

WIENER, PLEIN & BAUS CORP.

VPX340DMA7.1 MIL-STD-461F CE101 PRECOMPLIANCE TESTING

08/31/21

WIENER Engineering conducted MIL-STD-461F CE101 precompliance testing on VPX340DMA7.1. The tests were conducted with 398W output power for both 28V and 24V input voltages. This document presents the empirical data collected during test.

SUMMARY: VPX340DMA7.1 passed CE101 precompliance tests operating at 398W output power for both 28V and 24V input voltages.

NOTICE: 5 μ H LISN exception (MIL-STD-461F, A.4.3.6) used to perform tests. VPX340DMA7.1 has a maximum input line inductance of 10 μ H.

TABLE 1: OPERATING CONDITIONS:

TEST #	INPUT VOLTAGE	12V (PO1)	3.3V (PO2)	5V (PO3)
TEST 1	28V	11A (132W)	20A (66W)	40A (200W)
TEST 2	24V	11A (132W)	20A (66W)	40A (200W)

EQUIPMENT LIST:

1. **DEVICE UNDER TEST:** VPX340DMA7.1 SN: 4281017
2. **INPUT SUPPLY:** WIENER PL-512
3. **DC LOAD:** BK PRECISION MDL001
4. **LISNs:** QTY 2: TekBox TBL0550-1 5 μ H
5. **SPECTRUM ANALYZER:** Tektronix MSO4 SpectrumView
6. **CURRENT PROBE:** PEM CWTUM015
7. **GROUND PLANE:** EMI PRECOMPLIANCE TEST CART

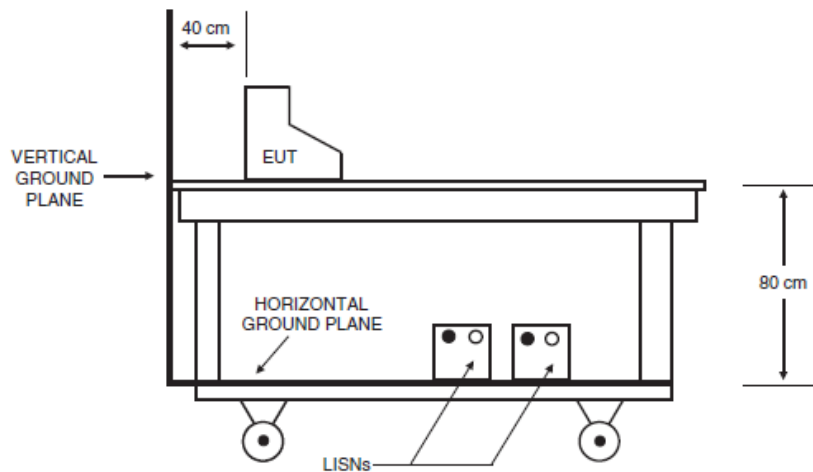


FIGURE 1: DESIGN OF EMI PRECOMPLIANCE TEST CART.

