

# Test Report

## E4064136601KY

Type / Model Name: PR-318

Brand Name: SKYLINK

Product Description: LIGHTING REMOTE CONTROL

Applicant: Capital Prospect Limited

FCC ID: KUTPR318

## FCC --- TEST REPORT

<b>Test Report No. :</b> <b>E4064136601KY</b>	19-10-2010 <hr style="border: 0; border-top: 1px solid black; margin: 0;"/> Date of issue
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Type / Model Name:    PR-318

Brand Name :            SKYLINK

Product Description :    LIGHTING REMOTE CONTROL

Applicant :              Capital Prospect Limited

Address :                 Room 03, 13/F., Block B,  
Veristrong Ind. Centre, 34-36 Au Pui Wan Street,  
Fo Tan, N.T.,  
Hong Kong

<b>Test Result</b> according to the standards listed in clause 1 test standards:	<b>POSITIVE</b>
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The test report merely corresponds to the test sample.  
It is not permitted to copy extracts of these test results without the written permission of the test laboratory.

File No. **E4064136601KY**

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## 1 TEST STANDARDS

The tests were performed according to following standards:

FCC Part 15:2008-10-01

Federal Communications Commission, Part 15 – Radio Frequency Device

ANSI C63.4:2003

Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

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## 2 SUMMARY

### GENERAL REMARKS:

The antenna of the EuT is fulfilled the FCC part 15.203.

### FINAL ASSESSMENT:

The equipment under test fulfils the FCC requirements cited in test standard listed in section 1.

Date of receipt of test sample : Jan 07, 2010

Testing commenced on : Sep 25, 2010

Testing concluded on : Oct 19, 2010

Checked by:

Tested by:

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Ivan Toa  
Technical Manager

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Kidd Yang  
Engineer

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### **3 EQUIPMENT UNDER TEST**

#### **3.1 Photo documentation of the EuT**



Front view



Rear view

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### 3.2 Power supply system utilized

Power supply voltage: AC 120V/60Hz

### 3.3 Short description of the Equipment under Test (EuT)

The Equipment under test (EUT) is a 318.0MHz transceiver. The radio transceiver is assembled in a case enclosure and act as a remote control to receive the signal from the transmitter and repeat the signal to other receiver unit. It responds when properly encoded signal modulated on a radio frequency of 318MHz. The radio receiver is designed as a PCBA module to receive the signal from the transmitter. The power supply is the switching type to operate at 120Vac.

Tested samples: One Set

Serial number: Not Labeled

Dimensions: L: 8.0 cm W: 7.5 cm H: 16.0 cm

#### EuT operation mode:

The equipment under test was operated during the measurement under the following conditions:

- Operation mode 1: Transmitting mode

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#### EuT configuration:

The following interface cables and peripheral devices were connected during the measurements:

Interface cables:

Interface cable	Length [m]	Type	Line		Line termination
			shielded	unshielded	
AC cable	1.0	2-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EuT to LISN
AC cable	1.0	2-wires	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EuT to Lamp

Peripheral devices:

Kind of equipment	Model and/or Manufacturer
300W Lamp	Philips

File No. **E4064136601KY**

## **4 TEST ENVIRONMENT**

### **4.1 Address of the test laboratory**

emitel (Shenzhen) Limited  
Building 2, 171 Meihua Road,  
Futian District, Shenzhen,  
P.R. China

### **Laboratory registration numbers:**

FCC Registration number: 746887

### **4.2 Environmental conditions**

During the measurement the environmental conditions were within the listed ranges:

Temperature: 15-35 ° C

Humidity: 30-60 %

Atmospheric pressure: 860-1060 mbar

### **4.3 Statement of the measurement uncertainty**

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16-4-2 /11.2003 "Uncertainties, statistics and limit modeling – Uncertainty in EMC measurements" and is documented in the quality system acc. to ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer does have the sole responsibility for the continued compliance of the device.



