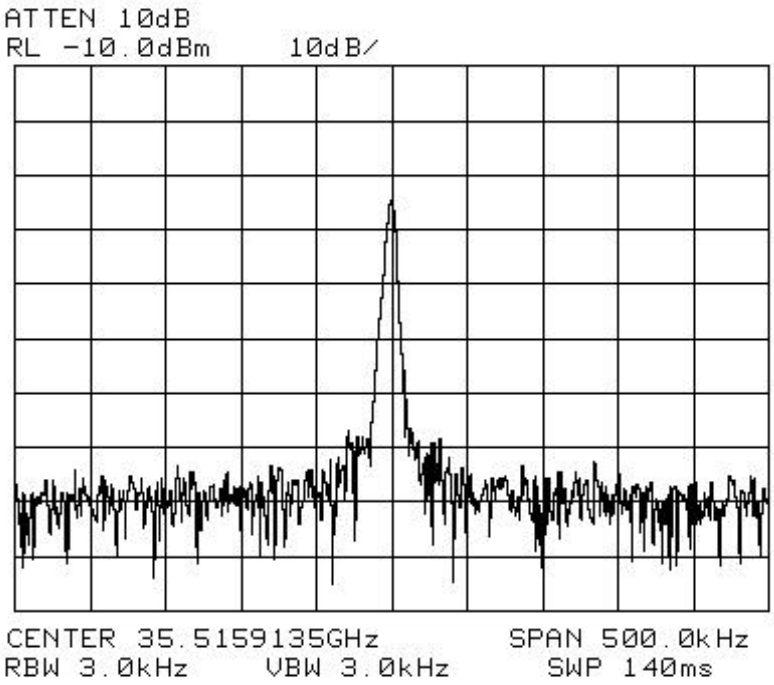
Para. No.: 2.1049

Test Performed By: Russell Grant	**Date of Test: Jan 17,2003**

Minimum Standard: N/A, No modulation.

Test Results: Complies

Measurement Data: See attached graph.



Section 5. Spurious Emissions at Antenna Terminals

Para. No.: 2.1051

Test Performed By: Russell Grant	**Date of Test: Jan 13, 2003**

Minimum Standard: -13 dBm

Test Results: Complies.

Measurement Data: This equipment uses a permanently attached antenna. Therefore radiated spurious measurements were made. See measurement data for field strength of spurious emissions.

Section 6. Field Strength of Spurious Emissions

Para. No.: 2.1053

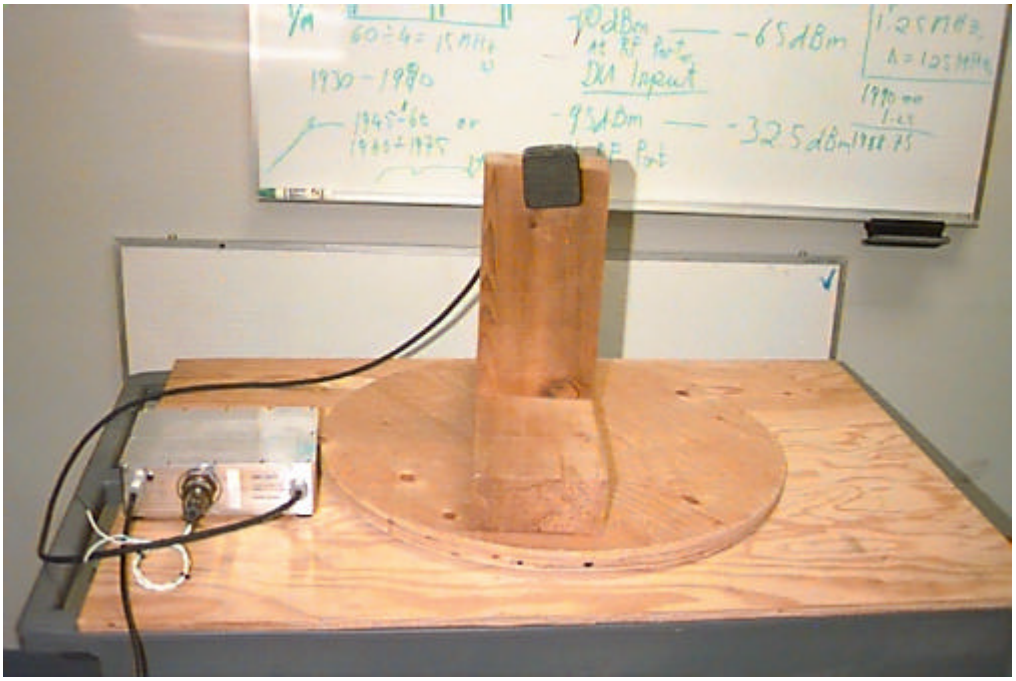
Test Performed By: Russell Grant	**Date of Test: Jan 13, 2003**

Minimum Standard: -13 dBm

Test Results: Complies

Measurement Data: The spectrum was searched for spurious emissions from 30 MHz up to 220 GHz. No emissions were detected within 20 dB of the specification limit.

Photographs of Test Setup (Worst Case Configuration)



Section 7. Frequency Stability

Para. No.: 2.1055

Test Performed By: Russell Grant	**Date of Test: Jan 13, 2003**

Minimum Standard: N/A

Test Results: Complies

Measurement Data: See attached tables.

