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TEST –Results				Order-No.: T35222-06-06HS		
Client	Siemens AG, Industrial Automation Division					
Manufacturer	Siemens AG, Sensors & Communication					
Product Description	Module for industrial WLAN applications 2.4 / 5 GHz					
Type / Model Name	WLAN n-module MPCIE-R1-ABGN-U3					
Date received	2012-05-18	Date returned	2012-06-06	Serial - No.:	#45	
		Tests are made according to FCC Part 15.407 and RSS 210				
Type of test			Limits		Test Results	
Transmission mode fall back to Cyclic Delay Diversity (CDD)			Margin (dB)	exceeded by (dB)	ok	not ok
			meet criterion			
Ch36 – MCS23 to MCS15, power reduction			n/a	n/a	X	-
Ch36 – MCS23 to MCS7, power reduction			n/a	n/a	X	-
Ch48 – MCS23 to MCS15, power reduction			n/a	n/a	X	-
Ch48 – MCS23 to MCS7, power reduction			n/a	n/a	X	-
Remarks: The test is only a performance test to verify the CDD mechanism of the EUT. Test description: The test setup was performed under the following conditions: - Three of three output chains were activated. - The transmission was set to HT20 transmission mode, with a power setting of P10. - The MCS rates being used were MCS23 (three output streams), MCS15 (two output streams) and MCS7 (one output stream). - The tested channels are: CH36 (5180 MHz), CH48 (5240 MHz). - The transmission was measured conducted on output chain one, chains two and three were terminated with 50 Ω. - Visualisation and measuring of the transmission was performed using a spectrum analyser Test procedure: - The first generated signal in each tested channel was set to MCS23 to perform three separate streams. The resulting level is the reference to compare the MCS23 with MCS15 rate and MCS23 with MCS7 rate. - Using the trace mode max hold the maximum level was recorded in trace one, the level for MCS15 was recorded in trace 2 and the level for MCS7 was recorded in trace 3. - MCS15 and MCS7 were recorded separately on the analyser's second channel to measure the back off emission level.						

This test result consists of 5 page(s). The test result only corresponds to the tested sample. It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

Date	Tested by	Checked by	Result ☒ passed ☐ not passed
2012-06-11			

Test results:

Ch36 MCS23 and MCS15



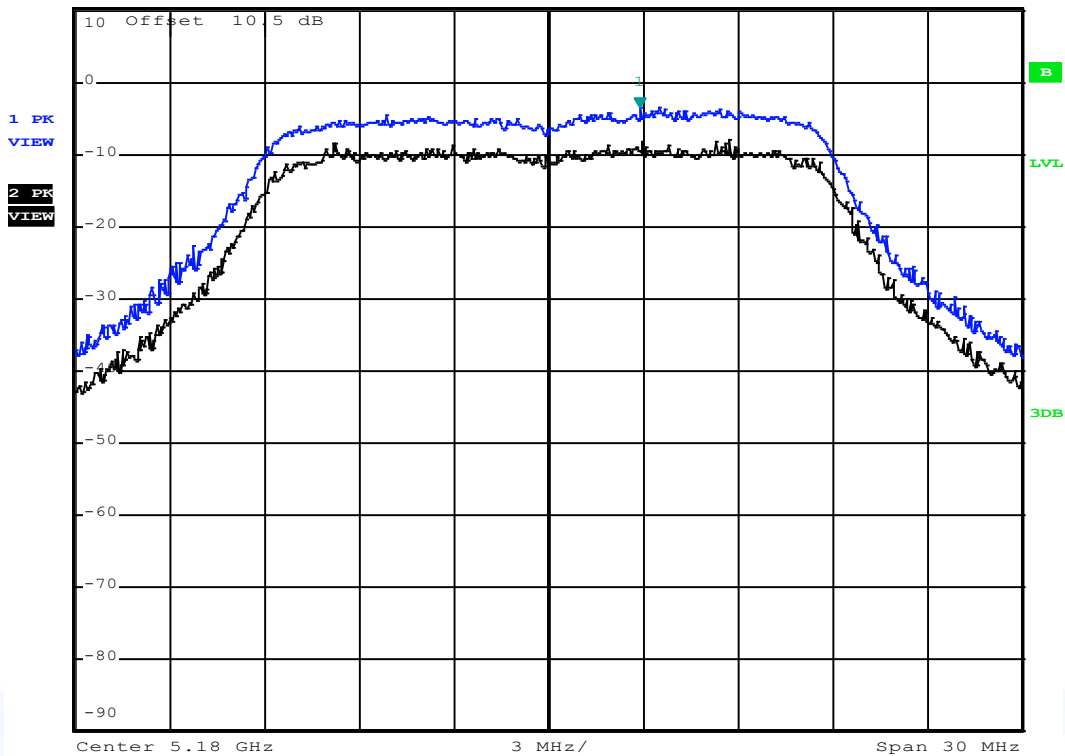
*RBW 1 MHz
*VBW 1 MHz
Marker 1 [T1]
-3.45 dBm
5.182880000 GHz