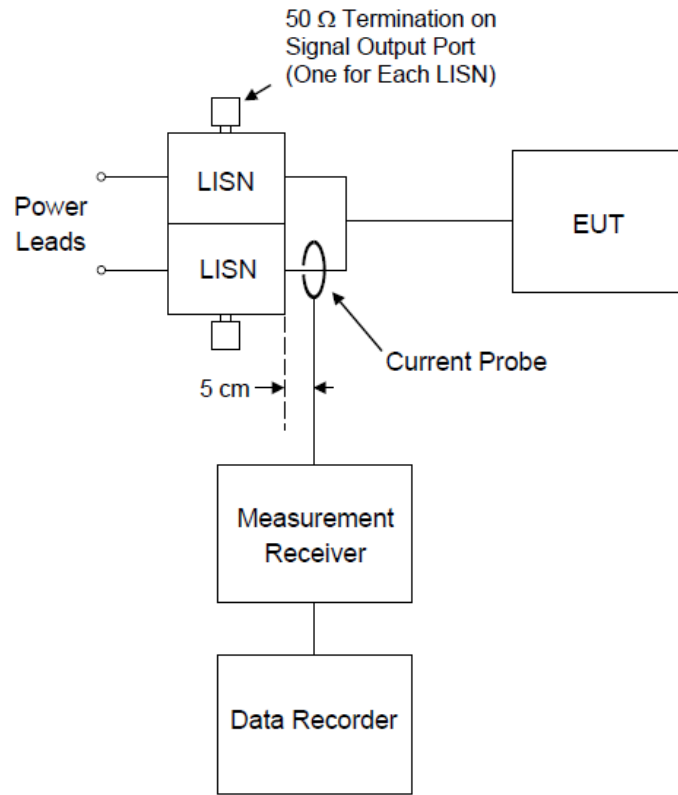


FIGURE 2: CE101 MEASUREMENT SETUP

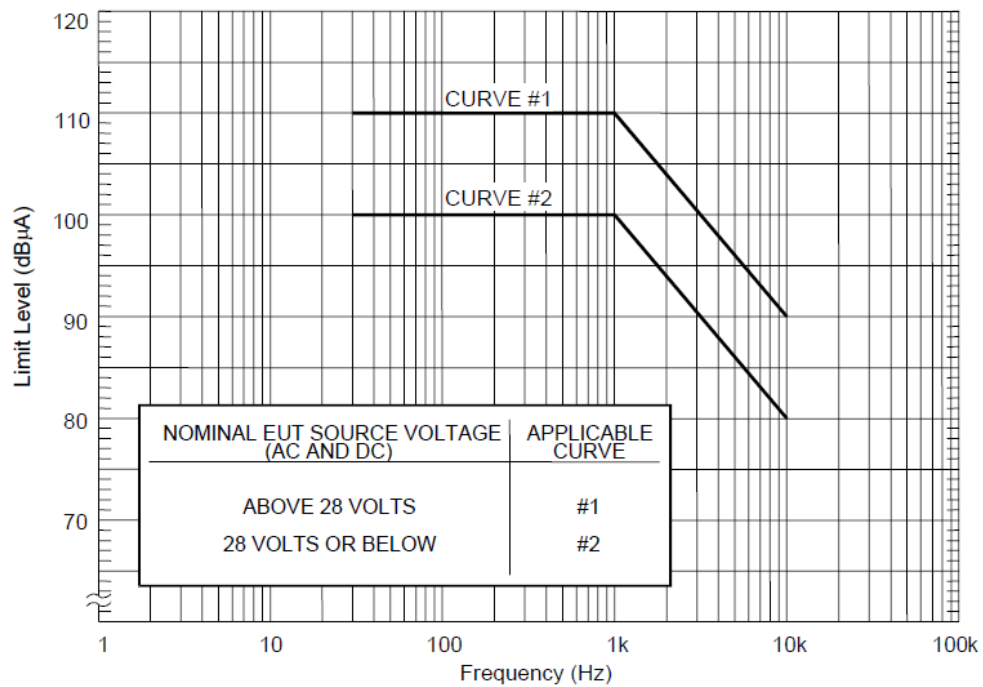


FIGURE 3: CE101 LIMIT FOR NAVY ASW AIRCRAFT AND ARMY AIRCRAFT APPLICATIONS.

