

Test case number	Description	Distance from transmitter	Receiver orientation	Receiver type	Transmitter type	Transmitter power	Transmitter placement	Transmitter antenna direction	Amount of transmitters	Distance between transmitters
		[m]	{ , F-, B-, P}	{B, S}	{B1, B2, B3, B4}	[dBm]	{Ceiling, Wall}	{↓, →}	{1, 3}	{-, 10m, 15m}
1	Obtain transmitters power attenuation curve	TEST	F-	S	B1	TEST	Ceiling	↓	1	-
1,1	* 4dBm transmitter power; power density measured on discrete distances from signal source					4dBm				
1,2	* -16dBm transmitter power; power density measured on discrete distances from signal source					-16dBm				
2	Signal range per given tx power setting and rx in „pocket” orientation. Dynamic tests in a sequence: * 5 sec under the tx, * move 5 meters away (actor is an obstacle), * 5 sec on 5 meters distance	{0m, 0-5m, 5m}	P	S	B1	TEST	Ceiling	↓	1	-
2,1	* -12dBm tx power					-12dBm				
2,2	* -16dBm tx power					-16dBm				
2,3	* -20dBm tx power					-20dBm				
2,4	* -30dBm tx power					-30dBm				
3	Singal range per given tx power setting and different rx orientation. Static test: directly under the tx	0m	TEST	S	B1	TEST	Ceiling	↓	1	-
3,1	* -12dBm tx power; orientation: -		B-			-12dBm				
3,2	* -12dBm tx power; orientation:					-12dBm				
3,3	* -12dBm tx power; orientation: P		P			-12dBm				
3,4	* -16dBm tx power; orientation: -		B-			-16dBm				
3,5	* -16dBm tx power; orientation:					-16dBm				
3,6	* -16dBm tx power; orientation: P		P			-16dBm				
3,7	* -20dBm tx power; orientation: -		B-			-20dBm				
3,8	* -20dBm tx power; orientation:					-20dBm				
3,9	* -20dBm tx power; orientation: P		P			-20dBm				
3,10	* -30dBm tx power; orientation: -		B-			-30dBm				
3,11	* -30dBm tx power; orientation:					-30dBm				
3,12	* -30dBm tx power; orientation: P		P			-30dBm				
4	Line of sight (LOS) test. Tests performed with no LOS condition. Rest parameters same as in test 1,1. Test is designed to be compared with results of analogue test no. 1,1	TEST	F-	S	B1	4dBm	Ceiling	↓	1	-
4,1	* With LOS (source not shadowed, same as 1.1)									
4,2	* Without LOS (source not visible due to corridor shape)									
5	Impact of actor position; obtain attenuation curve in case where an actor is an obstacle between transmitter and receiver	TEST	TEST	S	B1	4dBm	Ceiling	↓	1	-
5,1	* 4dBm transmitter power; power density measured on discrete distances from signal source		F-							
5,2	* 4dBm transmitter power; power density measured on discrete distances from signal source; actor in an obstacle		B-							
6	Obtain tx signal attenuation curve per different tx antenna directions for tx mounted on ceiling	{0m, 1m, 2m, 3m, 4m, 6m, 8m, 10m, 12.5m, 15m, 20m, 25m, 35m}	F-	S	B1	-16dBm	Ceiling	TEST	1	-
6,1	↓ direction							↓		
6,2	→ direction							→		
7	Obtain tx signal attenuation curve per different tx antenna directions for tx mounted on wall	{0m, 1m, 2m, 3m, 4m, 6m, 8m, 10m, 12.5m, 15m, 20m, 25m, 35m}	F-	S	B1	-16dBm	Wall	TEST	1	
7,1	↓ direction							↓		
7,2	→ direction							→		
8	Obtain tx signal attenuation curve for different transmitters microcontrollers and hardware	{0m, 1m, 2m, 3m, 4m, 6m, 8m, 10m, 12.5m, 15m, 20m, 25m, 35m}	F-	S	TEST	-16dBm	Wall	↓	1	-
8,1	* B1				B1					