Ref 10 dBm

*Att 10 dB

SWT 20 ms

5.182880000 GHz



Ch36 MCS23 and MCS7



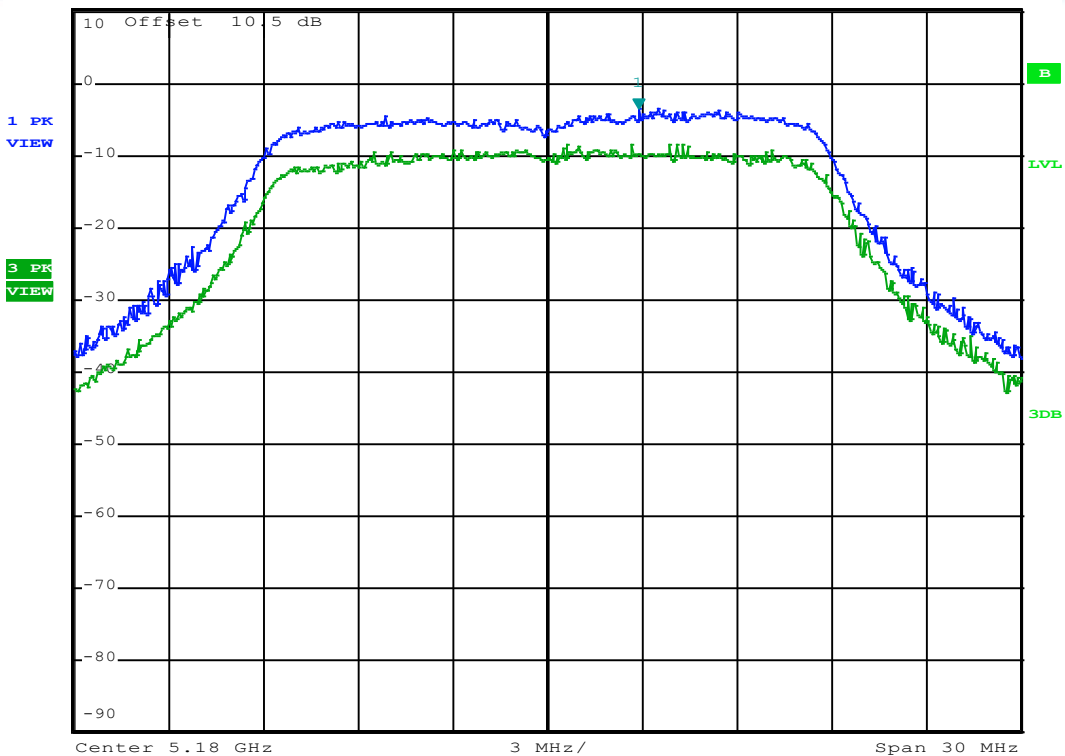
*RBW 1 MHz
*VBW 1 MHz
Marker 1 [T1]
-3.45 dBm
5.182880000 GHz

