



## EMI TEST REPORT

FOR RIVERDI HB, IPS 7.0" LCD SERIES

Rev.1.0  
2021-08-02

The EMI test report applies to below Riverdi HB, IPS 7.0" series:

PRODUCT NAME	DESCRIPTION
RVT70HSTNWC00-B	HB, IPS, 7.0", 850cd/m <sup>2</sup> , RGB, uxTouch, Optical bonding
RVT70HSTNWC00	HB, IPS, 7.0", 800cd/m <sup>2</sup> , RGB, uxTouch, Air bonding
RVT70HSTNWC00	HB, IPS, 7.0", 800cd/m <sup>2</sup> , RGB, uxTouch, Air bonding
RVT70HSTNWC00	HB, IPS, 7.0", 800cd/m <sup>2</sup> , RGB, aTouch, Air bonding
RVT70HSTFWCA0	HB, IPS, 7.0", 800cd/m <sup>2</sup> , RGB, aTouch, Air bonding, Metal frame



## 1. REVISION RECORD

REV NO.	REV DATE	CONTENTS	REMARKS
1.0	2021-08-02	Initial Release	



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### 3. SUMMARY OF TEST RESULT

TEST ITEM	NORM APPLIED	Result
RADIATED EMISSION 30-1000 MHz	EN 55032 (CISPR32). Radiated emission 30-1000 MHz (EMI)	Pass

Date of Test: 24/05/2021

EMC Lab: RADMOR S.A., Gdynia.

### 4. GENERAL INFORMATION

#### 4.1 Description of EUT

<b>PRODUCT NAME</b>	RVT70HSTNWC00-B
<b>TEST VOLTAGE</b>	Battery 6V

**Note.** All test was performed on RVT70HSTNWC00-B. But results applied for every module within this line: RVT70HSTNWC00, RVT70HSTNWC0A0, RVT70HSTFWCA0, RVT70HSTNWC00-B.

#### 4.2 Description of EUT peripheral

The 70BT817 (display controller board) and Revelation Board (host controller board) designed by Riverdi were used to drive RVT70HSTNWC00-B during the EMI test.

70BT817, as the main board of Riverdi EVE4 IPS 7.0" series, applies Bridgetek's BT817Q chip, which is the most powerful and intelligent graphics controller. It features a low EMI design, QSPI/SPI interface, RiBUS connector, built-in flash memory, and audio amplifier.

Learn more about EVE4 solutions [here](#) or browse the EVE4 IPS 7.0" series directly [here](#).

The following EUT operation modes were tested:

##### Mode A:

The 70BT817 was assembled with RVT70HSTNWC00-B and connected with the Revelation Board via RiBUS.

During the test, the Revelation Board keeps transferring data to 70BT817 via RiBUS with full SPI speed at 6 MHz.

Animated pictures were presented on the screen.

##### Mode B:

The images were generated by the Revelation Board.

During the test, the Revelation Board was disconnected to eliminate the radiated emission from it.

The RVT70HSTNWC00-B connected with 70BT817 was powered via RiBUS, and a non-animated picture was presented from the internal BT817Q memory.



### 4.3 Measuring device and test settings

EQUIPMENT	MODEL	VERSION
EMI test receiver	Rohde & Schwarz ESW-44	1.72 SP1

Meas BW: 120000,000000 Hz	Filter Type: Quasipeak	Meas Time: 1,000000 s	Center Freq: 221100000,000000 Hz
Attenuation: 0,000000 dB	Auto Range: On	Auto Preamp: On	Preamp: On
Preselector: On	Filter Split: Off	Notch Filter 1: Off	Notch Filter 2: Off
Input: 1 DC			

