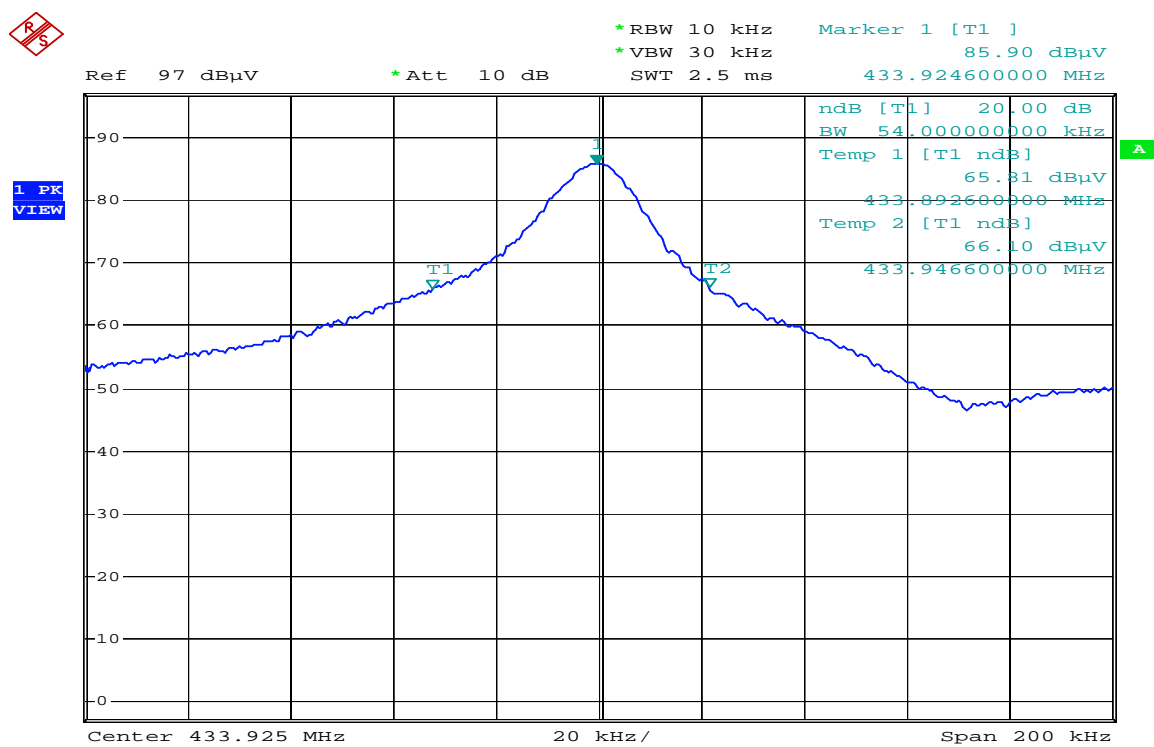


After verify each pulse trains the worst case are 20dB bandwidth at 54kHz and the average factor at -10.08dB.

### 1. 20dB Bandwidth

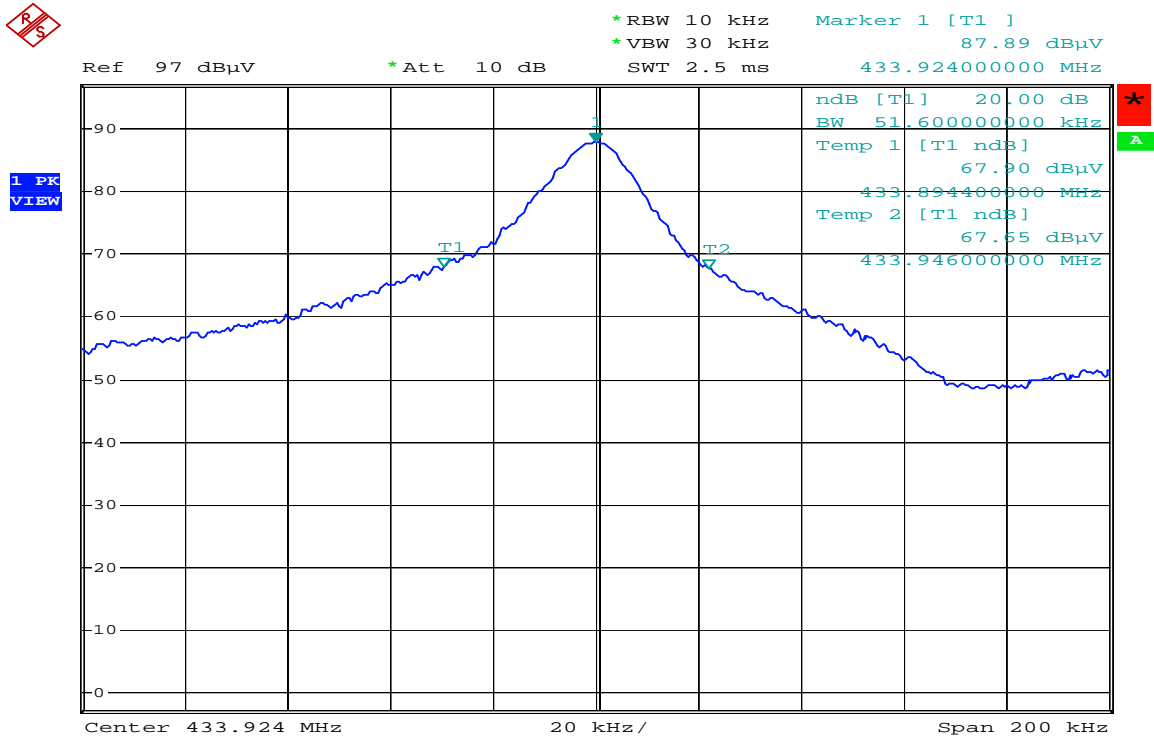
Pulse Train	Frequency (MHz)	20dB Bandwidth (kHz)
1	433.92	54.0
2	433.92	51.6
3	433.92	52.8
4	433.92	49.6
5	433.92	50.8
6	433.92	50.0
7	433.92	52.8

#### Pulse Train 1:



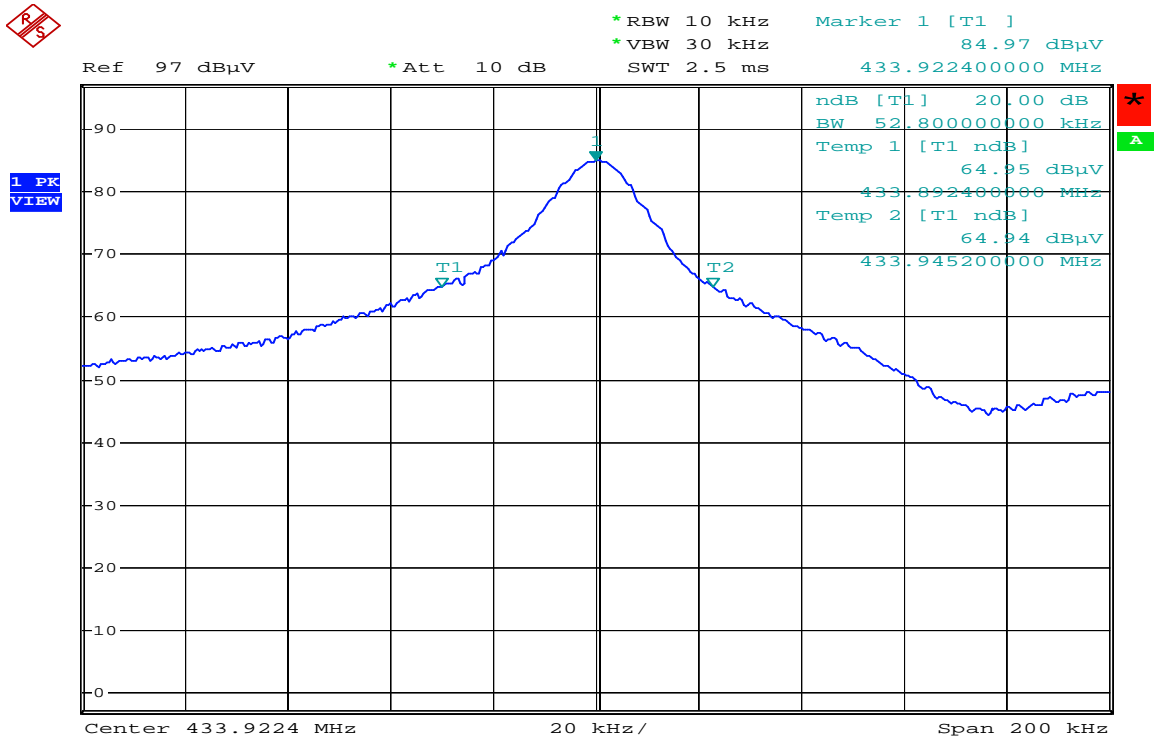
Comment: 20dB Bandwidth  
 Date: 24.AUG.2009 15:09:27

### Pulse Train 2:



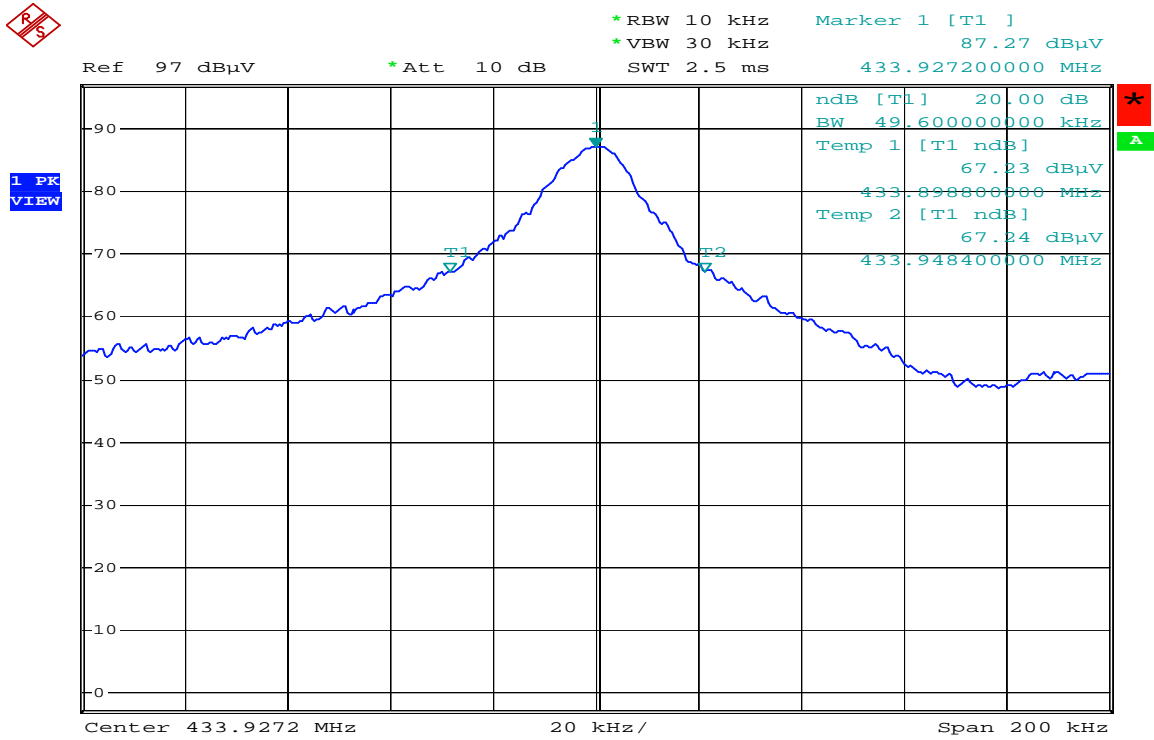
Comment: 20dB Bandwidth-2  
 Date: 28.AUG.2009 13:05:16