Ref 10 dBm

*Att 10 dB

SWT 20 ms

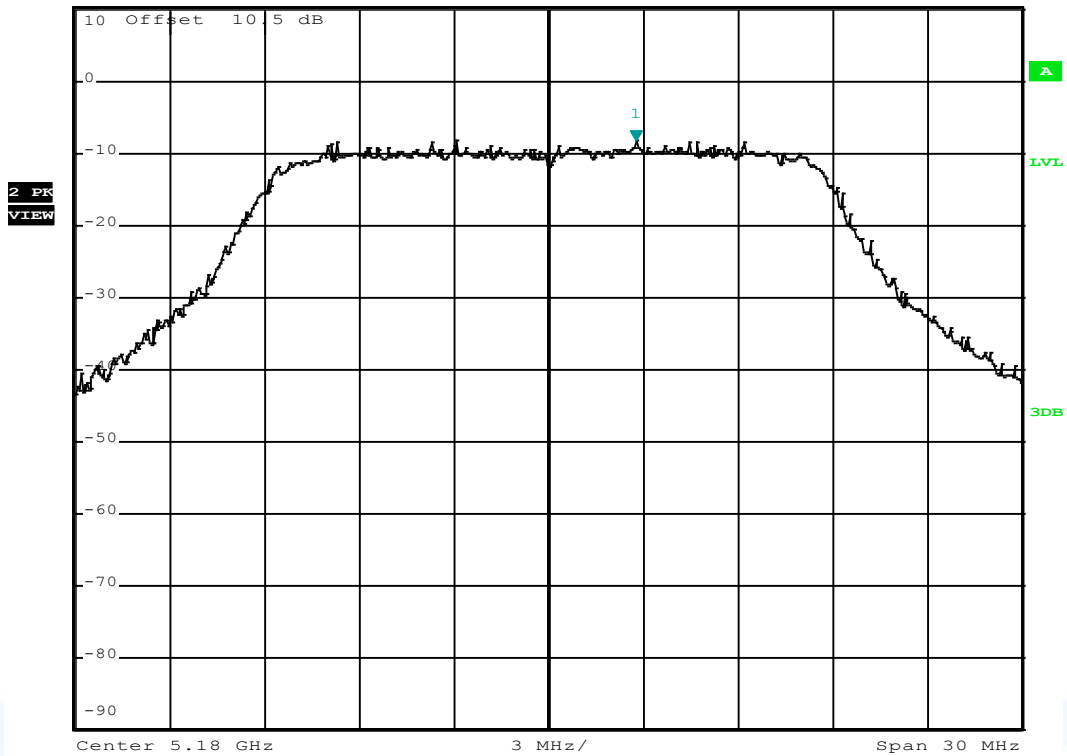
5.182880000 GHz



Ch36 MCS15



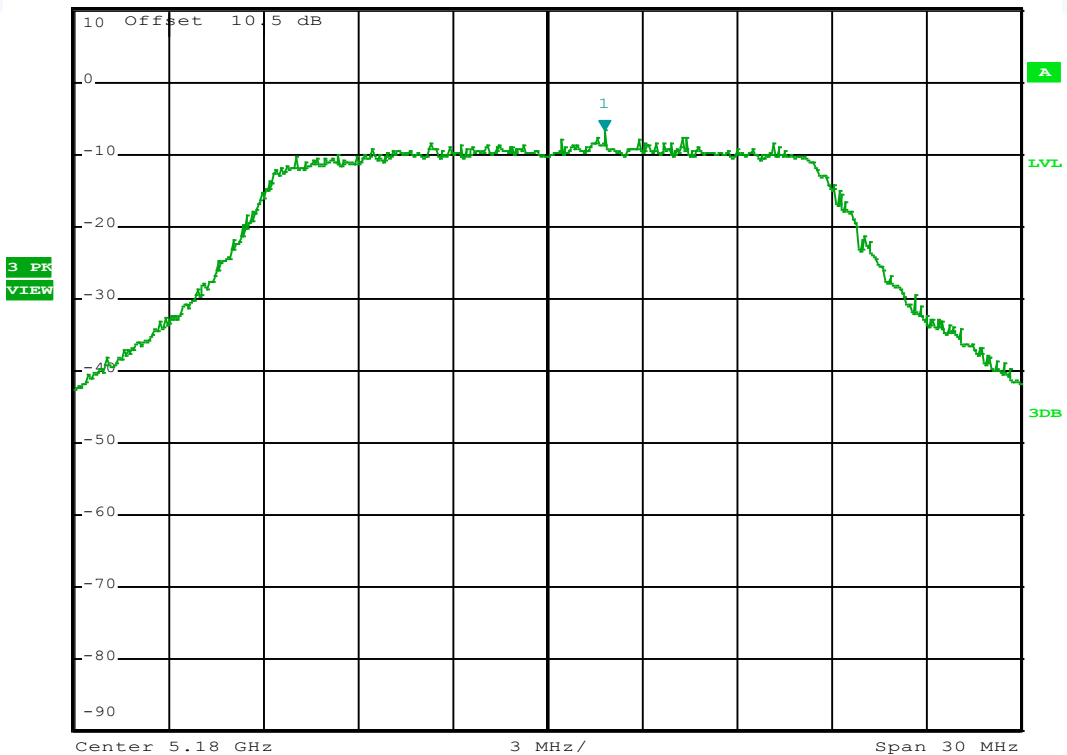
*RBW 1 MHz Marker 1 [T2]
*VBW 1 MHz -8.20 dBm
*Att 10 dB 5.182760000 GHz
Ref 10 dBm SWT 20 ms