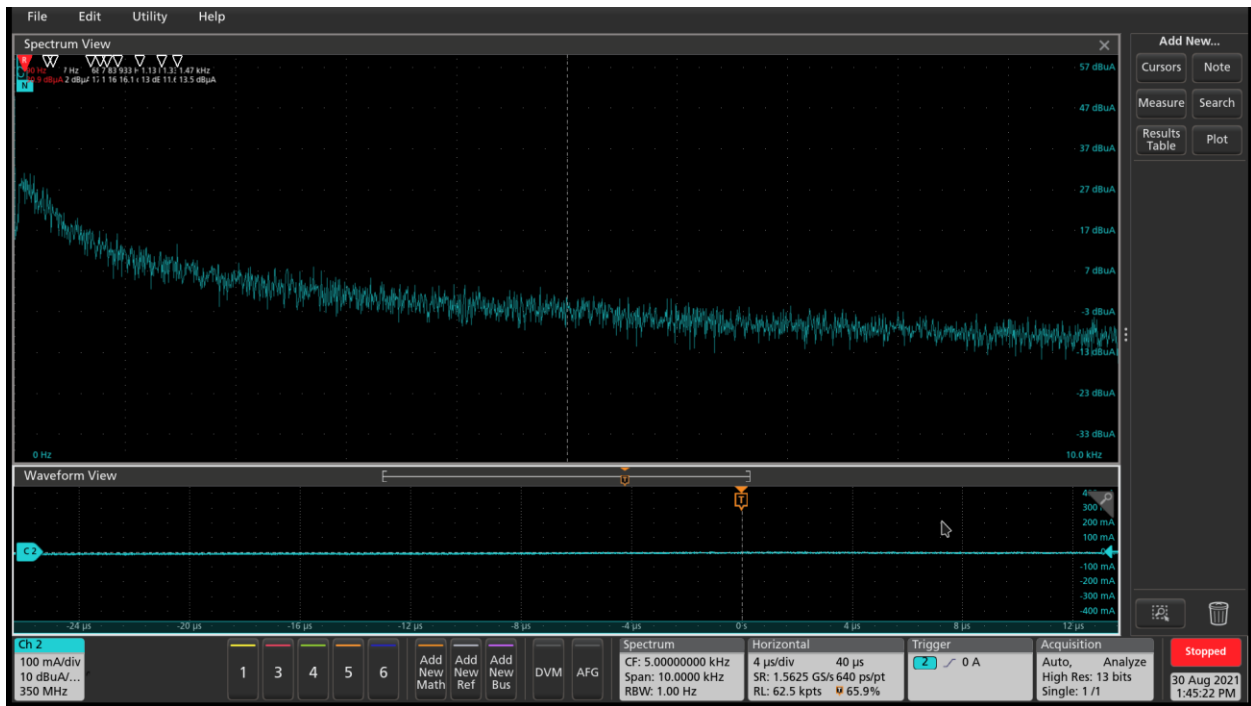


FIGURE 4: VPX340DMA7.1 CE101 PRE-COMPLIANCE NOISE FLOOR

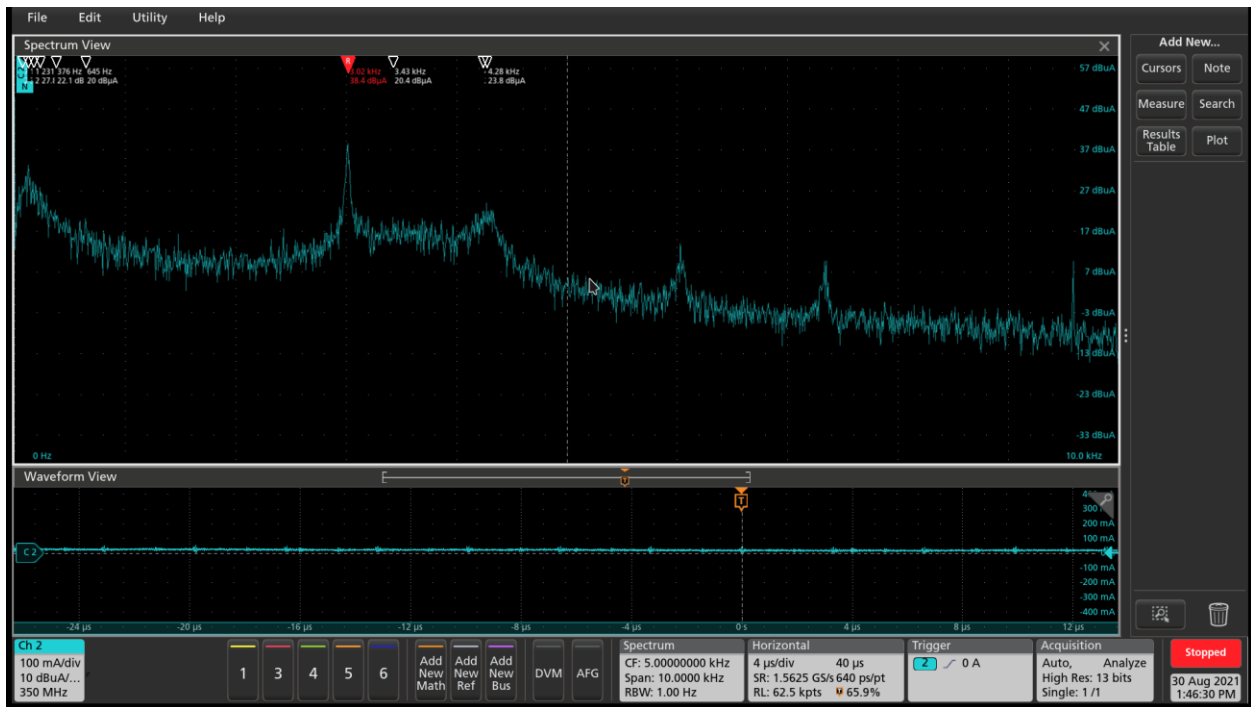


FIGURE 5: VPX340DMA7.1 CE101 PRE-COMPLIANCE 28VIN 12VOUT 11A 3.3VOUT 20A 5VOUT 40A. NO FREQUENCIES EXCEED 38.4dB μ A FROM 30Hz – 10kHz.

