

# **Annex no. 11**

# **Periodic Operation Characteristics**

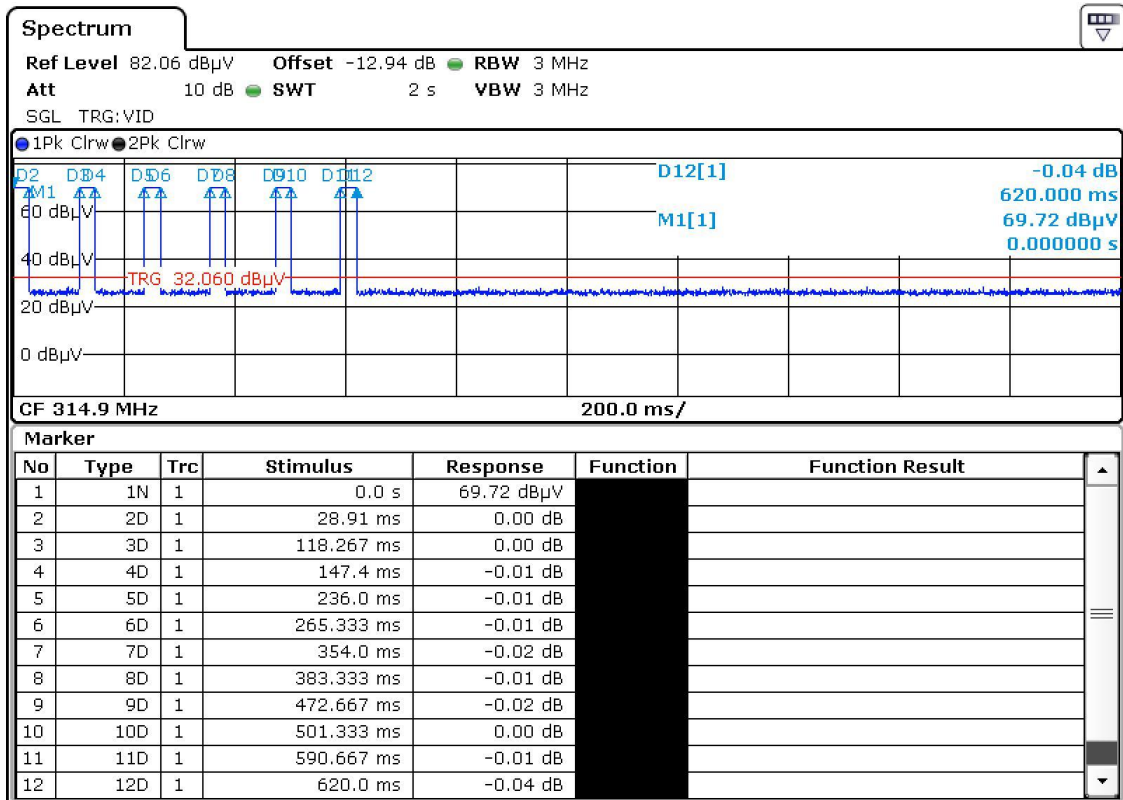
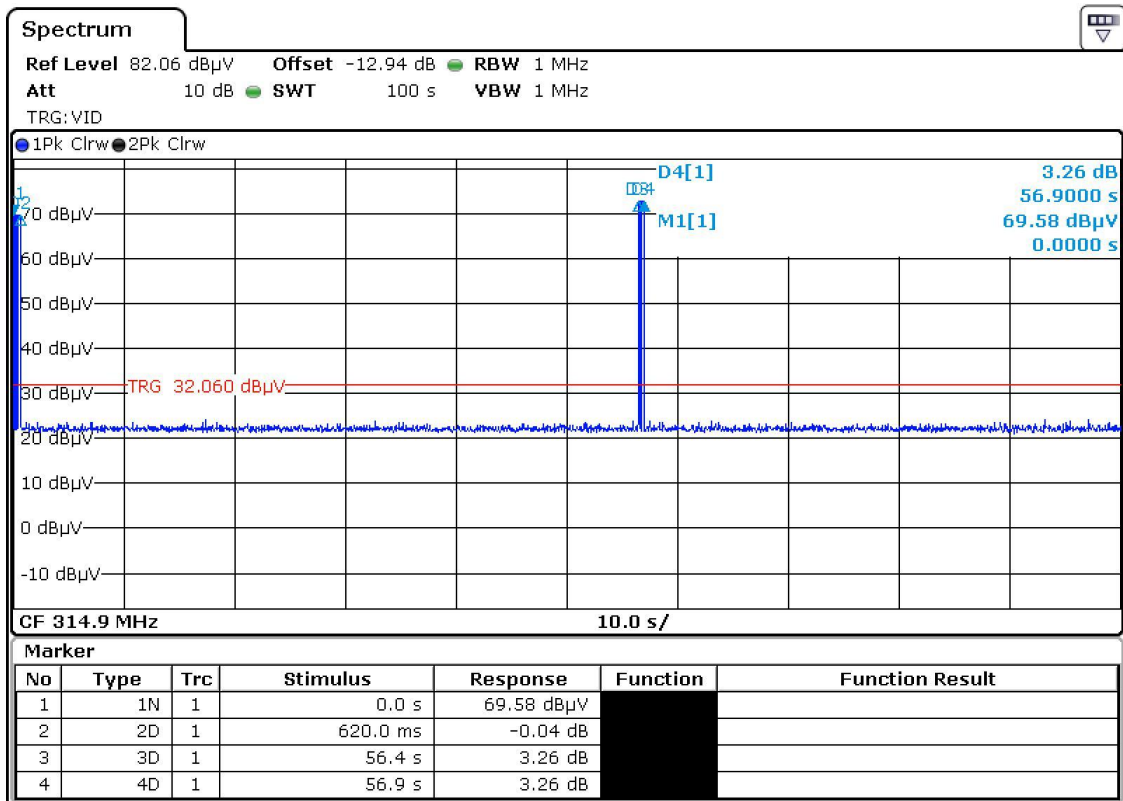
15.231 (e) Intentional radiators may operate at a periodic rate exceeding that specified in paragraph (a) and may be employed for any type of operation, including operation prohibited in paragraph (a), provided the intentional radiator complies with the provisions of paragraphs (b) through (d) of this Section, except the field strength table in paragraph (b) is replaced by the following:

Fundamental Frequency (MHz)	Field Strength of Fundamental (microvolts/meter)	Field Strength of Spurious Emission (microvolts/meter)
40.66 - 40.70	1,000	100
70 - 130	500	50
130 - 174	500 to 1,500 **	50 to 150 **
174 - 260	1,500	150
260 - 470	1,500 to 5,000 **	150 to 500 **
Above 470	5,000	500

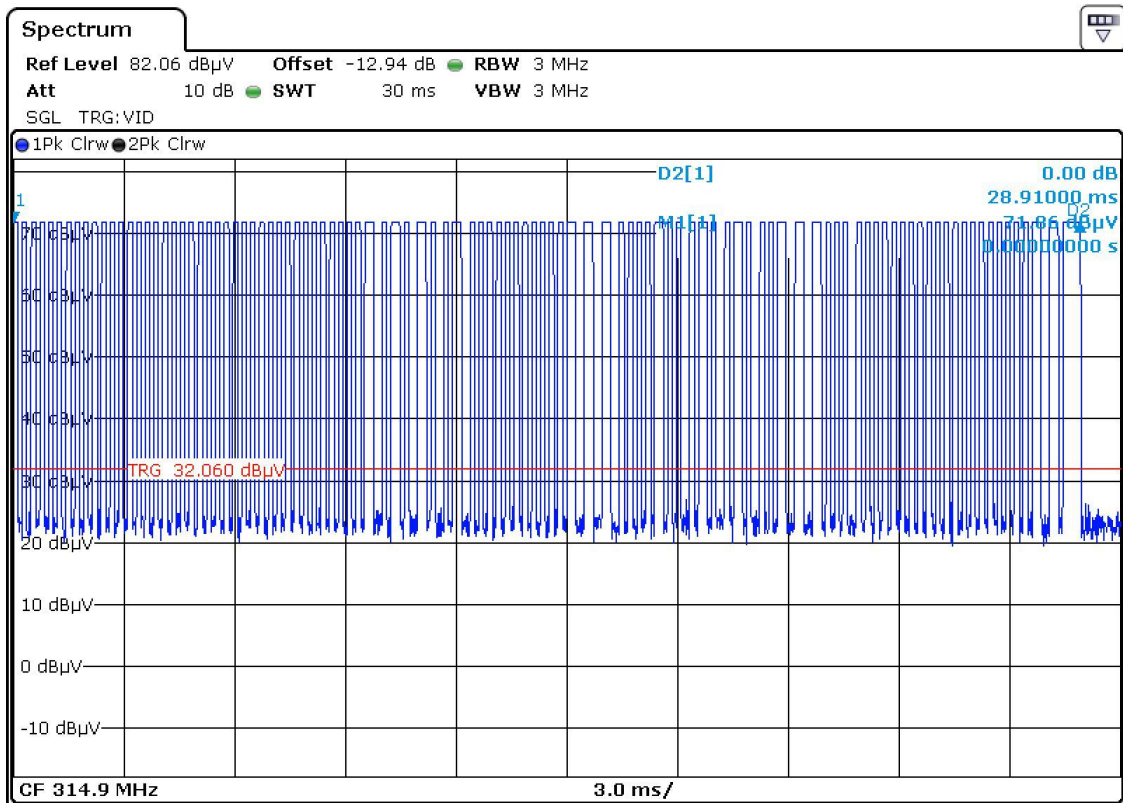
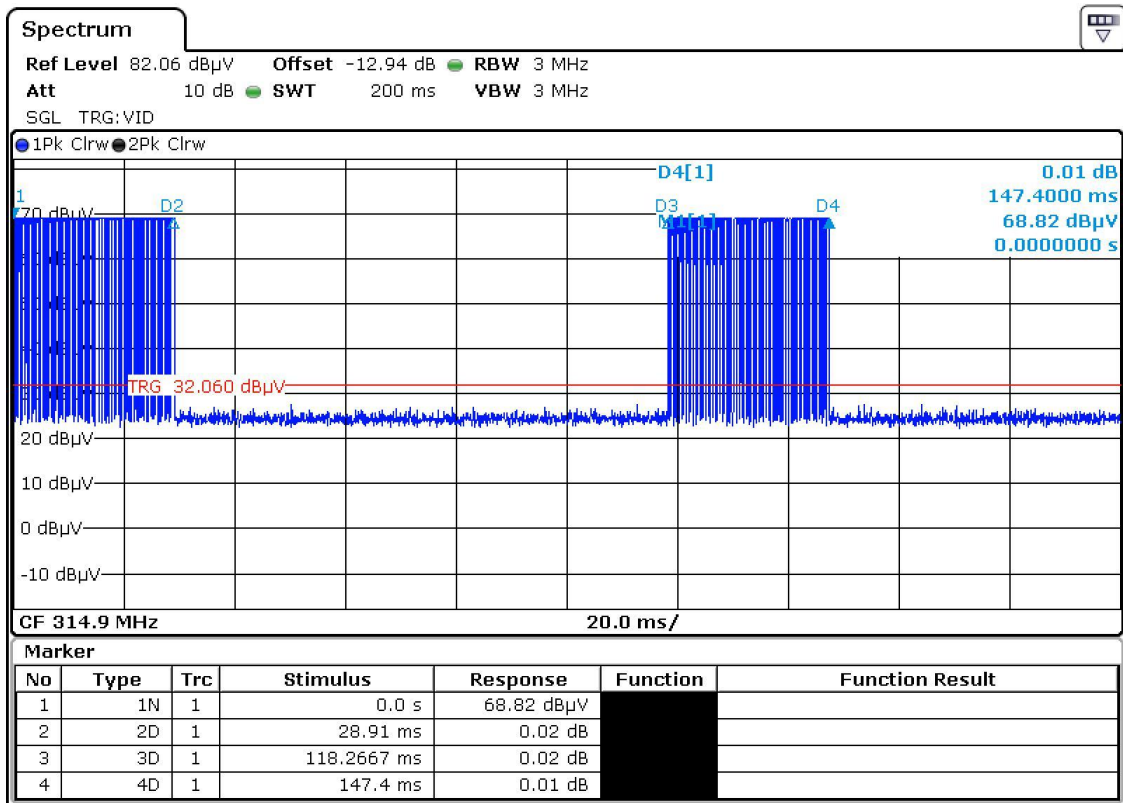
\*\* linear interpolations