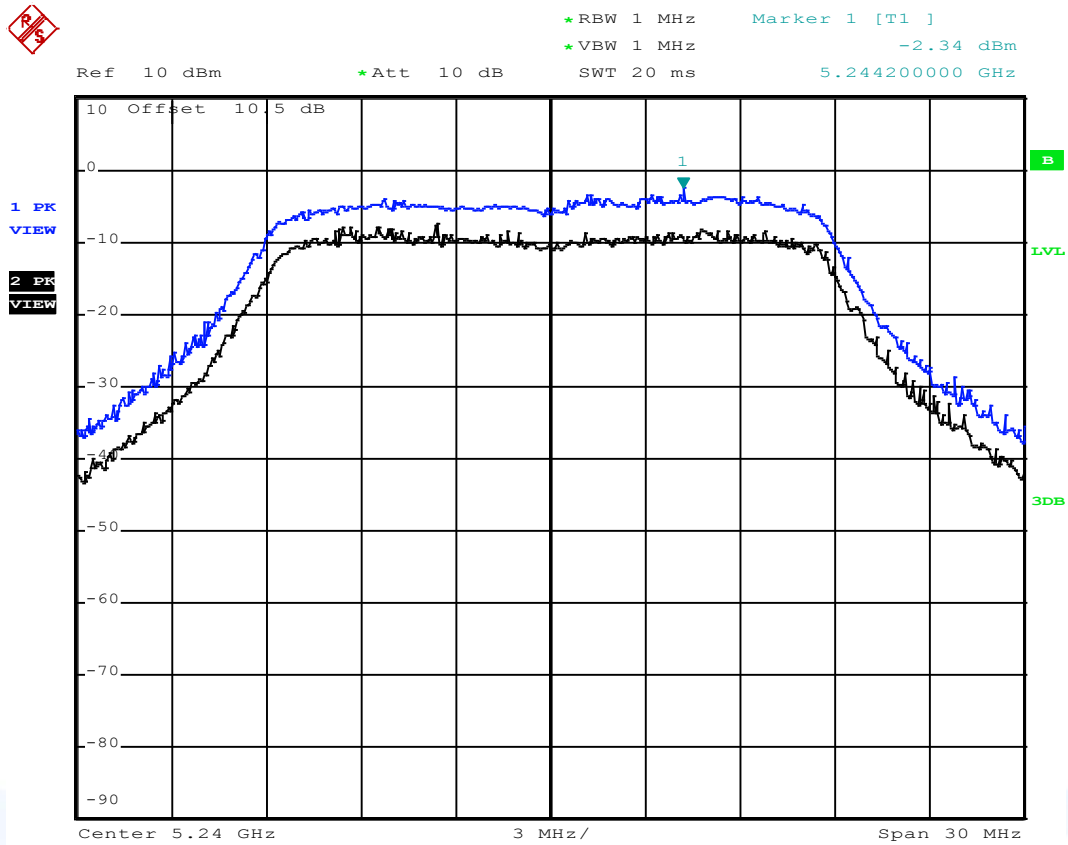
Ch36 MCS7



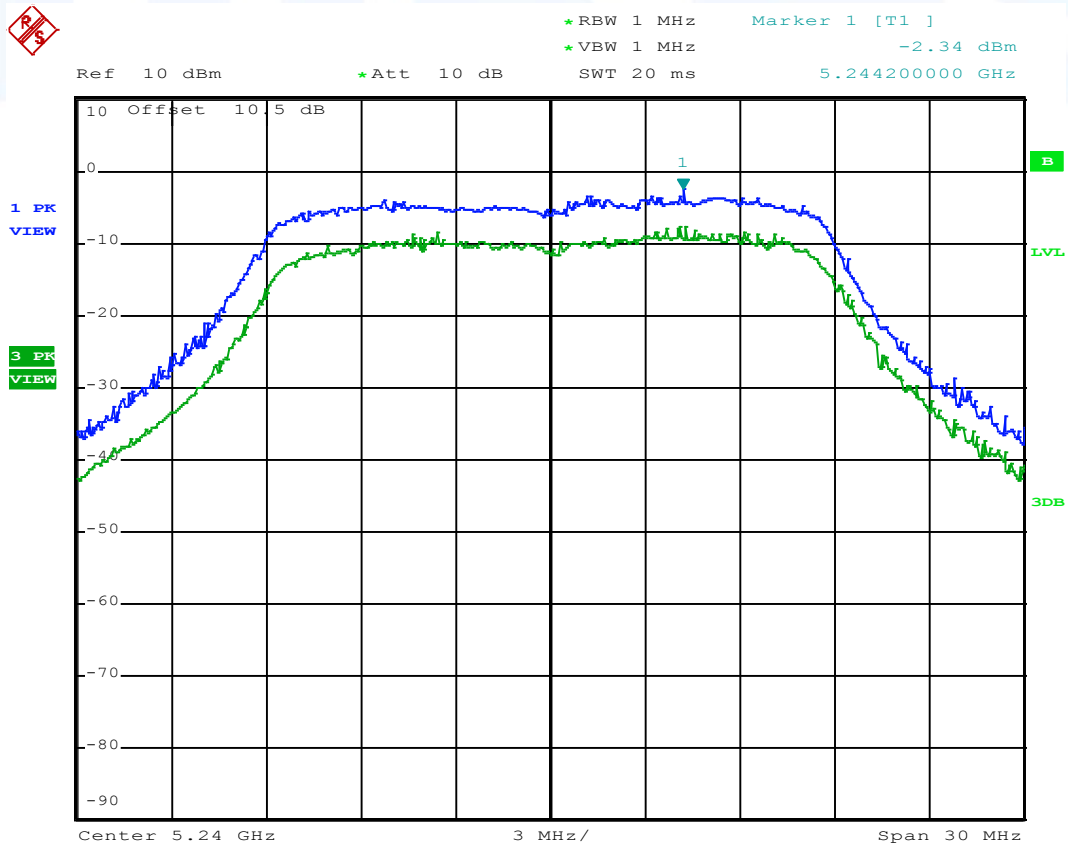
*RBW 1 MHz Marker 1 [T3]
*VBW 1 MHz -6.63 dBm
*Att 10 dB 5.181800000 GHz
Ref 10 dBm SWT 20 ms