## 5. TEST RESULTS

### 5.1 The test result of Mode A:

#### Test condition

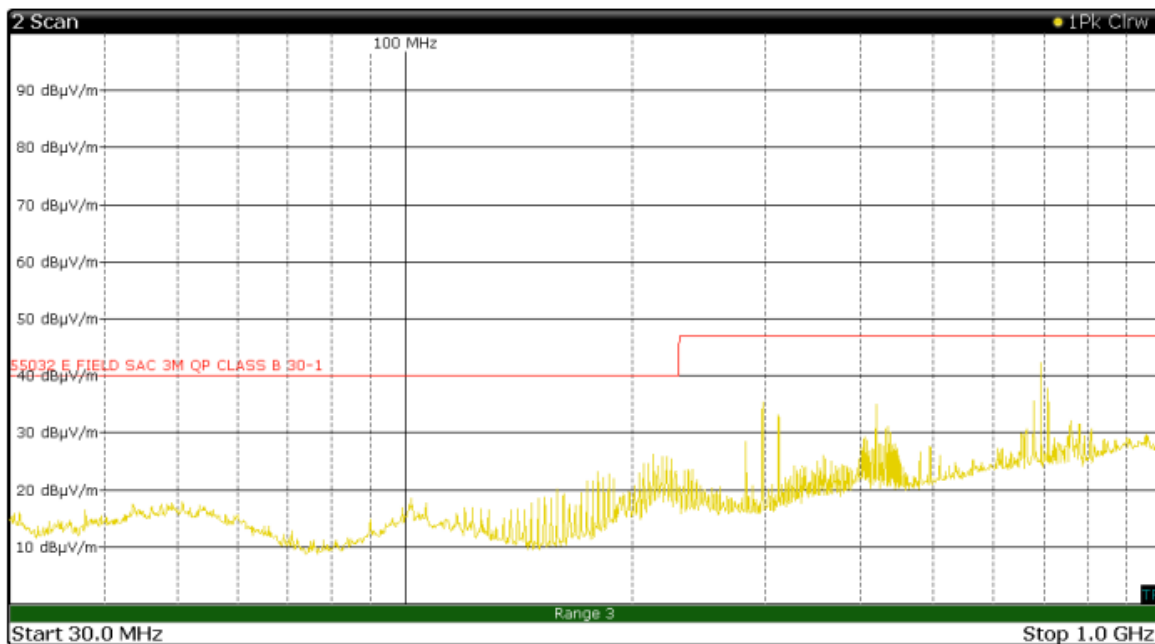
Power supply: Battery 6 V

External oscillator: 12.00MHz

PCLK: 51.0MHz

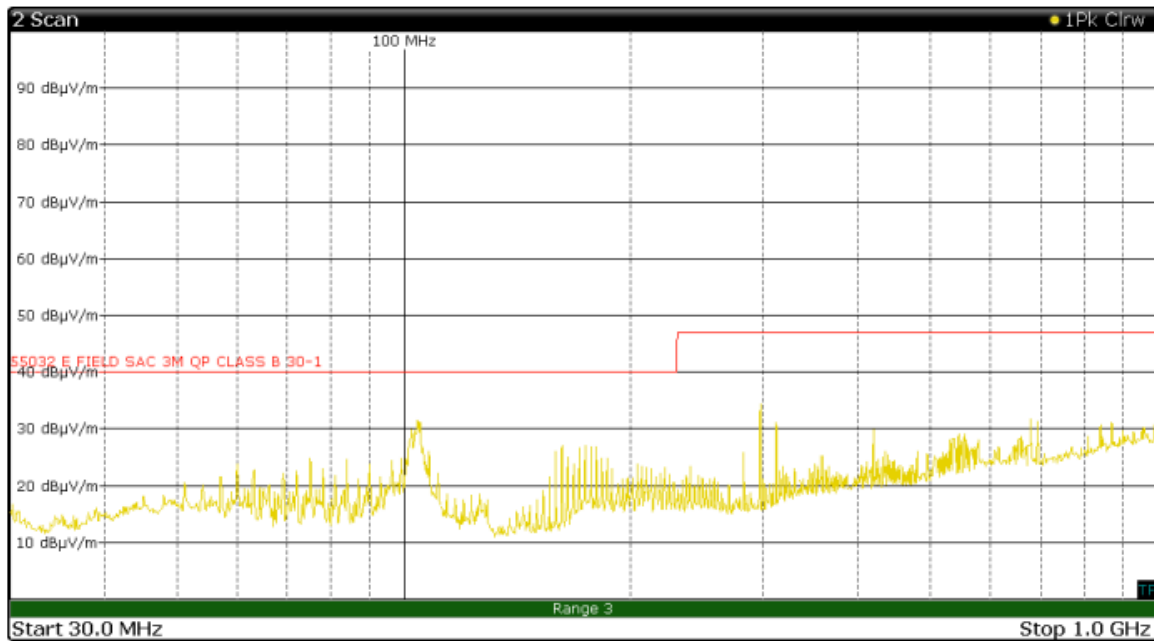
Device and test settings: Same settings as subchapter 4.3 presented.