Standard Test Frequency (GHz): 35.5
Standard Test Voltage (STV): 120 VAC

Temperature	Measured Frequency	Frequency Drift	
(C)	(GHz)	(Mz)	(%)
-30	35.5289	28.9	0.0813
-20	35.5290	29.0	0.0816
-10	35.5291	29.1	0.0820
0	35.5265	26.5	0.0746
10	35.5249	24.9	0.0701
20*	35.5152	15.2	0.0428
30	35.5183	18.3	0.0515
40	35.5144	14.4	0.0406
50	35.5121	12.1	0.0341

* No change due to +/- 15% variation in primary power supply voltage.

Section 8. Test Equipment List

RADIO TEST EQUIPMENT LIST

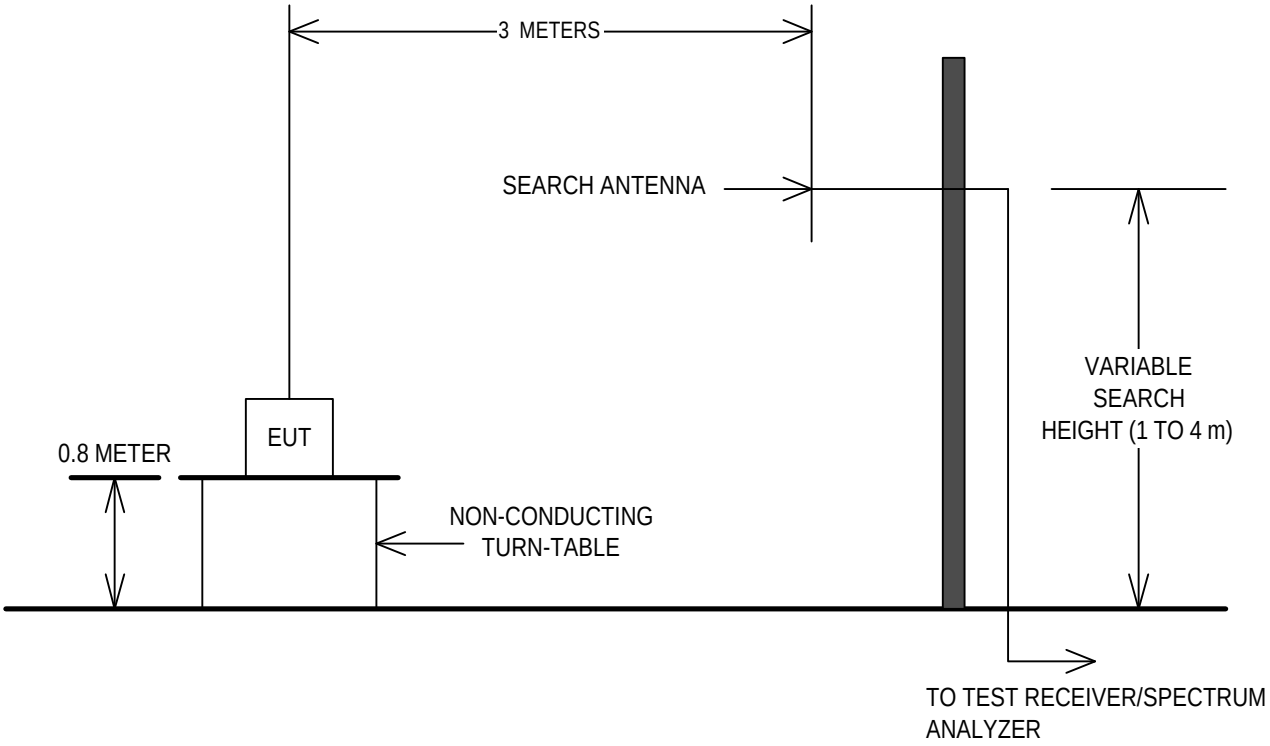
CAL CYCLE	EQUIPMENT	MANUFACTURER	MODEL	SERIAL
1 Year	Spectrum Analyzer	Hewlett Packard	8564E	3846A01407
1 Year	Climate Chamber	Thermotron	SM-16C	15649-S
1 Year	Horn Antenna	EMCO #2	3115	4336
3 Year	Standard Gain Horn	Electro-Metrics	SH-50/60-1	FA000479
3 Year	Standard Gain Horn	Electro-Metrics	SH-50/60-2	FA000485
3 year	Mixer/Antenna 40-60Ghz	Olsen – OML	M19HWA (H.P.)	None
3 year	Mixer /Antenna 60-90Ghz	Olsen – OML	M12HWA (H.P.)	None
3 year	Mixer / Antenna 90-140Ghz	Olsen – OML	M08HWA (H.P.)	None
3 year	Mixer / Antenna 140-220Ghz	Olsen – OML	M05HWA (H.P.)	None
1 Year	Power Meter	Hewlett Packard	E4418B	FA001413
1 Year	Power Sensor	Hewlett Packard	8487A	FA001419

Annex A

Test Diagrams

Para. No. 2.1046 RF Power Output

Para. No. 2.1053 Field Strength of Spurious Emissions.



Para. No. 2.1055 - Frequency Stability