TCB Compliance Opinion

Rev. 9/15/03

Information about the Applicant

| Company Name | Sagem Morpho, Inc. | |
|------------------------|---|--|
| Address | 1145 Broadway Plaza, Suite 200 | |
| City, State, Zip | Tacoma, WA 98402 | |
| Requested By | Eric L. Vogel | |
| Job Number | SAGM0001 | |
| Model | MA220 | |
| FCC ID | M9H-MA220 | |
| Agent | Northwest EMC, Inc. | |
| Approval Type | Original | |
| Equipment Class | DXT Part 15, Low Power Transceiver, Rx Verified | |
| Rule Part | 15.225 | |

Overview

The radio is an ISO/IEC 14443 type Mifare remote RFID card reader. It is a seeking certification under FCC 15.225. The device uses a single antenna, integral to the circuit board.

Recommendation

All items have been resolved and completed to my satisfaction; therefore I recommend this application for approval.

| Quit m Tolma | 9/26/03 |
|--------------|---------|
| Name, Title | Date |

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Findings and Resolution

| Item | 15.19 The required labeling was not located on the device nor in the user manual. |
|------------|---|
| Resolution | |

Requirements and Opinion

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 2.1033(b)(3) | Installation, operating instructions, user information |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | User Manual.pdf, |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 2.1033(b)(4) | Operational description |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | Operational description.pdf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 2.1033(b)(5) | Block diagram showing frequency of oscillators. Signal path and frequency at each block. |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | Block Diagram.pdf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 2.1033(b)(5) | Schematic diagram |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | Schematics.pdf, |

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| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 2.1033(b)(7) | Internal and external photos |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | User Manual.pdf, Schematics.pdf, Operational description.pdf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 15.19 | Label requirements |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | User Manual ndf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 15.21 | User Information |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted the required information. |
| Reference | User Manual.pdf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 15.27 | Special Accessories (Shielded cables, etc.) |
| Opinion | The device complies with the requirements |
| Discussion | The manufacturer supplies required ferrite beads |
| Reference | User Manual.pdf. |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 15.33 | Frequency range |
| Opinion | The data complies with the requirements. |
| Discussion | The client has submitted a test report. |
| Reference | Technical Report-PLEX0339.pdf |

| Specification Requirements | Description |
|----------------------------|--|
| 47 CFR 15.35 | Measurement Detectors |
| Opinion | The data complies with the requirements. |
| Discussion | The client has submitted a test report. |
| Reference | Technical Report-PLEX0339.pdf |

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| Consideration Descriptions | Description |
|--|---|
| Specification Requirements 47 CFR 15.205 | Description Restricted band(s) requirements |
| | · · · · · · · · · · · · · · · · · · · |
| Opinion | The data complies with the requirements. |
| Discussion | The client has submitted a test report. |
| Reference | Technical Report-PLEX0339.pdf |
| | |
| Specification Requirements | Description |
| 47 CFR 15.207 | Powerline Conducted Emissions |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted a test report. |
| Reference | Technical Report-PLEX0339.pdf |
| | |
| Specification Requirements | Description |
| 47 CFR 15.209 | Spurious Emissions |
| Opinion | The device complies with the requirements. |
| Discussion | The client has submitted a test report. |
| Reference | Technical Report-PLEX0339.pdf |
| | |
| Specification Deguirements | Description |
| Specification Requirements | Description Field Strength of Fundamental |
| 47 CFR 15.225(a) | Field Strength of Fundamental |
| | |
| 47 CFR 15.225(a) | Field Strength of Fundamental |
| 47 CFR 15.225(a) Opinion | Field Strength of Fundamental The device complies with the requirements. |
| 47 CFR 15.225(a) Opinion Discussion | Field Strength of Fundamental The device complies with the requirements. The client has submitted a test report. |
| 47 CFR 15.225(a) Opinion Discussion Reference Specification Requirements | Field Strength of Fundamental The device complies with the requirements. The client has submitted a test report. Technical Report-PLEX0339.pdf Description |
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| 47 CFR 15.225(a) Opinion Discussion Reference Specification Requirements 47 CFR 15.225(b) | Field Strength of Fundamental The device complies with the requirements. The client has submitted a test report. Technical Report-PLEX0339.pdf Description Field Strength of Spurious Emissions |
| 47 CFR 15.225(a) Opinion Discussion Reference Specification Requirements 47 CFR 15.225(b) Opinion | Field Strength of Fundamental The device complies with the requirements. The client has submitted a test report. Technical Report-PLEX0339.pdf Description Field Strength of Spurious Emissions The device complies with the requirements. |
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Technical Report-PLEX0339.pdf

Reference