[Where F is the frequency in MHz, the formulas for calculating the maximum permitted fundamental field strengths are as follows: for the band 130-174 MHz,  $\mu\text{V}/\text{m}$  at 3 meters =  $22.72727(F) - 2454.545$ ; for the band 260-470 MHz,  $\mu\text{V}/\text{m}$  at 3 meters =  $16.6667(F) - 2833.3333$ . The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level.]

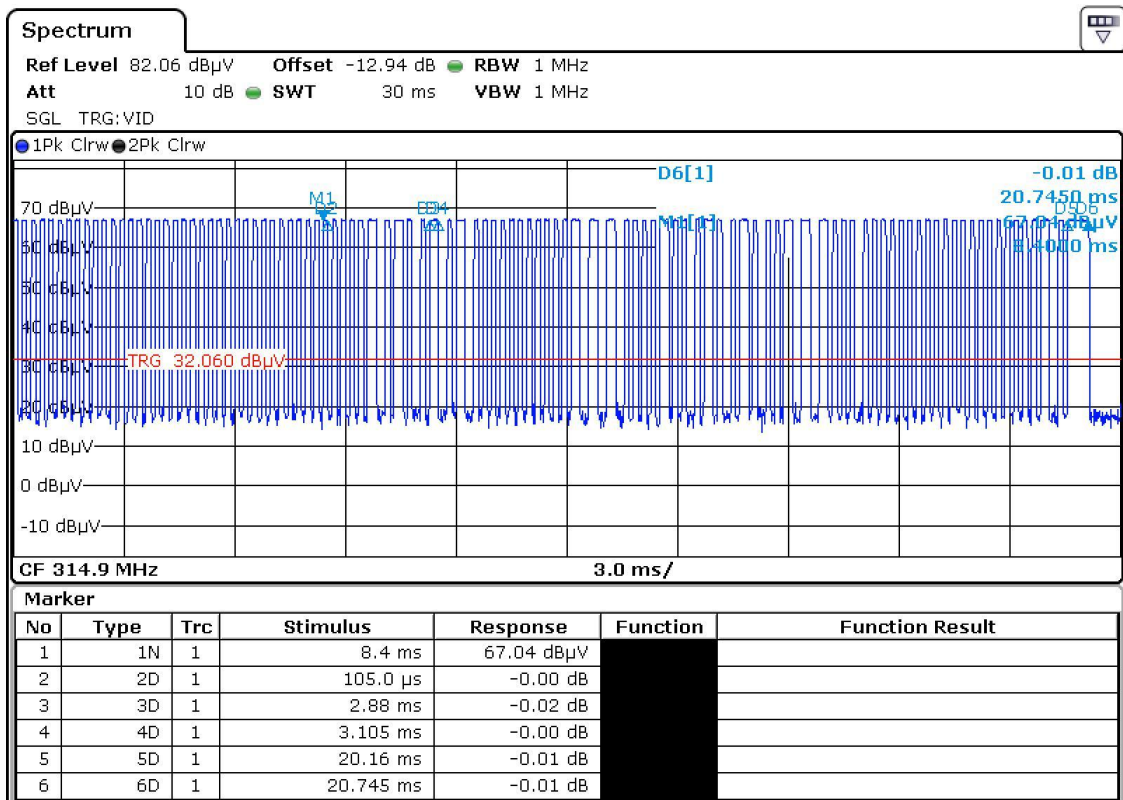
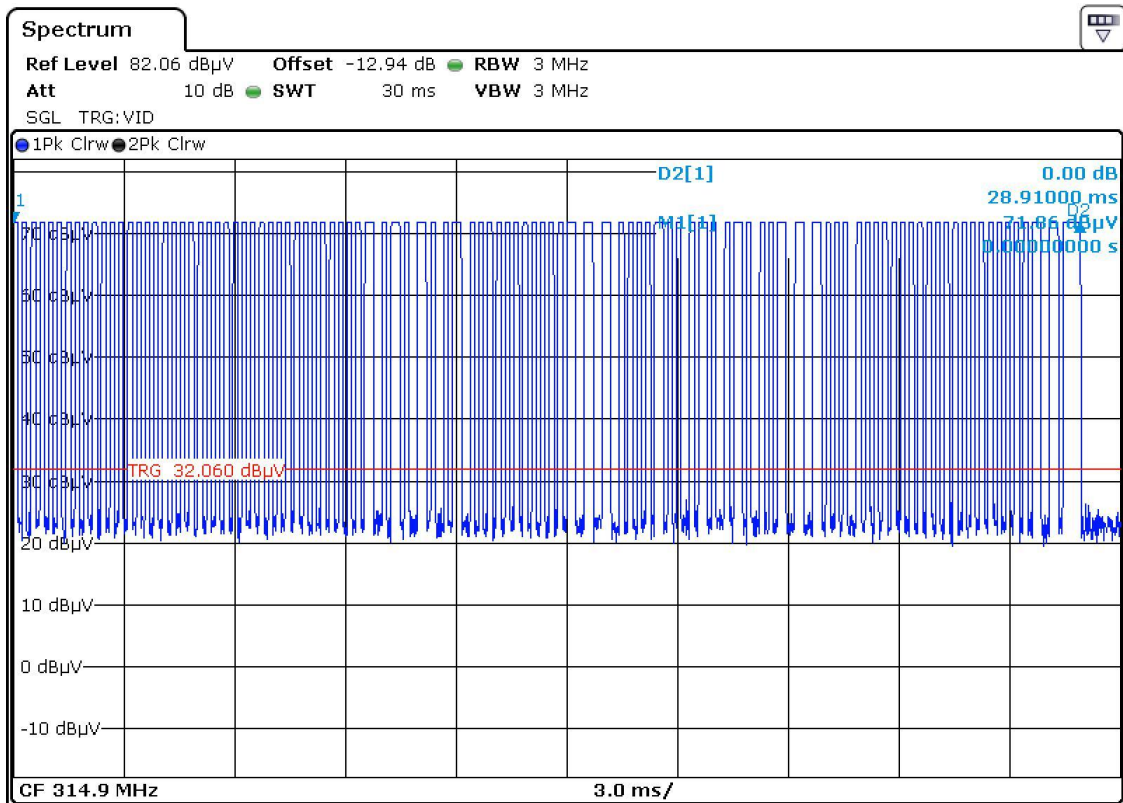
In addition, devices operated under the provisions of this paragraph shall be provided with a means for automatically limiting operation so that the duration of each transmission shall not be greater than one second and the silent period between transmissions shall be at least 30 times the duration of the transmission but in no case less than 10 seconds.



The device sends periodically data packages of 6 single pulse trains in a 56.9 second time slot



**One single pulse train will be 28.91 ms long (worst case)**



Each single pulse train consists:

90 pulses a' 105 µs

14 pulses a' 225 µs

1 pulse a' 585 µs

Maximum measured transmitting duration in every 100ms period:

90 pulses a' 105  $\mu$ s = 9.45 ms

+ 14 pulses a' 225  $\mu$ s = 3.15 ms

+ 1 pulse a' 585  $\mu$ s = 0.585 ms

**= 13.185 ms**

Averaging factor =  $20 \cdot \log(13.185/100) = -17.6$  dB

**The measured worst case duration for a single burst transmission in any 100ms time window is:  
13.185 ms**

**The calculated worst case duration for a single burst transmission in any 100ms time window is:  
19.93 ms (see Annex no. 8 – Operational Description)**

**Maximum transmitting duration in every 100ms period: 19.93 ms**

**Averaging factor =  $20 \cdot \log(19.93/100) = -14.0$  dB**