VARISCITE LTD.
DART-MX8M
EMC Radiation test
# Document Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>1.0</td>
<td>12/09/2019</td>
<td>Initial</td>
</tr>
<tr>
<td>1.1</td>
<td>17/05/2022</td>
<td>Added results for SOM revision v1.4 (ADIN1300 Ethernet PHY) – updated sections 2, 3.1, 3.2; added section 3.3</td>
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1 Introduction

This Document presents the DART-MX8M EMC radiation test, held at the “THE STANDARDS INSTITUTION OF ISRAEL” EMC test labs (http://www.sii.org.il/896-en/SII_EN.aspx).
2 Test Set up

Test setup included a stock DART-MX8M module assembled on a VAR-DT8CustomBoard carrier board powered by 5V linear power supply. All SOM features were enabled, Ethernet port of carrier board was connected to Ethernet switch. A script running continuous scan for WLAN access points and eMMC writes was executed.

3 Results

3.1 Radiation Spectrum (SOM Rev 1.2)

SOM: DART-MX8M Rev 1.2
Carrier board: VAR-DT8CustomBoard 1.4

The blue graph represents Vertical & Horizontal polarity radiation frequency measurements. The red horizontal line is the EN55022 Class B standard limits.

<table>
<thead>
<tr>
<th>Frequency, Mhz</th>
<th>Peak, dBµV/m</th>
<th>QP, dBµV/m</th>
<th>Avg dBµV/m</th>
<th>QP Limit, dBµV/m</th>
<th>Delta QP (dB)</th>
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<tbody>
<tr>
<td>45.675</td>
<td>34.5</td>
<td>29.7</td>
<td>17.0</td>
<td>40.0</td>
<td>-10.3</td>
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<tr>
<td>500.029</td>
<td>38.2</td>
<td>36.3</td>
<td>32.7</td>
<td>47.0</td>
<td>-10.7</td>
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3.2 Radiation Spectrum (SOM Rev 1.3)

SOM: DART-MX8M Rev 1.3
Carrier board: VAR-DT8CustomBoard 3.0

The yellow graph represents Vertical & Horizontal polarity radiation frequency measurements. The yellow horizontal line is the EN55022 Class B standard limits.
3.3 Radiation Spectrum (SOM Rev 1.4)

SOM: DART-MX8M Rev 1.4
Carrier board: VAR-DT8CustomBoard 3.0

The yellow graph represents Vertical & Horizontal polarity radiation frequency measurements. The yellow horizontal line is the EN55022 Class B standard limits.

### Peak Frequency Measurement

<table>
<thead>
<tr>
<th>Frequency, MHz</th>
<th>Peak, dBµV/m</th>
<th>QP, dBµV/m</th>
<th>Avg dBµV/m</th>
<th>QP Limit, dBµV/m</th>
<th>Delta QP (dB)</th>
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<tbody>
<tr>
<td>300</td>
<td>43.652</td>
<td>40.046</td>
<td>35.642</td>
<td>47.0</td>
<td>-6.954</td>
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<tr>
<td>702</td>
<td>42.783</td>
<td>40.017</td>
<td>37.008</td>
<td>47.0</td>
<td>-9.991</td>
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6 Contact Information

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