### Pulse Train 3:



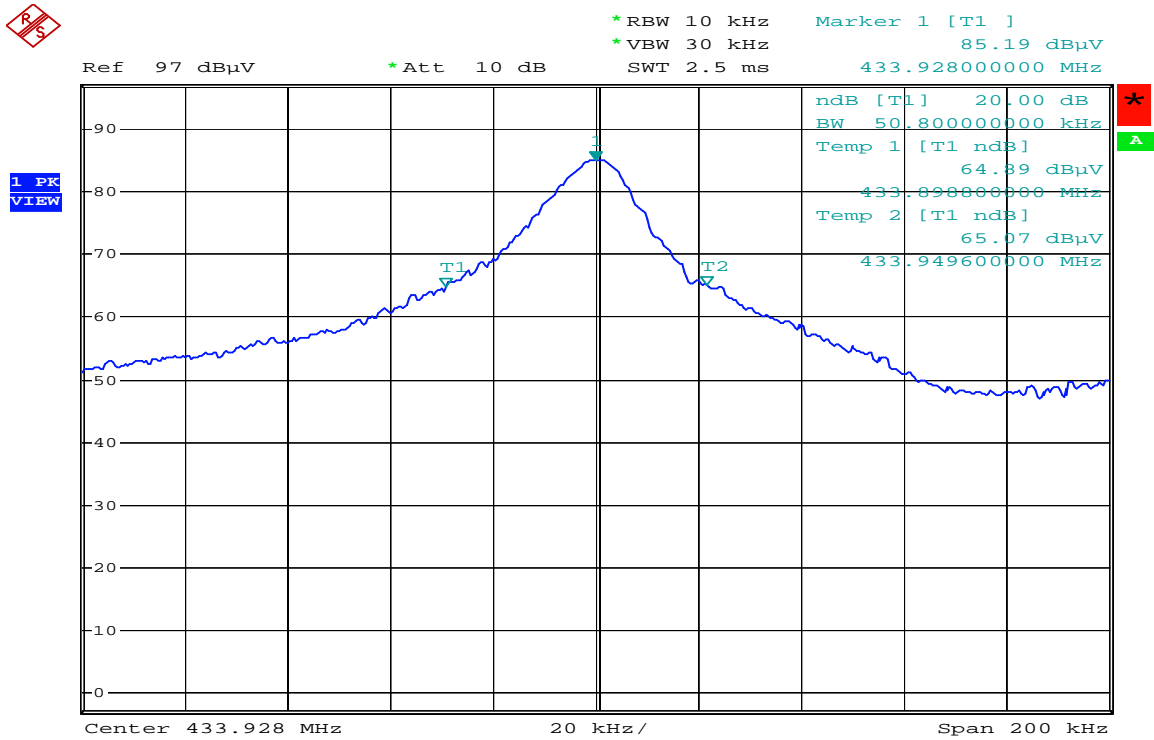
Comment: 20dB Bandwidth-3  
 Date: 28.AUG.2009 13:06:51

### Pulse Train 4:



Comment: 20dB Bandwidth-4  
 Date: 28.AUG.2009 13:10:15

### Pulse Train 5:



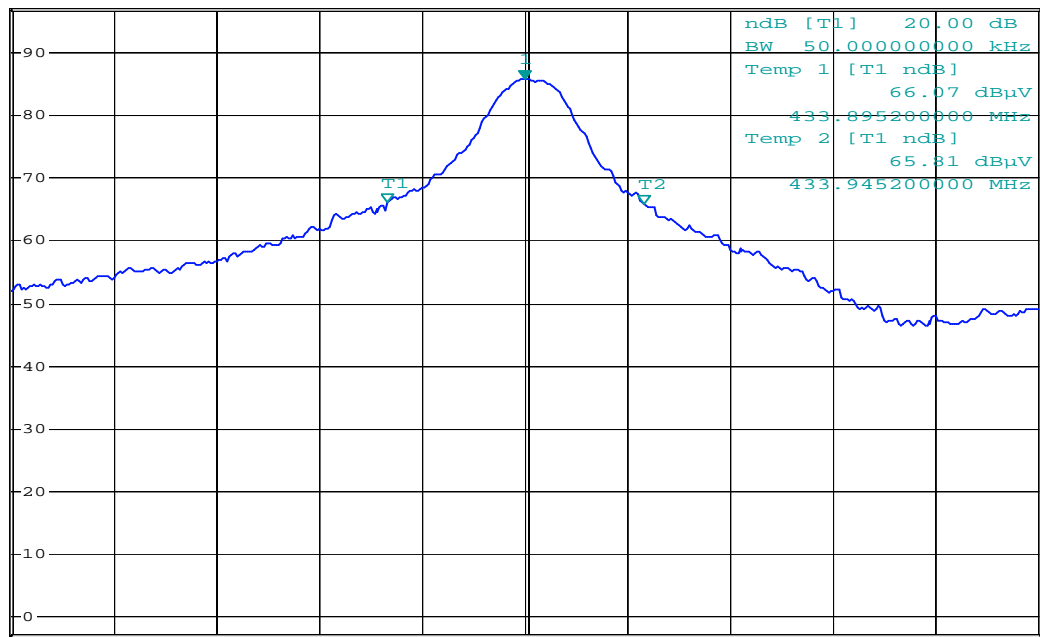
Comment: 20dB Bandwidth-5  
 Date: 28.AUG.2009 13:14:53

### Pulse Train 6:



\*RBW 10 kHz      Marker 1 [T1]      85.80 dBμV  
 \*VBW 30 kHz  
 Ref 97 dBμV      \*Att 10 dB      SWT 2.5 ms      433.922000000 MHz

1 PK VIEW



Center 433.922 MHz      20 kHz/      Span 200 kHz

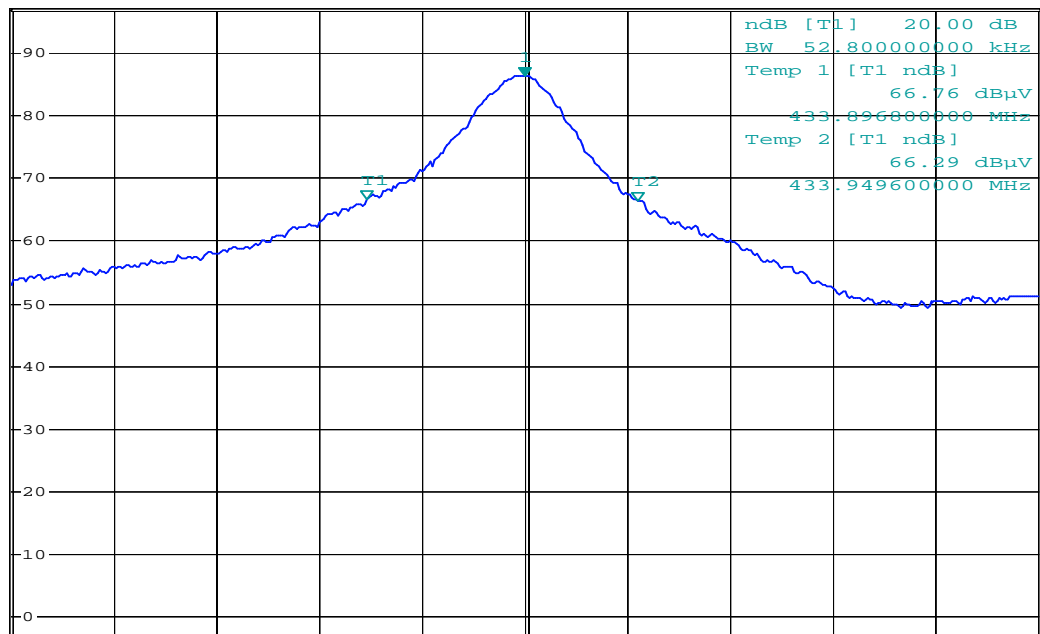
Comment: 20dB Bandwidth-6  
 Date: 28.AUG.2009 13:19:54

### Pulse Train 7:



\*RBW 10 kHz      Marker 1 [T1]      86.45 dBμV  
 \*VBW 30 kHz  
 Ref 97 dBμV      \*Att 10 dB      SWT 2.5 ms      433.927600000 MHz

1 PK VIEW



Center 433.9276 MHz      20 kHz/      Span 200 kHz

Comment: 20dB Bandwidth-7  
 Date: 28.AUG.2009 13:21:01

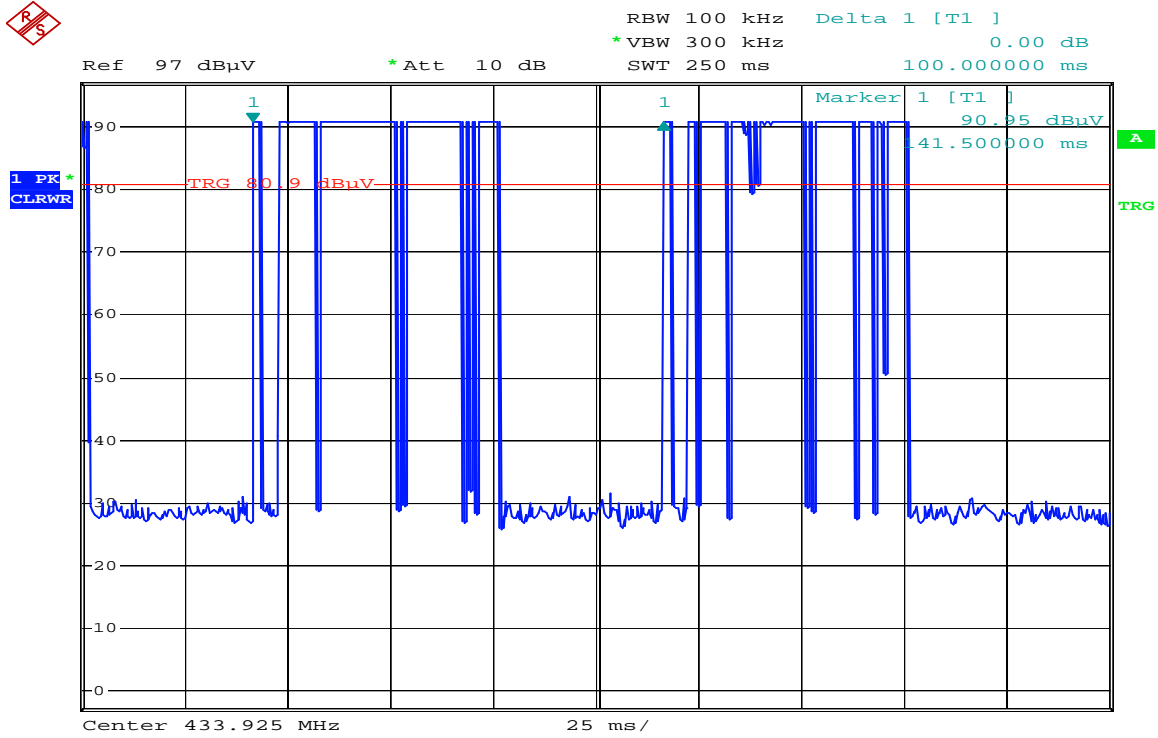
## 2. Duty Cycle

Pulse Train	Duty Cycle	Average Factor (dB)
1	0.3132	-10.08
2	0.311156	-10.14
3	0.3096	-10.18
4	0.3096	-10.18
5	0.3096	-10.18
6	0.30392	-10.34
7	0.3096	-10.18

### Pulse Train 1

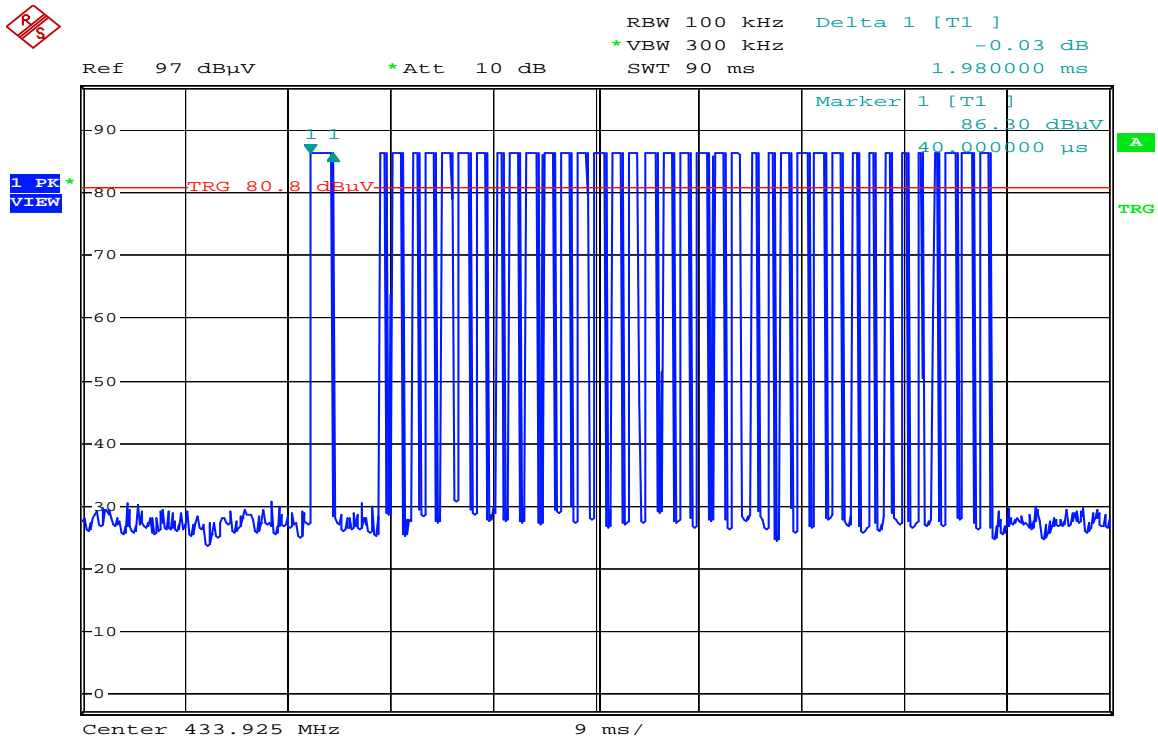
Duty Cycle =  $(1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 26 + 0.54\text{ms} \cdot 11) / 100\text{ms} = 0.3132$