Ch48 MCS23 and MCS15



Ch48 MCS23 and MCS7



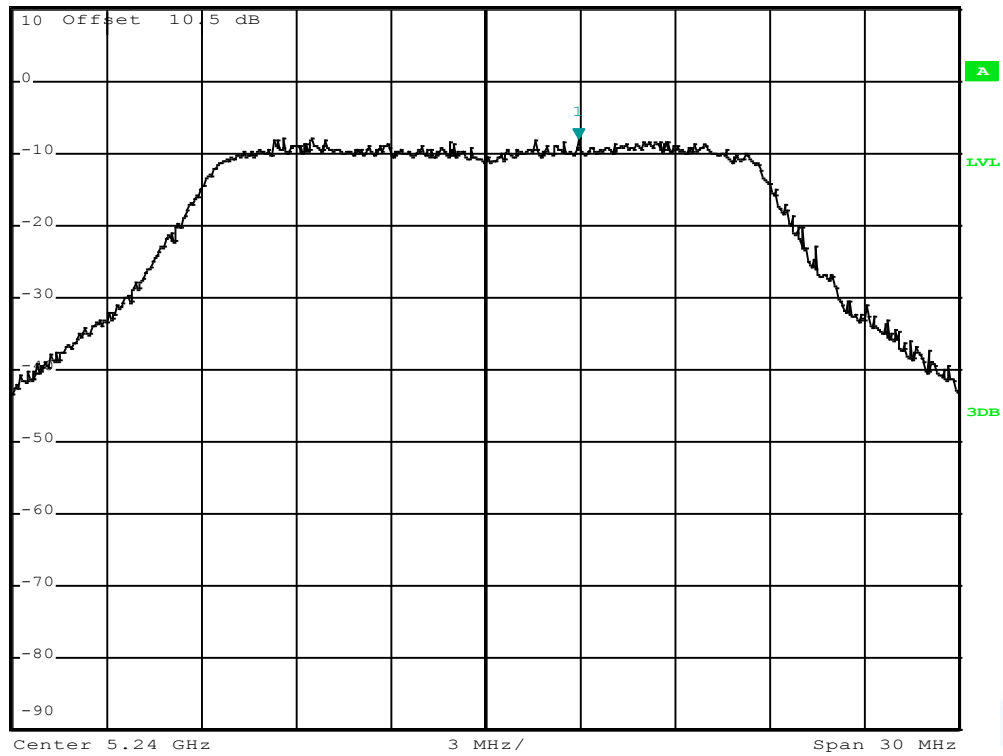
Ch48 MCS15



*RBW 1 MHz Marker 1 [T2]
*VBW 1 MHz -8.02 dBm
*Att 10 dB SWT 20 ms 5.242940000 GHz

Ref 10 dBm

2 PK
VIEW



Ch48 MCS7



*RBW 1 MHz Marker 1 [T3]
*VBW 1 MHz -7.85 dBm
*Att 10 dB SWT 20 ms 5.244140000 GHz

Ref 10 dBm

3 PK
VIEW

