

|                                                                     |                     |
|---------------------------------------------------------------------|---------------------|
| <u>APPLICANT</u>                                                    | <u>MANUFACTURER</u> |
| Symbol Technologies Inc<br>One Symbol Plaza<br>Holtsville, NY 11742 | Same as Applicant   |

TEST SPECIFICATION: FCC Rules and Regulations Part 15, Subpart C

TEST PROCEDURE: ANSI C63.4:1992

TEST SAMPLE DESCRIPTION

BRANDNAME: Symbol

MODEL: P470

FCC ID: H9PP470

TYPE: 2.4 GHz Pulsed Transmitter

FREQUENCY RANGE: 2400 to 2483.5 MHz

POWER REQUIREMENTS: 4 VDC derived from rechargeable battery pack

TESTS PERFORMED

- 15.249(a) Radiated Emissions, Fundamental and Harmonics
- 15.249(c) Radiated Emissions, Spurious Case

## REPORT OF MEASUREMENTS

Applicant: Symbol Technologies, Inc.  
Device: 2.4 GHz Pulsed Transmitter  
FCC ID: H9PP470  
Power Requirements: 4 VDC derived from rechargeable battery pack  
Applicable Rule Section: Part 15, Subpart C, Section 15.249

**Note: This Permissive Change testing was performed with a new, more cost effective antenna with the same gain characteristics as original FCC filing.**

## TEST RESULTS

- 15.203: The intentional radiator is designed to ensure that no antenna other than that furnished by the applicant can be used with the device.
- 15.249(a): The unit operates in the 2400-2483.5 MHz band. The field strength of the fundamental did not exceed 50mV/M AVERAGE. The field strength of the harmonics did not exceed 500µV/M AVERAGE.
- 15.249(c): Emissions radiated outside the specified frequency band were attenuated in accordance with the general radiated emissions limits of 15.209.

## GENERAL NOTES

1. All user accessible controls were adjusted to produce maximum emissions.
2. The device utilize a pulsed emission which has a worst case duty cycle of 30%. All readings above 1000 MHz were taken using a peak detector, were found to comply with the average limits.
3. The frequency range was scanned from 30 MHz to 24.82 GHz. All emissions not reported were more than 20dB below the specified limit.



EXHIBIT 4

Radiated Emissions, Fundamental & Harmonics

Para. 15.249(a)

(Please see separate e-file attachments named FundHarmLow.doc,  
FundHarmMid.doc and FundHarmHigh.doc)

EXHIBIT 4

Radiated Emissions, Spurious Case

Para. 15.249(c)

(Please see separate e-file attachments named Spurious RE.doc)

## EQUIPMENT LIST

### FCC 15.249(b) Radiated Emissions, 2.4GHz to 24GHz

| EN   | Type                   | Manufacturer    | Description.       | Model No. | Cal Date   | Due Date   |
|------|------------------------|-----------------|--------------------|-----------|------------|------------|
| 061  | High Gain Horn Antenna | Microlab/FXR    | 1 GHz - 1.7 GHz    | L638A     | 01/25/2000 | 01/25/2001 |
| 062  | High Gain Horn Antenna | Microlab/FXR    | 1.7 GHz - 2.6 GHz  | R638A     | 01/25/2000 | 01/25/2001 |
| 063  | High Gain Horn Antenna | Microlab/FXR    | 2.6 GHz-3.95 GHz   | S638A     | 01/26/2000 | 01/26/2001 |
| 067  | Open Area Test Site    | Retlif          | 3 Meter            | RNY       | 10/15/1997 | 10/15/2000 |
| 129D | High Gain Horn Antenna | Microlab/FXR    | 12.4 GHz - 18 GHz  | Y638A     | 01/26/2000 | 01/26/2001 |
| 141  | Spectrum Analyzer      | Hewlett Packard | 100 Hz - 40 GHz    | 8566B     | 03/20/2000 | 09/20/2000 |
| 141A | Graphics Plotter       | Hewlett Packard | N/A                | 7470A     | 03/08/2000 | 03/08/2001 |
| 141B | Quasi-Peak Adaptor     | Hewlett Packard | 100 Hz - 1 GHz     | 85650A    | 03/20/2000 | 09/20/2000 |
| 543  | Preamplifier           | Hewlett Packard | 1.0 GHz - 26.5 GHz | 8449B     | 06/16/1999 | 06/16/2001 |

### FCC 15.209(a) Radiated Emissions, 30MHz to 24GHz

| EN   | Type                    | Manufacturer      | Description.         | Model No.    | Cal Date   | Due Date   |
|------|-------------------------|-------------------|----------------------|--------------|------------|------------|
| 061  | High Gain Horn Antenna  | Microlab/FXR      | 1 GHz - 1.7 GHz      | L638A        | 01/25/2000 | 01/25/2001 |
| 062  | High Gain Horn Antenna  | Microlab/FXR      | 1.7 GHz - 2.6 GHz    | R638A        | 01/25/2000 | 01/25/2001 |
| 063  | High Gain Horn Antenna  | Microlab/FXR      | 2.6 GHz-3.95 GHz     | S638A        | 01/26/2000 | 01/26/2001 |
| 067  | Open Area Test Site     | Retlif            | 3 Meter              | RNY          | 10/15/1997 | 10/15/2000 |
| 129D | High Gain Horn Antenna  | Microlab/FXR      | 12.4 GHz - 18 GHz    | Y638A        | 01/26/2000 | 01/26/2001 |
| 133  | Broadband Pre-Amplifier | Electro-Metrics   | 10 kHz - 1 GHz, 26dB | BPA-1000     | 06/22/1999 | 06/22/2000 |
| 141  | Spectrum Analyzer       | Hewlett Packard   | 100 Hz - 40 GHz      | 8566B        | 03/20/2000 | 09/20/2000 |
| 141A | Graphics Plotter        | Hewlett Packard   | N/A                  | 7470A        | 03/08/2000 | 03/08/2001 |
| 141B | Quasi-Peak Adaptor      | Hewlett Packard   | 100 Hz - 1 GHz       | 85650A       | 03/20/2000 | 09/20/2000 |
| 206B | 6.0 dB Attenuator       | Texscan           | 0 - 1.0 GHz          | FP-50 - 6 dB | 06/22/1999 | 06/22/2000 |
| 523  | Biconilog               | Electro-Mechanics | 26 - 2000 MHz        | 3142B        | 10/22/1998 | 04/22/2000 |
| 543  | Preamplifier            | Hewlett Packard   | 1.0 GHz - 26.5 GHz   | 8449B        | 06/16/1999 | 06/16/2001 |
| 617  | Interference Analyzer   | Electro-Metrics   | 10 kHz - 1 GHz       | EMC-30       | 01/17/2000 | 01/17/2001 |

Test Report Number R-8476