Average factor is  $20 \log 0.3132 = -10.08\text{dB}$



Comment: Duty Cycle  
 Date: 24.AUG.2009 15:16:15

### Time slot 1:

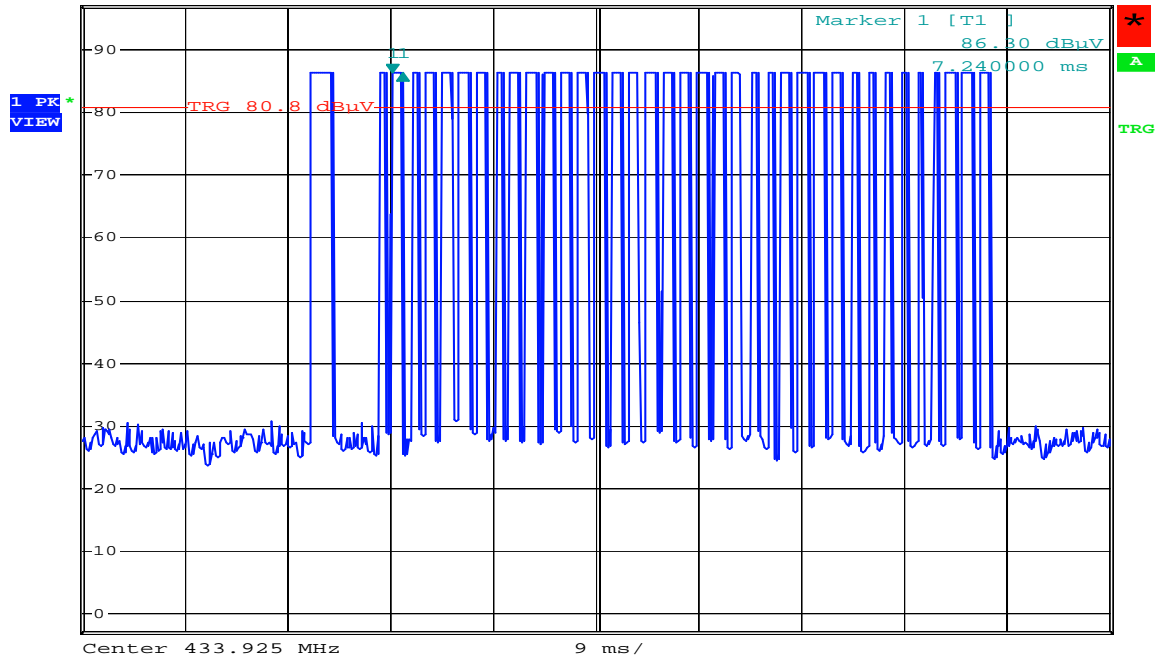


Comment: Ton1  
 Date: 24.AUG.2009 15:20:59

### Time slot 2:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      -0.02 dB  
SWT 90 ms      900.000000  $\mu$ s



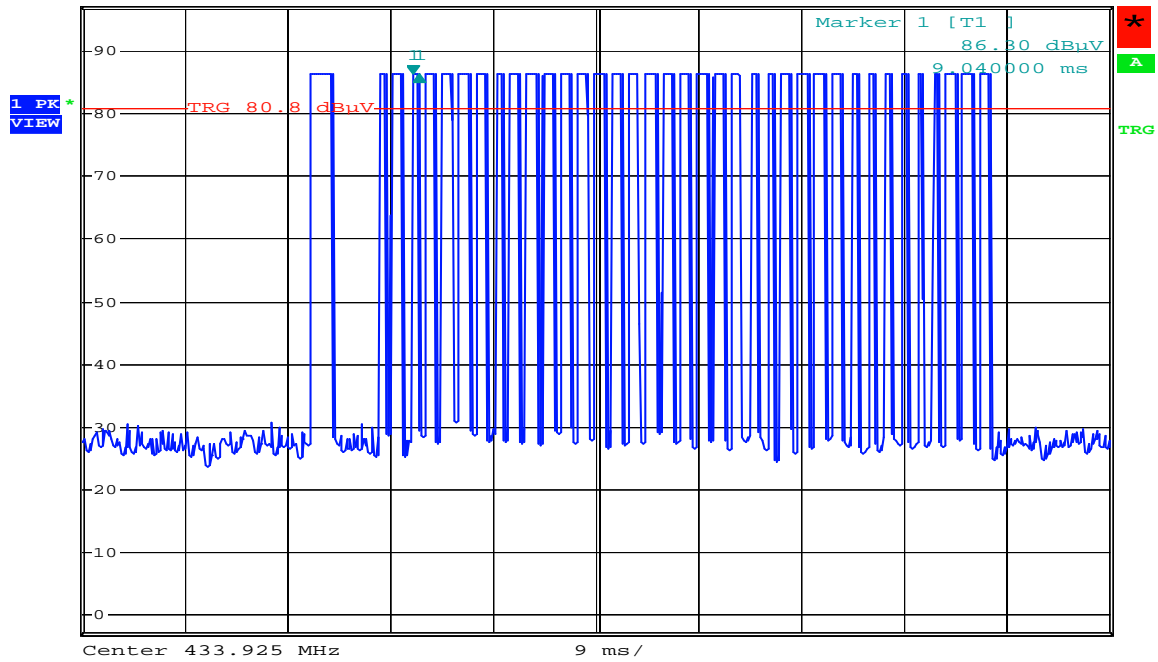
Comment: Ton2

Date: 24.AUG.2009 15:22:51

### Time slot 3:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      -0.02 dB  
SWT 90 ms      540.000000  $\mu$ s



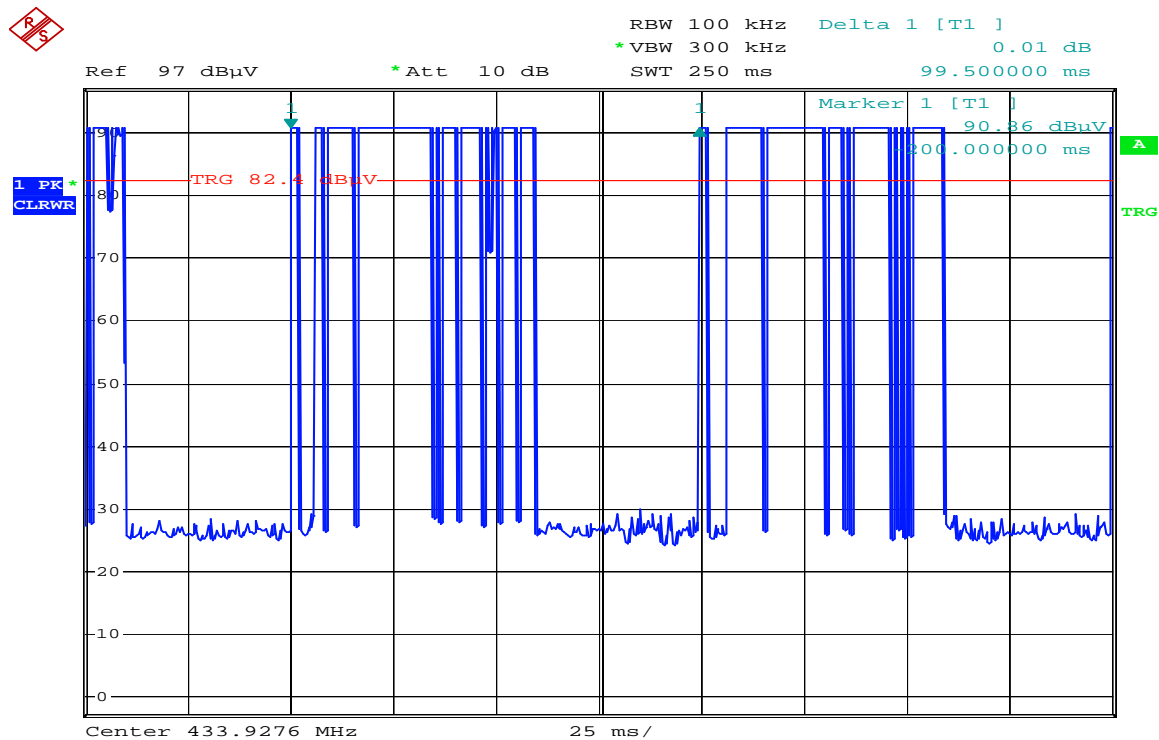
Comment: Ton3

Date: 24.AUG.2009 15:22:20

## Pulse Train 2

Duty Cycle =  $(1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 25 + 0.54\text{ms} \cdot 12) / 99.5\text{ms} = 0.311156$

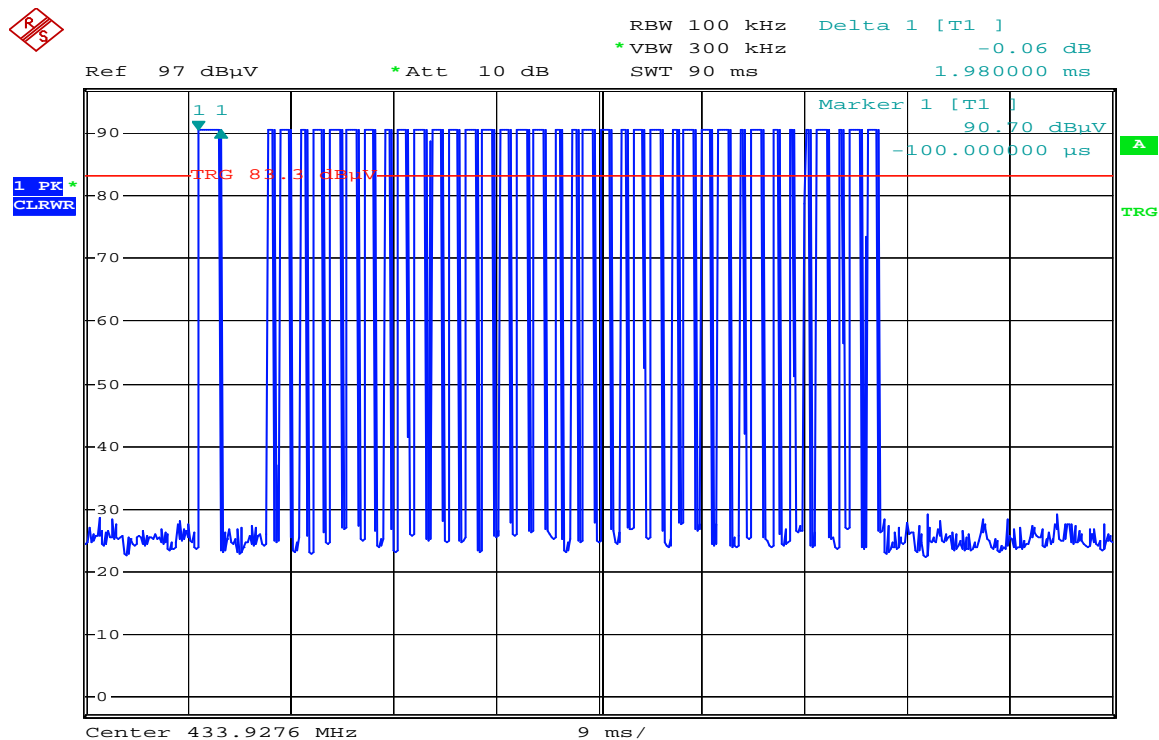
Average factor is  $20 \log 0.311156 = -10.14\text{dB}$