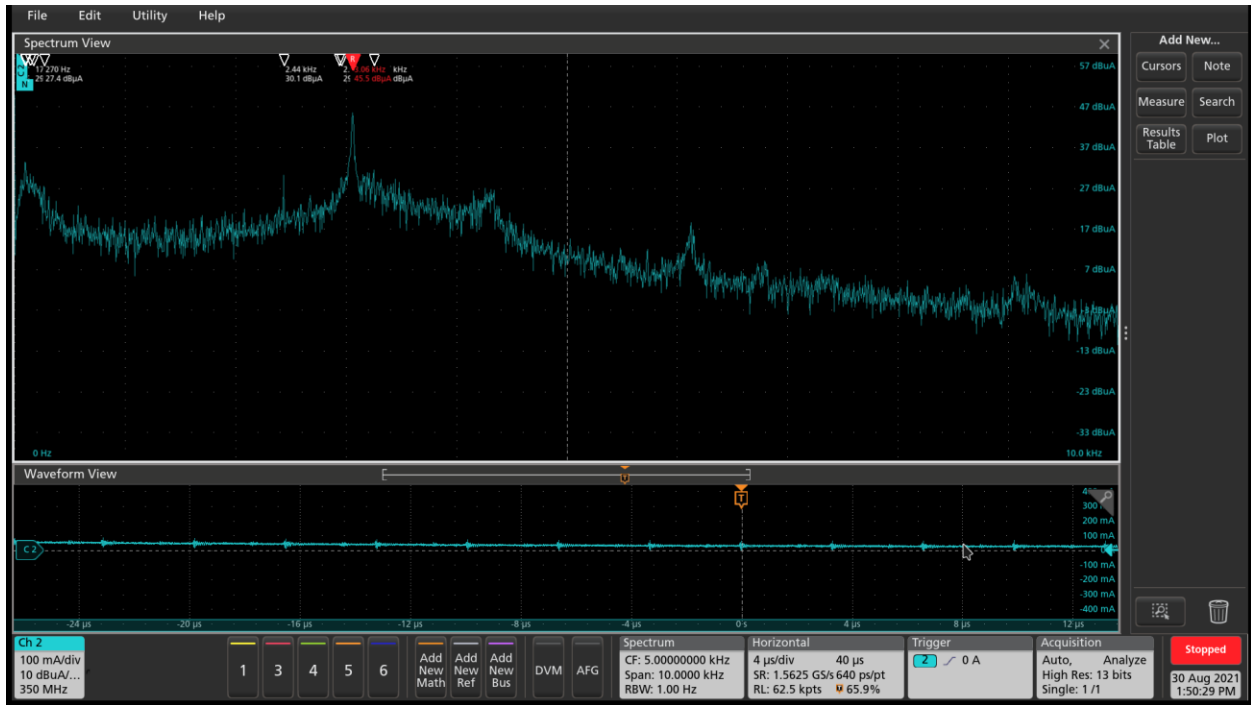


FIGURE 6: VPX340DMA7.1 CE101 PRE-COMPLIANCE 24VIN 12VOUT 11A 3.3VOUT 20A 5VOUT 40A. NO FREQUENCIES EXCEED 45.5dBμA FROM 30Hz – 10kHz.

CONCLUSION VPX340DMA7.1 passed CE101 precompliance tests operating at 398W output power for both 28V and 24V input voltages.