#### Horizontal:





## Vertical:



## 5.2 The test result of Mode B:

### Test condition

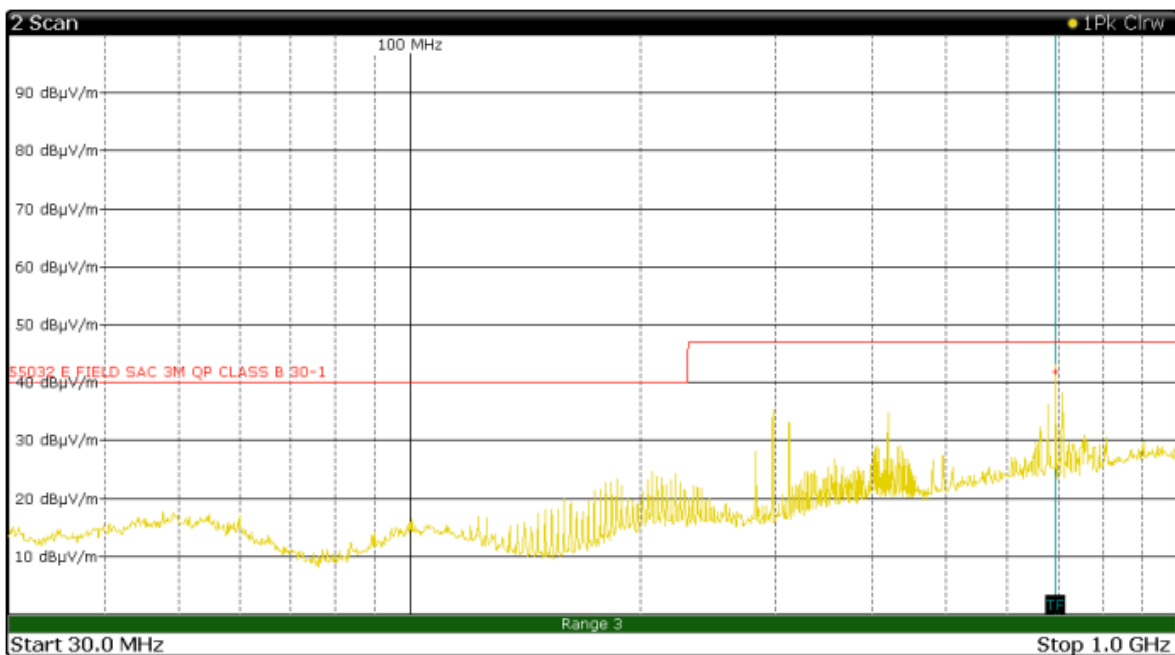
Power supply: Battery 6 V

External oscillator: 12.00MHz

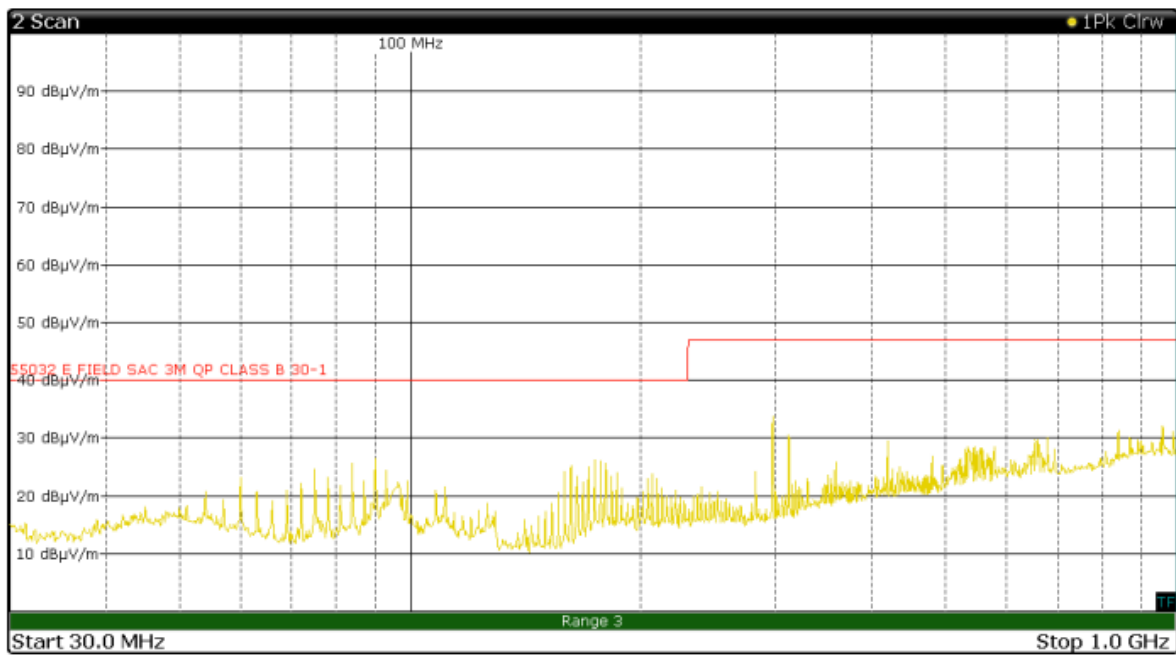
PCLK: 51.0MHz

Device and test settings: Same settings as subchapter 4.3 presented.