Comment: Duty Cycle-2

Date: 28.AUG.2009 13:56:36

## Time slot 1:



Comment: Ton1-2

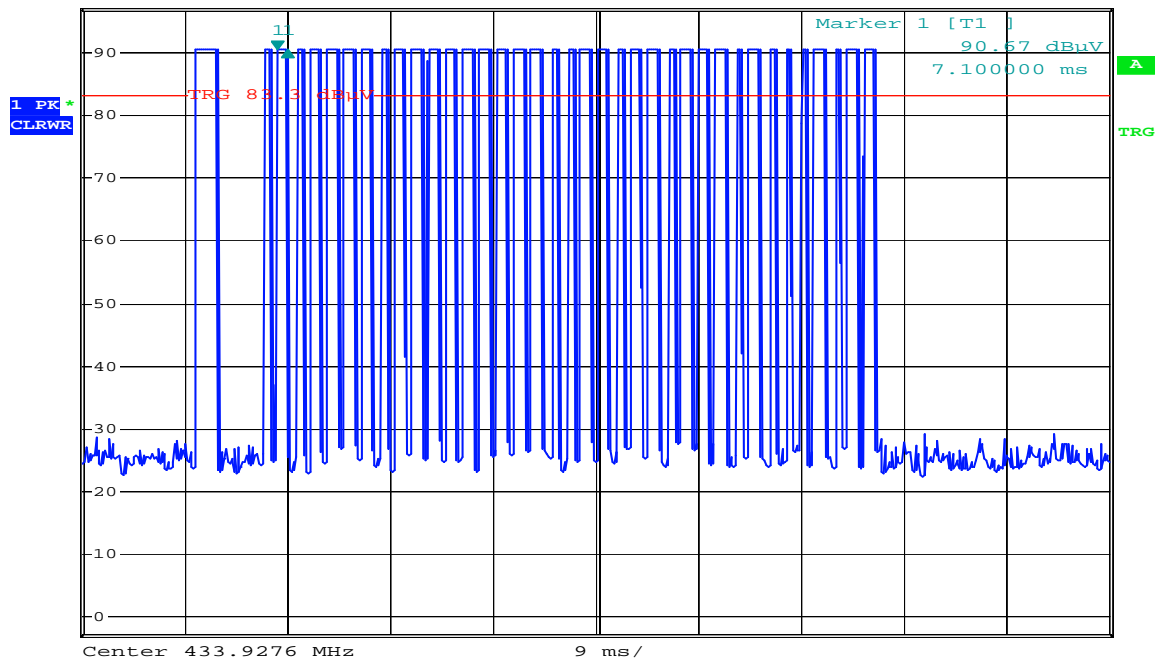
Date: 28.AUG.2009 14:54:34



### Time slot 2:



RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz    -0.03 dB  
Ref 97 dBμV    \*Att 10 dB    SWT 90 ms    900.000000 μs

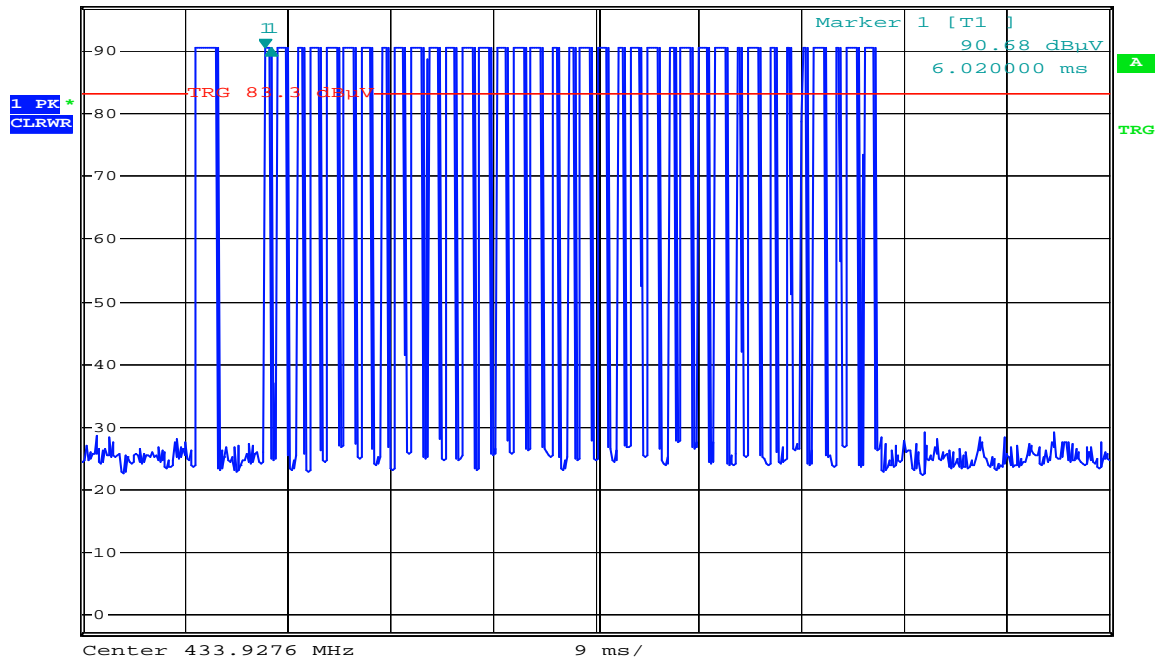


Comment: Ton2-2  
Date: 28.AUG.2009 14:54:56

### Time slot 3:



RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz    -0.04 dB  
Ref 97 dBμV    \*Att 10 dB    SWT 90 ms    540.000000 μs

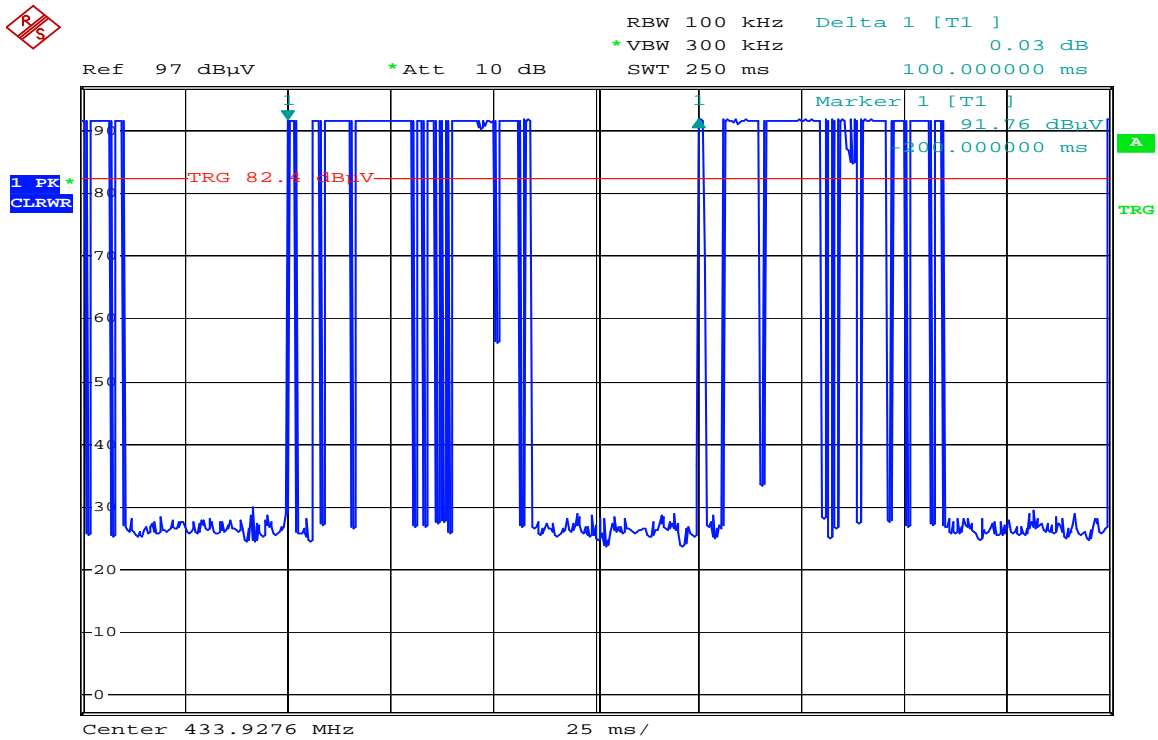


Comment: Ton3-2  
Date: 28.AUG.2009 14:55:13

### Pulse Train 3

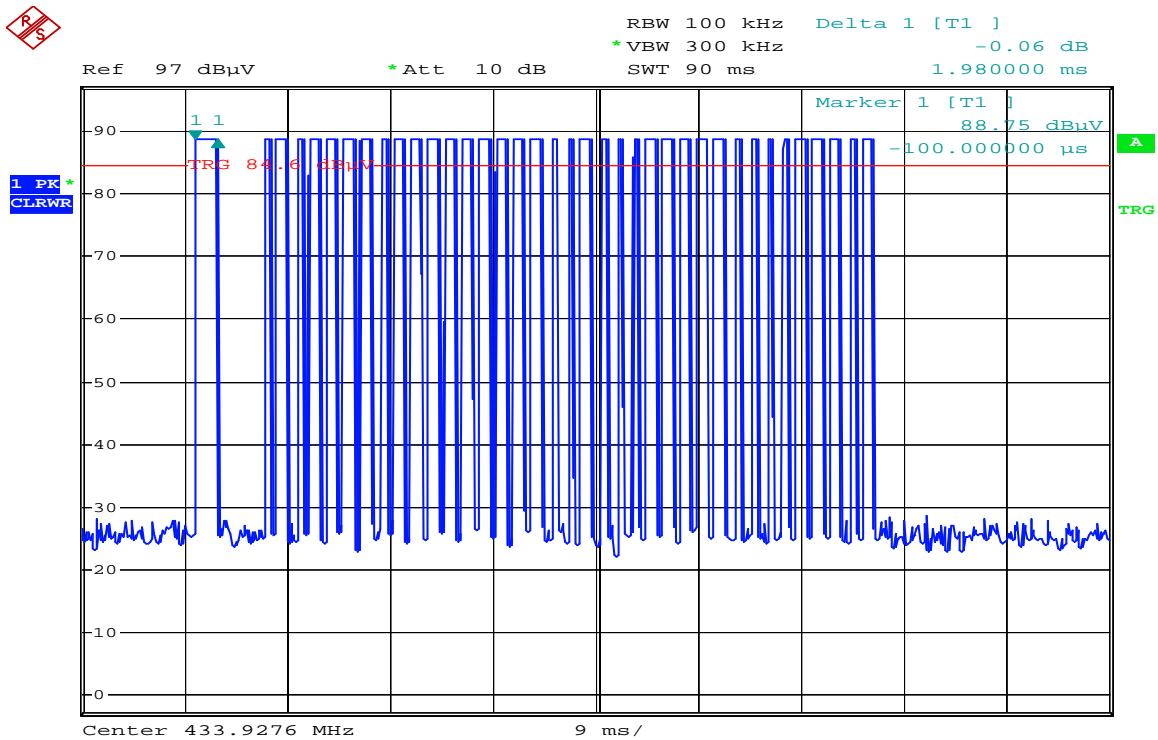
$$\text{Duty Cycle} = (1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 25 + 0.54\text{ms} \cdot 12) / 100\text{ms} = 0.3096$$

