

TEST No.10	Title "RF Exposure Evaluation"	47CFR Part 15 Ref. Section 15.247 (i)
TEST SET-UP & REQUIREMENTS	Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this Chapter.	
	EUT classification (fixed, mobile or portable devices)	Fixed, mobile or portable
	LIMITS	See table below

Limit for maximum permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Average Time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3÷3.0	614	1.63	(100)*	6
3.0÷30	1842/f	4.89/f	(900/f ²)*	6
30÷300	61.4	0.163	1.0	6
300÷1500	--	--	f/300	6
1500÷100,000	--	--	5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3÷3.0	614	1.63	(100)*	30
3.0÷30	824/f	2.19/f	(180/f ²)*	30
30÷300	27.5	0.073	0.2	30
300÷1500	--	--	f/1500	30
1500÷100,000	--	--	1.0	30

F = Frequency in MHz *Plane-wave equivalent power density

The distance from the device's transmitting antenna where the exposure level reaches the maximum permitted limit is calculated using the general equation:

$$S = P \cdot G / 4\pi R^2$$

Where:

S = Power Density (mW/cm²)

P = Conducted power (mW)

G = Linear power gain relative to isotropic radiator (numeric gain)

R = Distance (cm)

**RF Exposure evaluation Distance:
SPZB32W1A1.1**

Channel	Frequency	Output power to antenna	Power density @ 20 cm	Distance where the exposure level reaches the limit	Limits
(No.)	(MHz)	(dBm)	(mW/cm ²)	(cm)	(mW/cm ²)
11	2405,00	10,25	0,002107	0,918	1
20	2450,00	11,05	0,002535	1,007	1
26	2480,00	11,68	0,002929	1,082	1

SPZB32W1C1.1

Channel	Frequency	Output power to antenna	Power density @ 20 cm	Distance where the exposure level reaches the limit	Limits
(No.)	(MHz)	(dBm)	(mW/cm ²)	(cm)	(mW/cm ²)
11	2405,00	19,38	0,017252	2,627	1
20	2450,00	19,67	0,018442	2,716	1
26	2480,00	19,98	0,019807	2,815	1

Test Result:

The EUT operates at low power level so it does not exceed the Commission's RF exposure guidelines limits; furthermore, Spread spectrum transmitters operate according to the Section 15.247 are categorically excluded from routine environmental evaluation.
RF exposure limit warning or SAR test are not required.