## Horizontal:



## Vertical:



## 6. Photos

Figure 1. Radiation Emission 30-1000MHz Test Back View

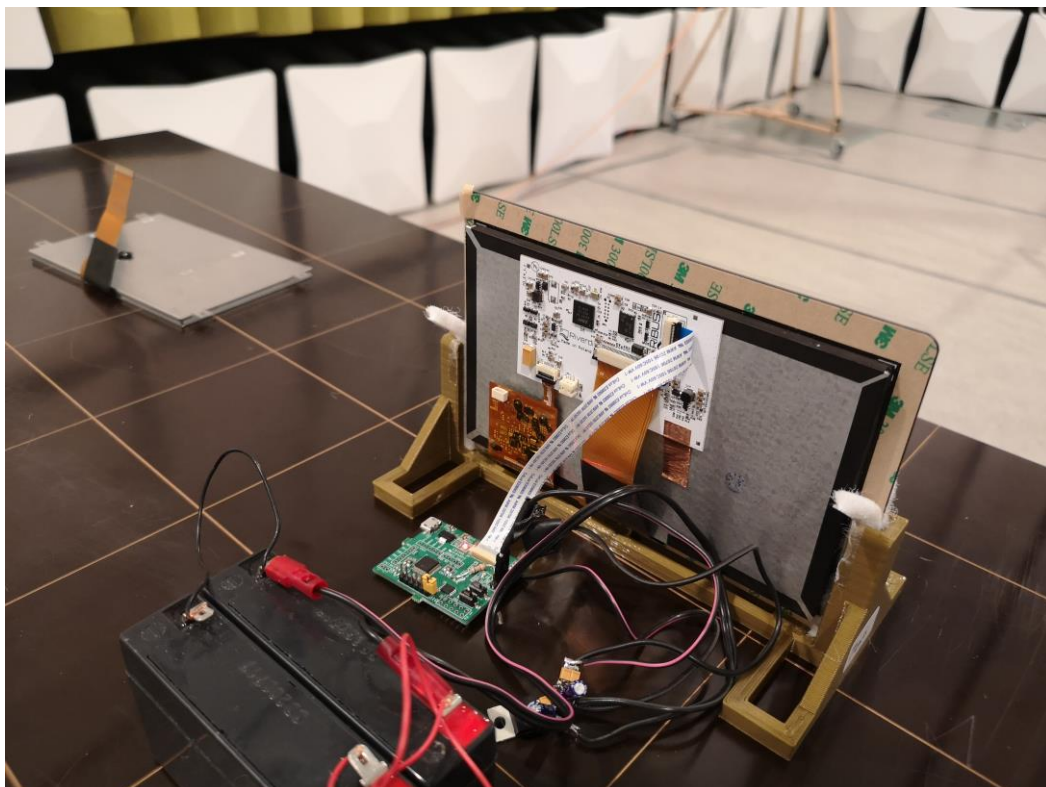
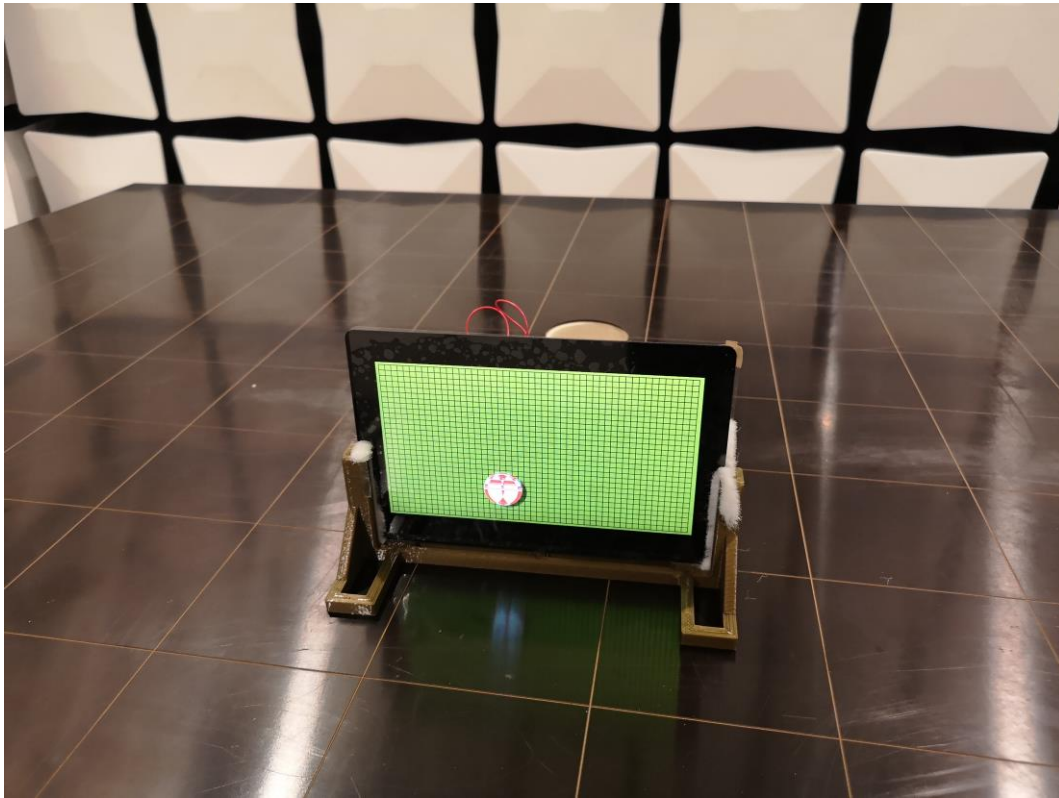




Figure 2. Radiation Emission 30-1000MHz Test Front View



## 7. Summary

The test results confirmed the low electromagnetic emissions of Riverdi HB, IPS 7.0" displays, even when displaying dynamic pictures.

Riverdi HB, IPS 7.0" displays have undergone EMI compliance self-tests and performed well at specified EMI limits.

In consequence, Riverdi HB, IPS 7.0" displays will not impact the environment due to the very low emission levels measured.

Hi, I am here to help you!  
If you have any additional  
questions, please contact  
our support via email:  
[contact@riverdi.com](mailto:contact@riverdi.com)