$$\text{Average factor is } 20 \log 0.3096 = -10.18\text{dB}$$



Comment: Duty Cycle-3  
Date: 28.AUG.2009 13:56:02

### Time slot 1:

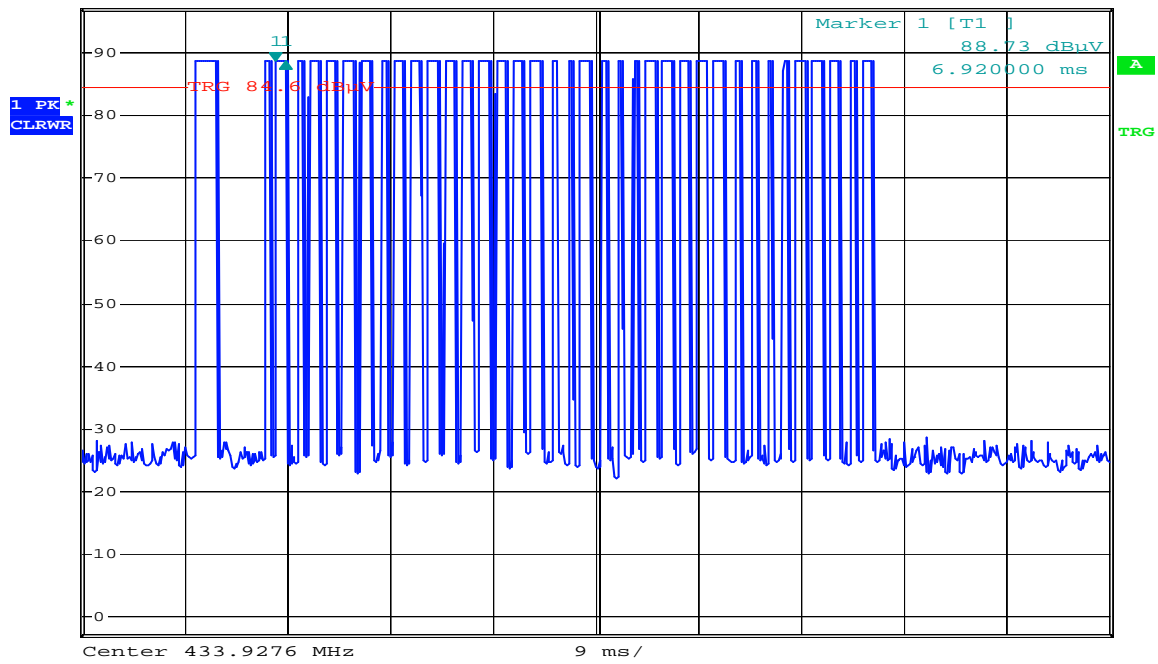


Comment: Ton1-3  
Date: 28.AUG.2009 14:22:39

### Time slot 2:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      -0.04 dB  
SWT 90 ms      900.000000  $\mu$ s



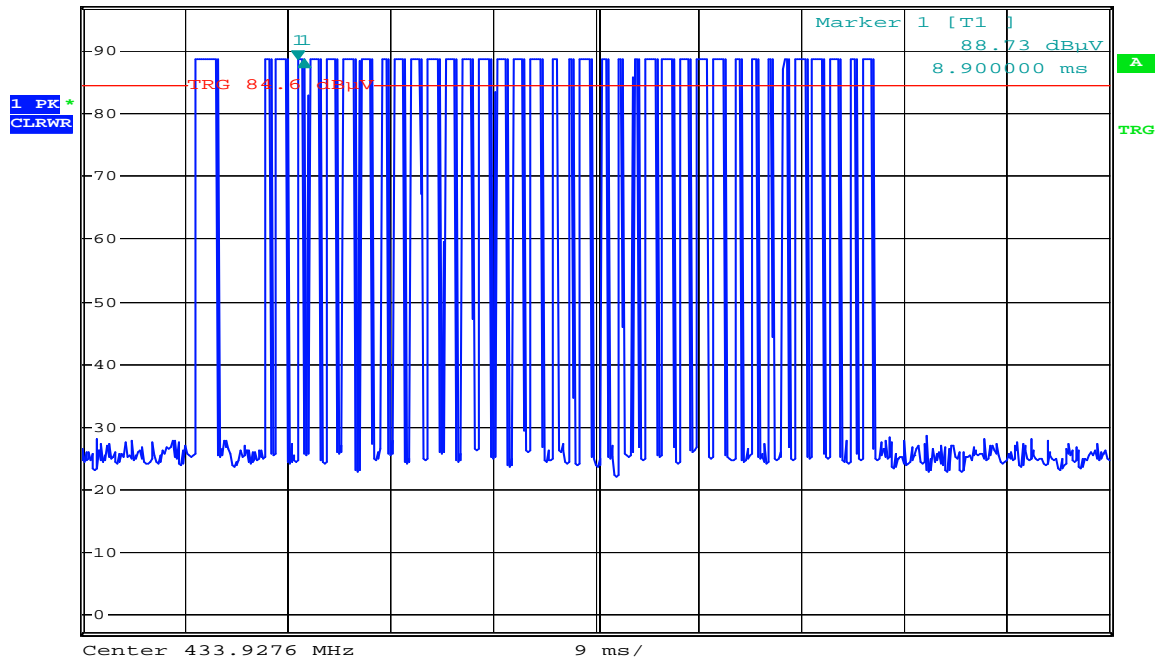
Comment: Ton2-3

Date: 28.AUG.2009 14:23:32

### Time slot 3:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      -0.03 dB  
SWT 90 ms      540.000000  $\mu$ s



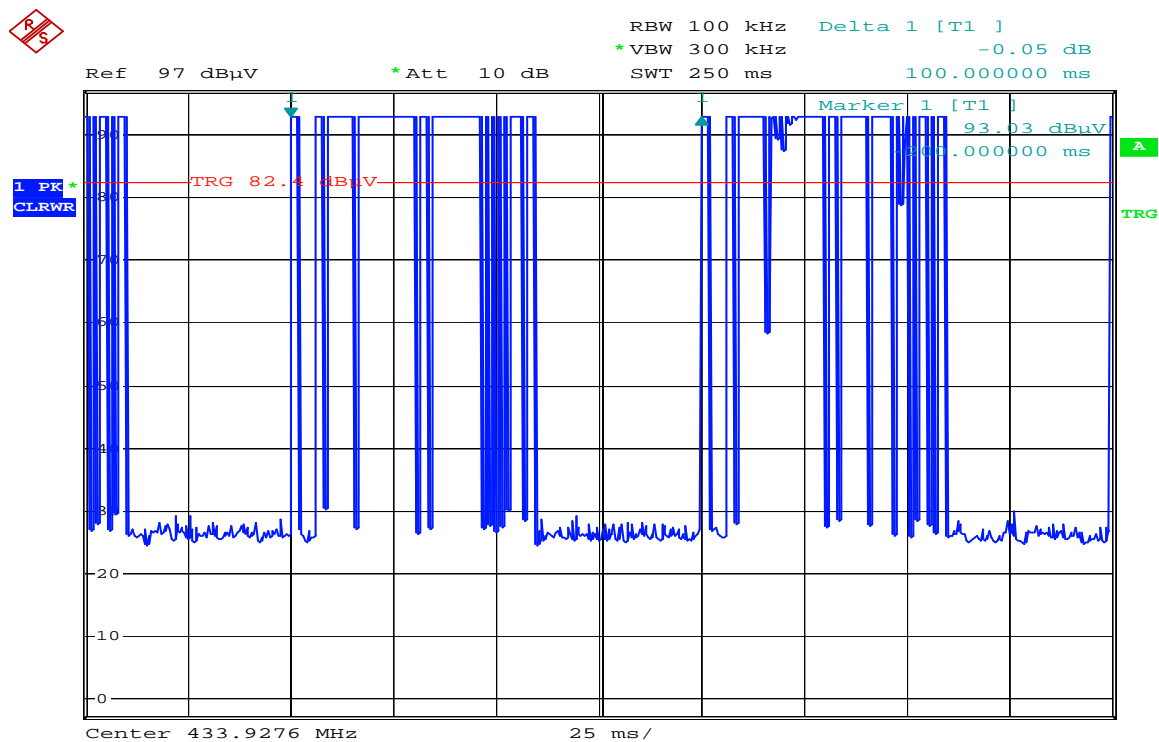
Comment: Ton3-3

Date: 28.AUG.2009 14:23:59

## Pulse Train 4

Duty Cycle =  $(1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 25 + 0.54\text{ms} \cdot 12) / 100\text{ms} = 0.3096$

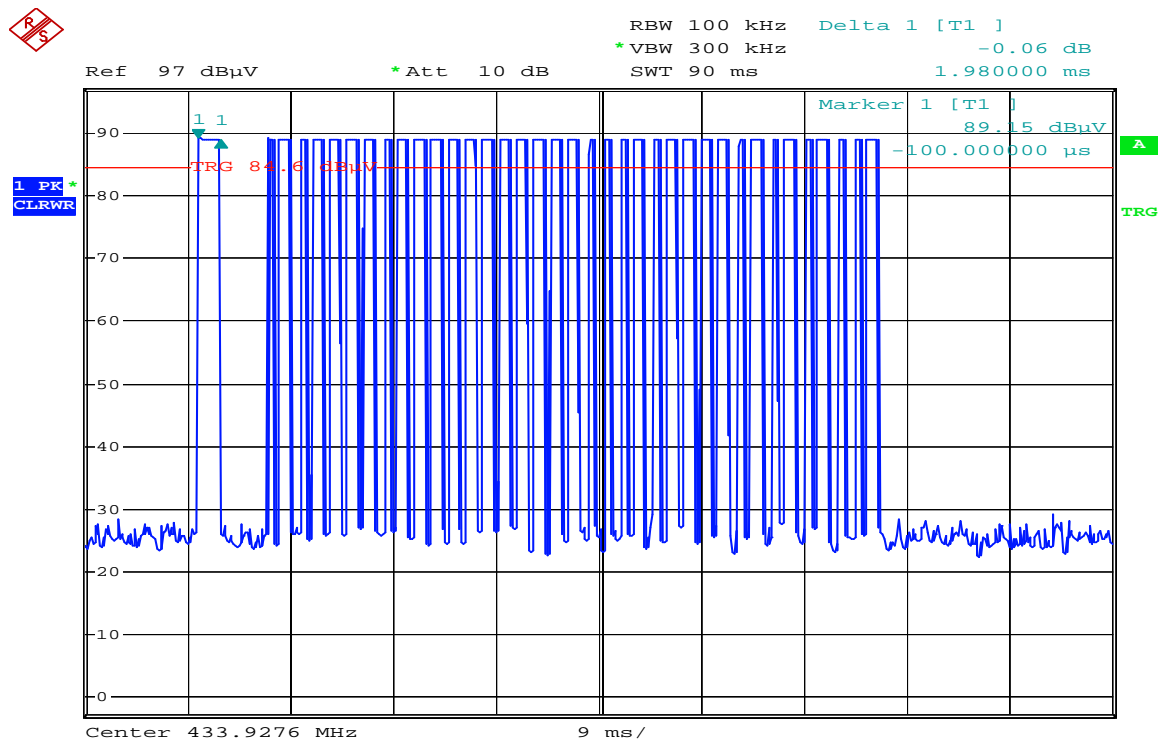
Average factor is  $20 \log 0.3096 = -10.18\text{dB}$



Comment: Duty Cycle-4

Date: 28.AUG.2009 13:55:35

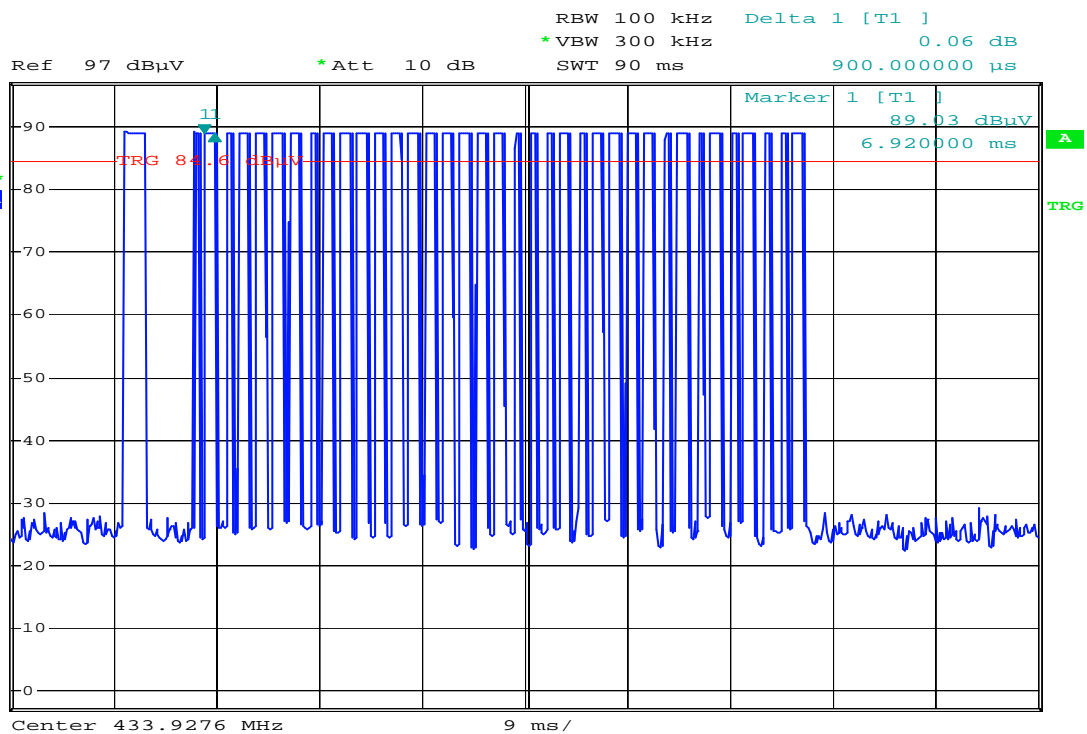
## Time slot 1:



Comment: Ton1-4

Date: 28.AUG.2009 14:29:15

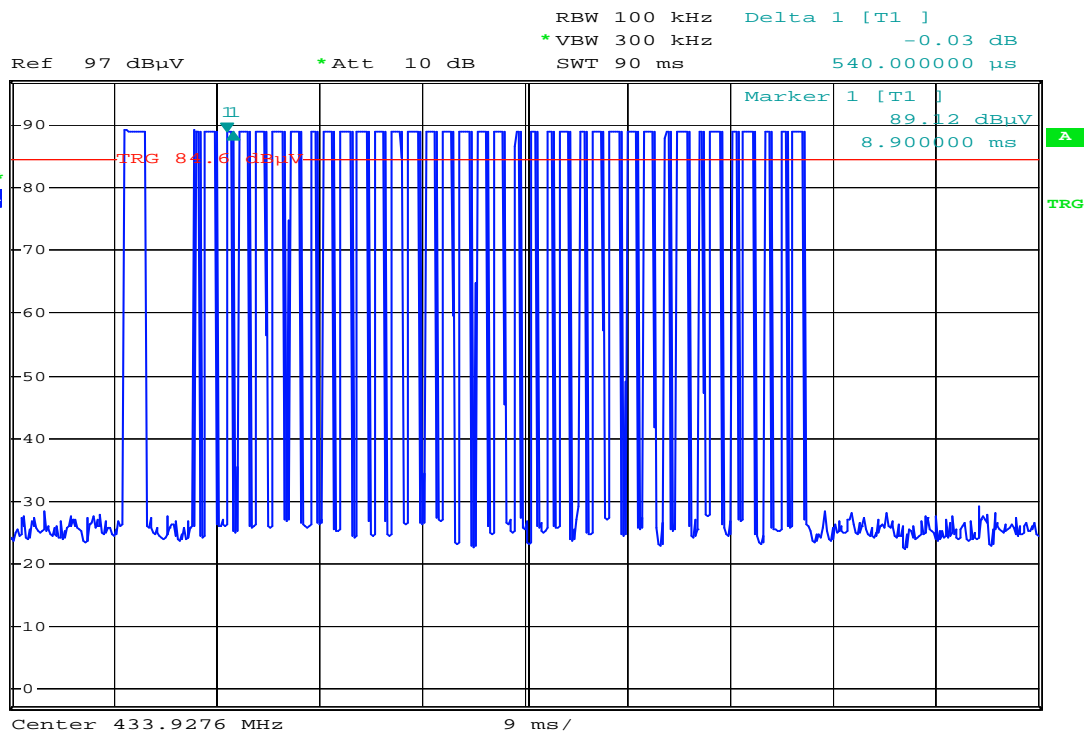
### Time slot 2:



Comment: Ton2-4

Date: 28.AUG.2009 14:29:56

### Time slot 3:



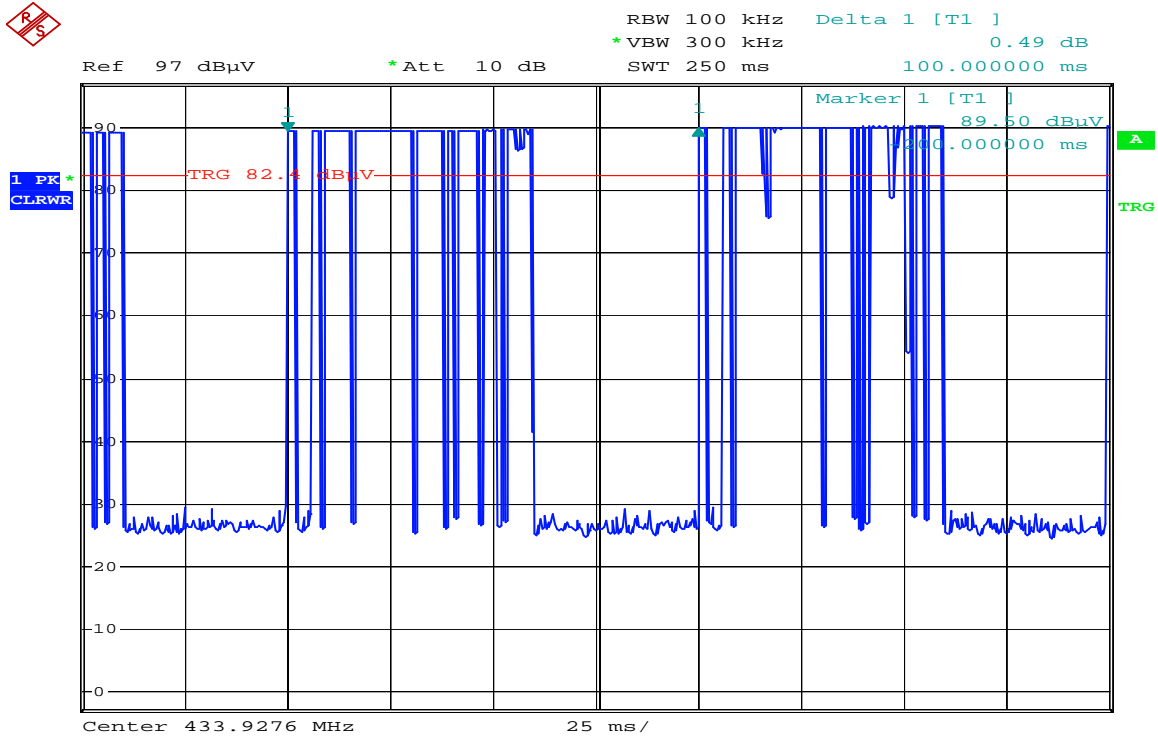
Comment: Ton3-4

Date: 28.AUG.2009 14:30:22

### Pulse Train 5

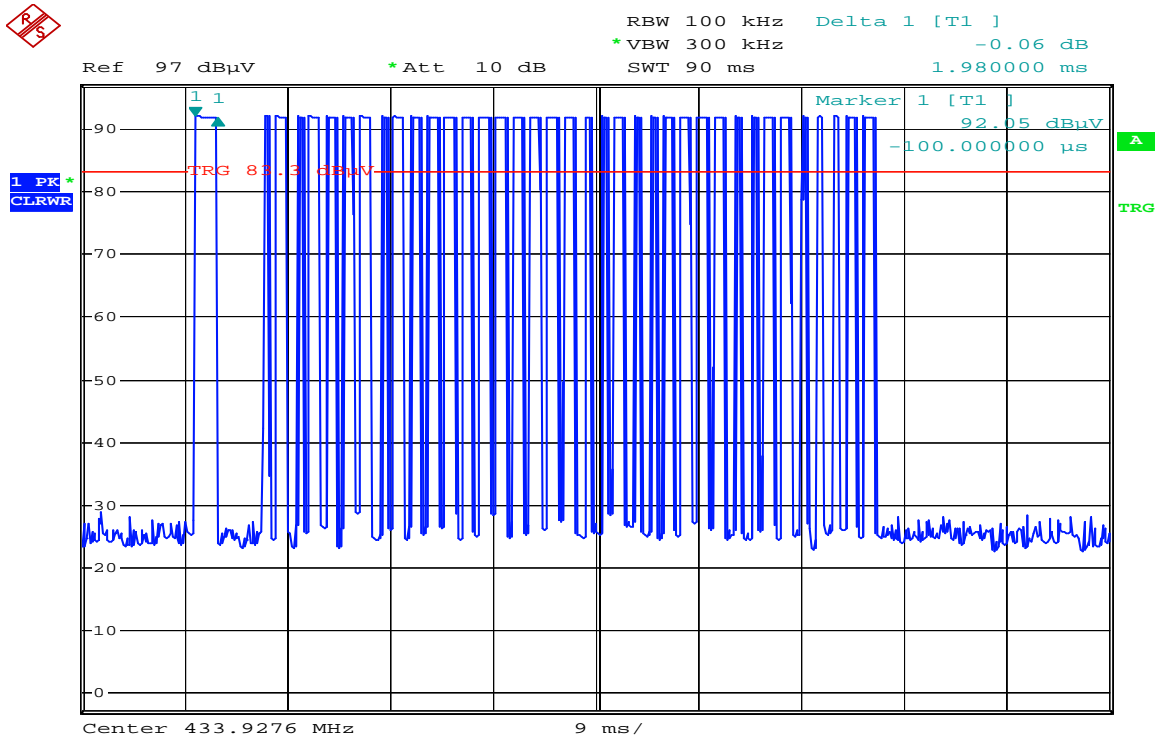
$$\text{Duty Cycle} = (1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 25 + 0.54\text{ms} \cdot 12) / 100\text{ms} = 0.3096$$

$$\text{Average factor is } 20 \log 0.3096 = -10.18\text{dB}$$



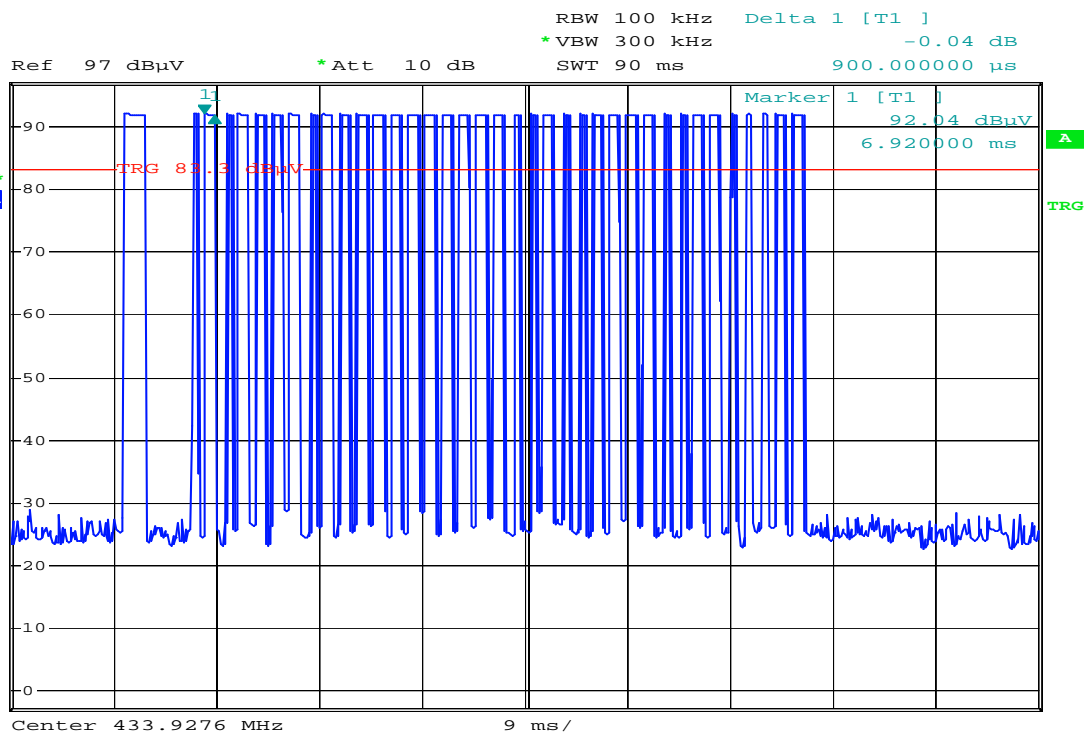
Comment: Duty Cycle-5  
Date: 28.AUG.2009 13:55:04

### Time slot 1:



Comment: Ton1-5  
Date: 28.AUG.2009 14:42:59

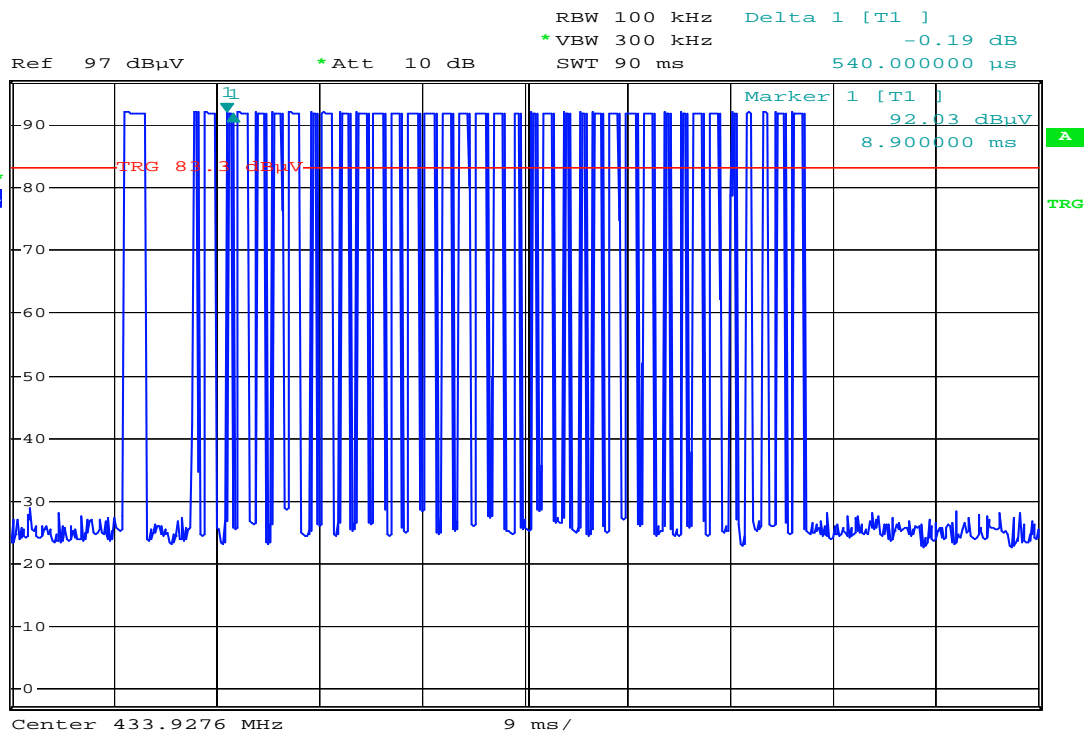
### Time slot 2:



Comment: Ton2-5

Date: 28.AUG.2009 14:42:32

### Time slot 3:



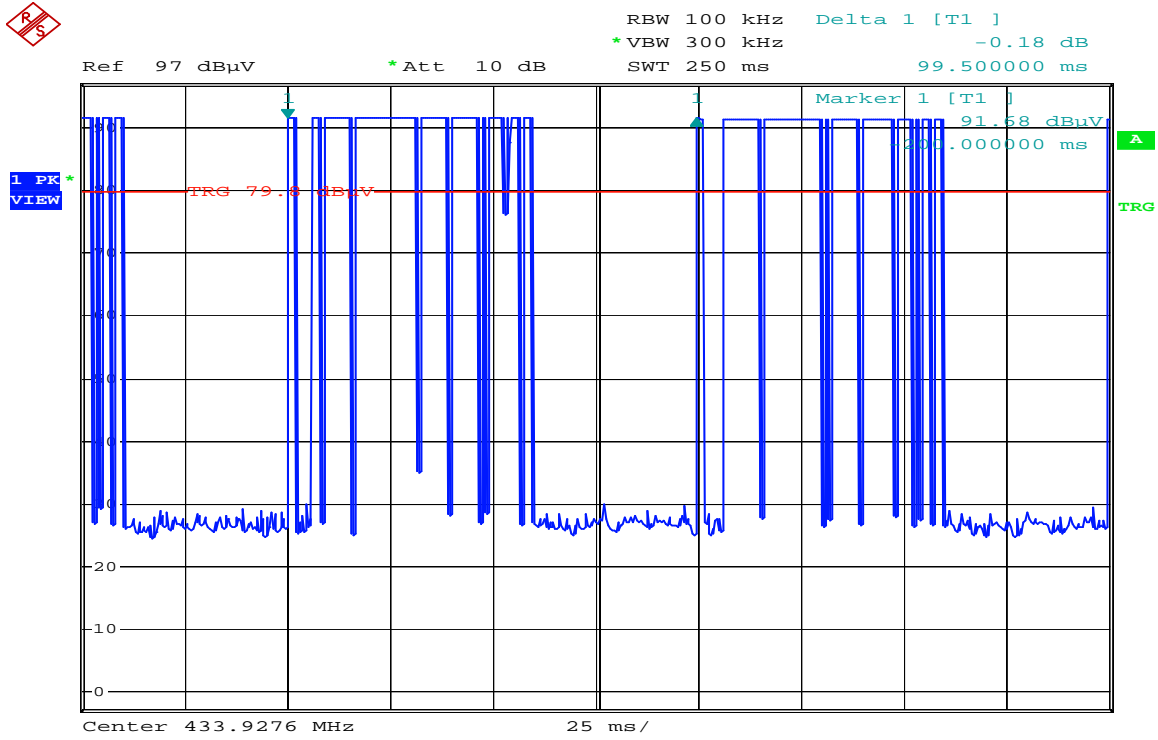
Comment: Ton3-5

Date: 28.AUG.2009 14:42:05

# Pulse Train 6

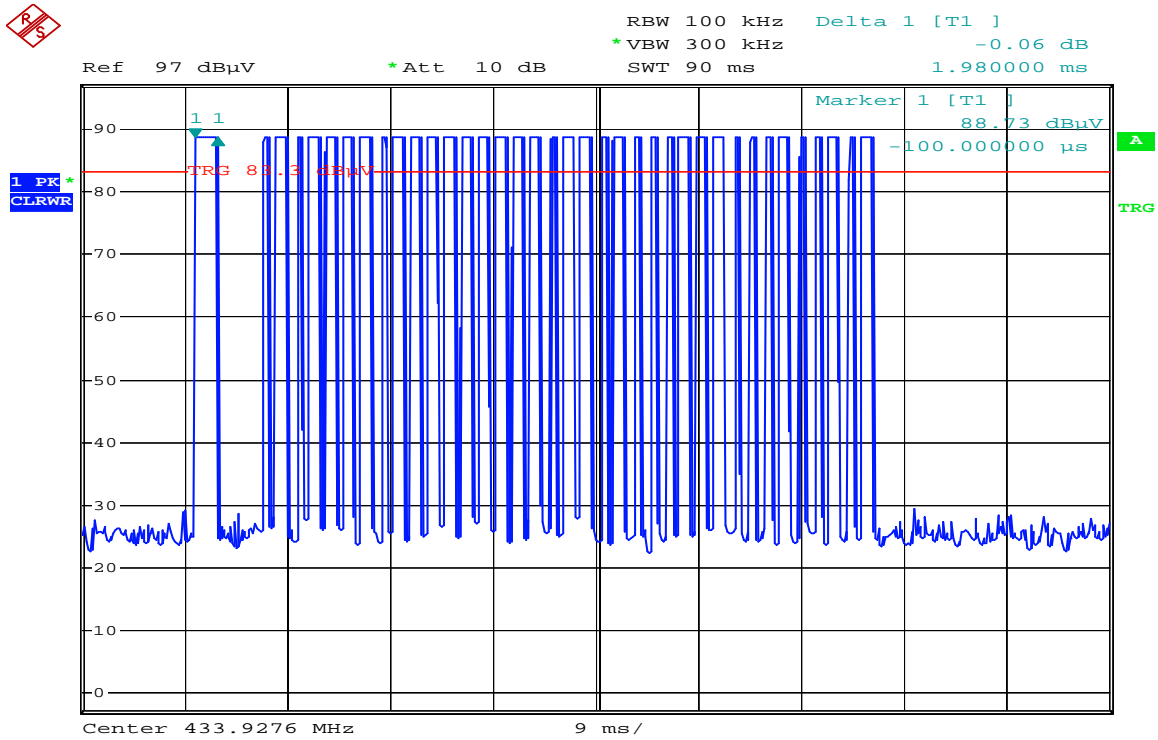
$$\text{Duty Cycle} = (1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 23 + 0.54\text{ms} \cdot 14) / 99.5\text{ms} = 0.30392$$

$$\text{Average factor is } 20 \log 0.30392 = -10.34\text{dB}$$



Comment: Duty Cycle-6  
Date: 28.AUG.2009 13:53:39

# Time slot 1:



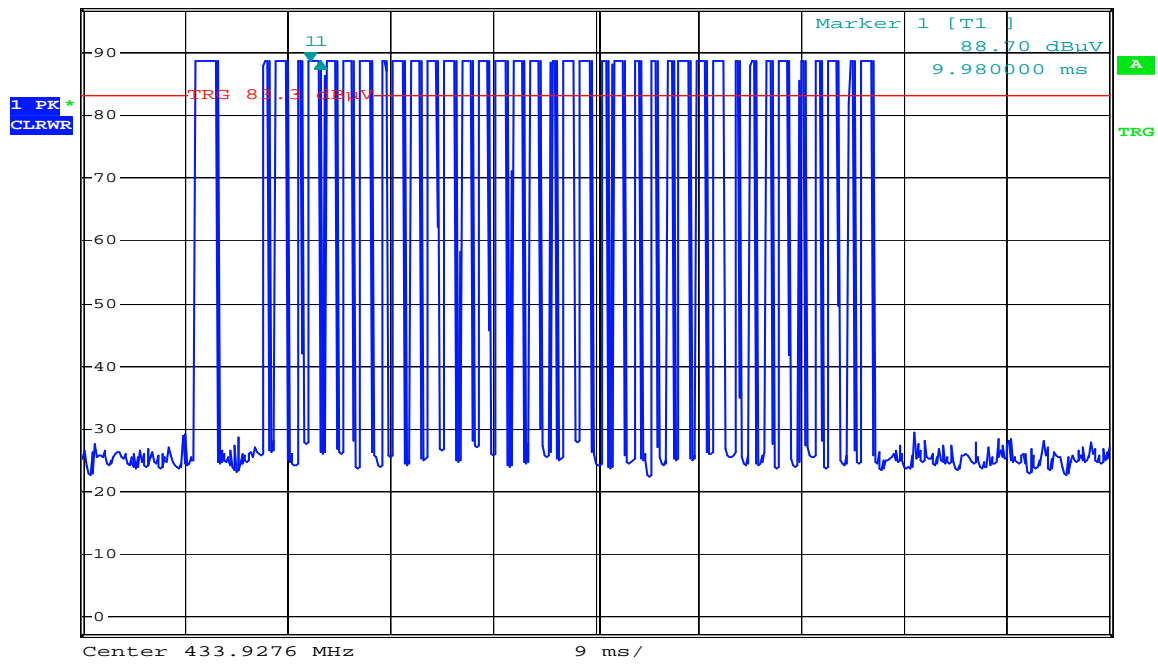
Comment: Ton1-6  
Date: 28.AUG.2009 14:46:11



### Time slot 2:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      -0.03 dB  
SWT 90 ms      900.000000  $\mu$ s



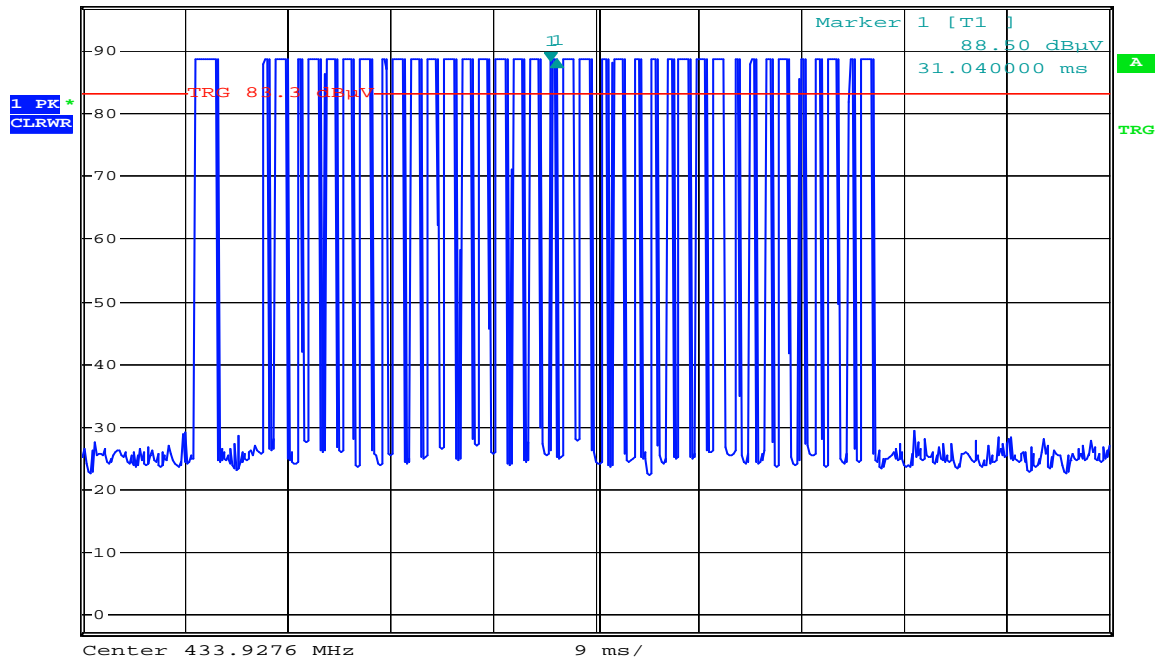
Comment: Ton2-6

Date: 28.AUG.2009 14:47:36

### Time slot 3:



Ref 97 dB $\mu$ V      \*Att 10 dB      RBW 100 kHz      Delta 1 [T1 ]  
\*VBW 300 kHz      0.15 dB  
SWT 90 ms      540.000000  $\mu$ s



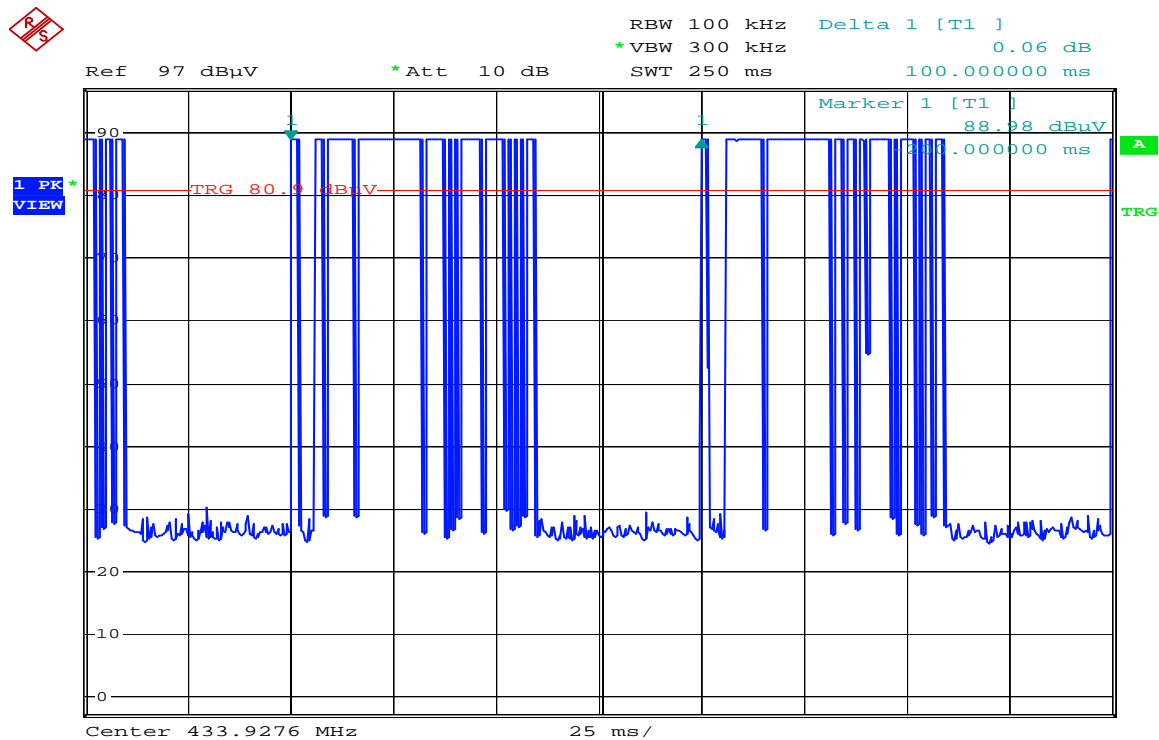
Comment: Ton3-6

Date: 28.AUG.2009 14:47:08

## Pulse Train 7

Duty Cycle =  $(1.98\text{ms} \cdot 1 + 0.9\text{ms} \cdot 25 + 0.54\text{ms} \cdot 12) / 100\text{ms} = 0.3096$

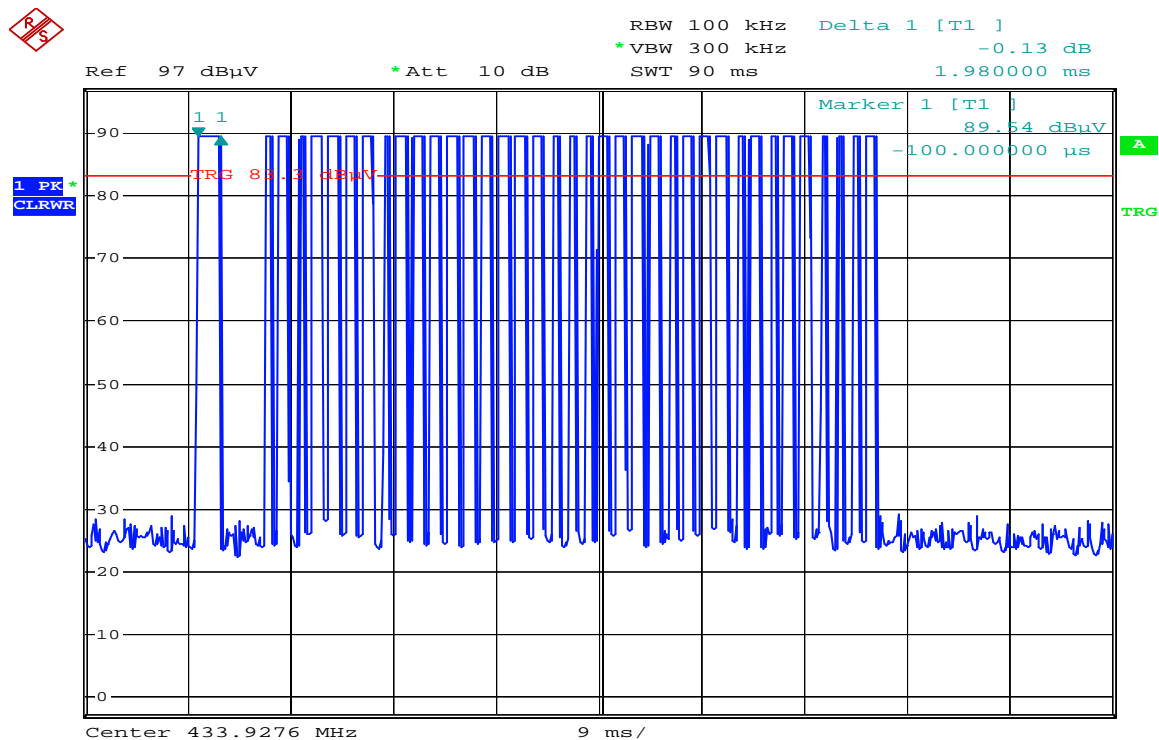
Average factor is  $20 \log 0.3096 = -10.18\text{dB}$



Comment: Duty Cycle-7

Date: 28.AUG.2009 13:52:34

## Time slot 1:



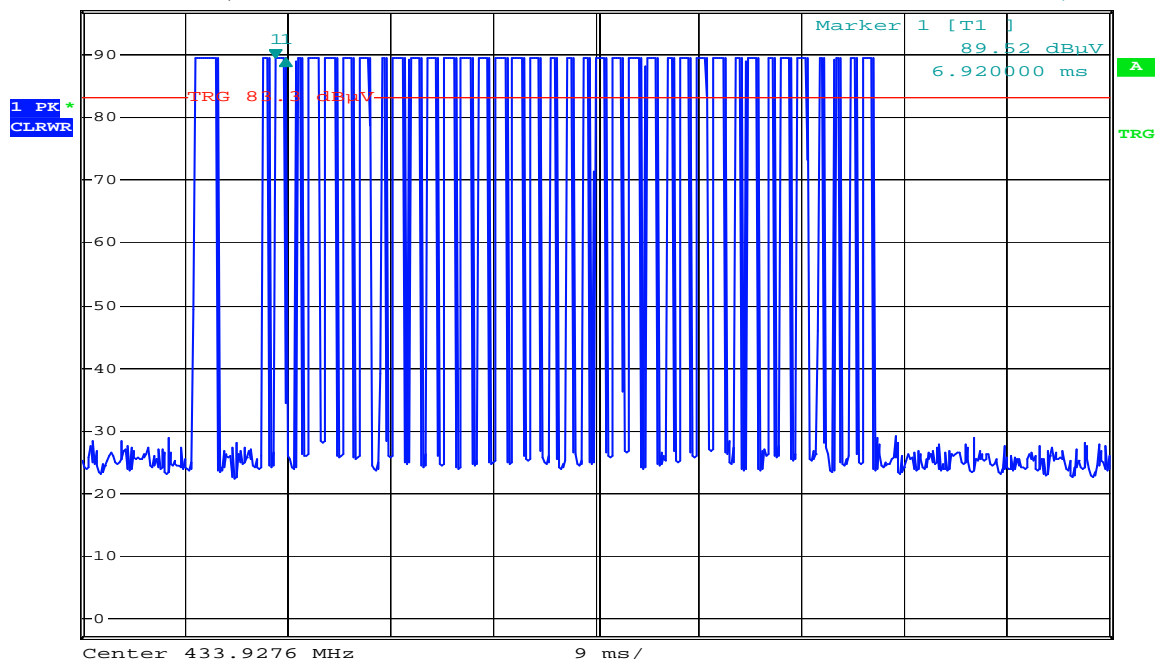
Comment: Ton1-7

Date: 28.AUG.2009 14:50:54

### Time slot 2:



RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz    -0.04 dB  
Ref 97 dBμV    \*Att 10 dB    SWT 90 ms    900.000000 μs

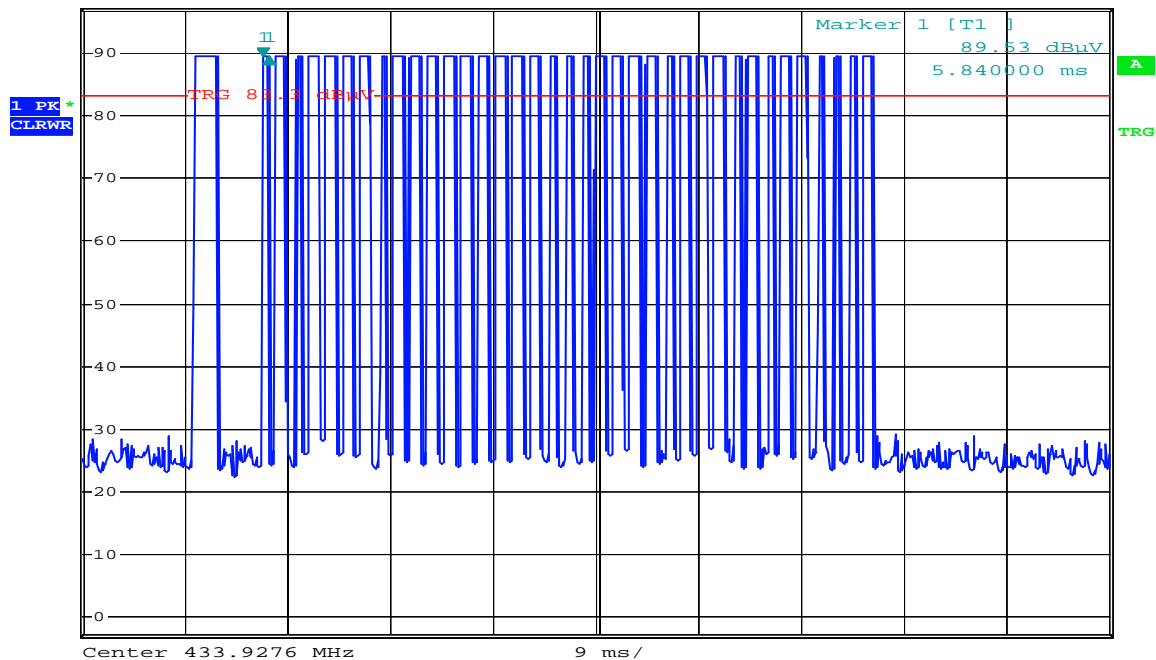


Comment: Ton2-7  
Date: 28.AUG.2009 14:51:17

### Time slot 3:



RBW 100 kHz    Delta 1 [T1 ]  
\*VBW 300 kHz    -0.03 dB  
Ref 97 dBμV    \*Att 10 dB    SWT 90 ms    540.000000 μs



Comment: Ton3-7  
Date: 28.AUG.2009 14:51:35