## 5 TEST CONDITIONS AND RESULTS

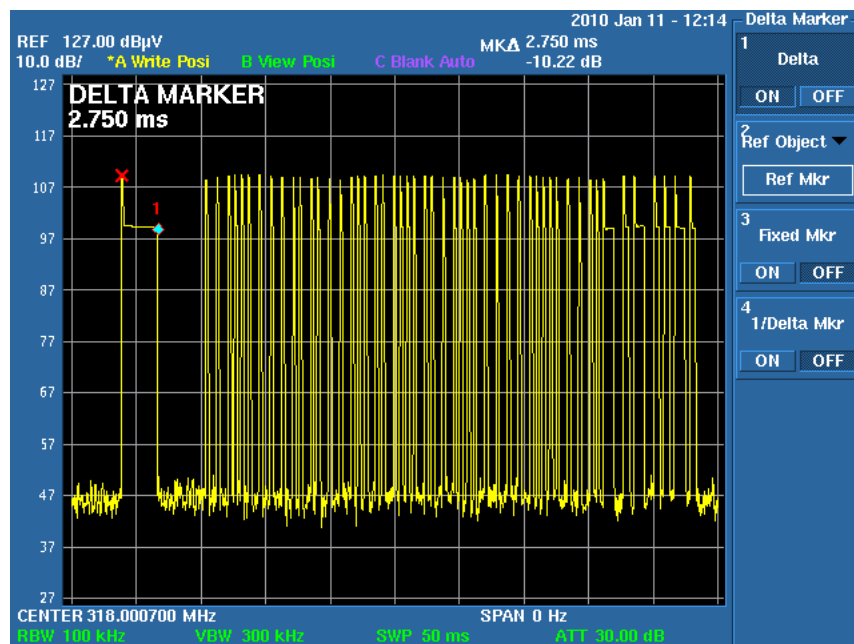
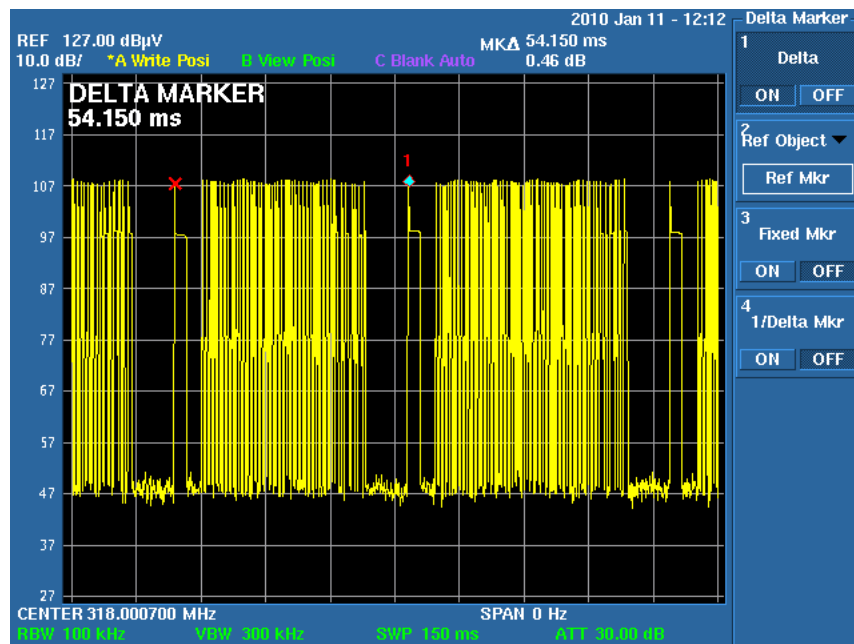
### 5.1 Average Factor

For test instruments and accessories used see section 6.

#### 5.1.1 Description of the test location

Test location: Shield room

#### 5.1.2 Photo documentation of test

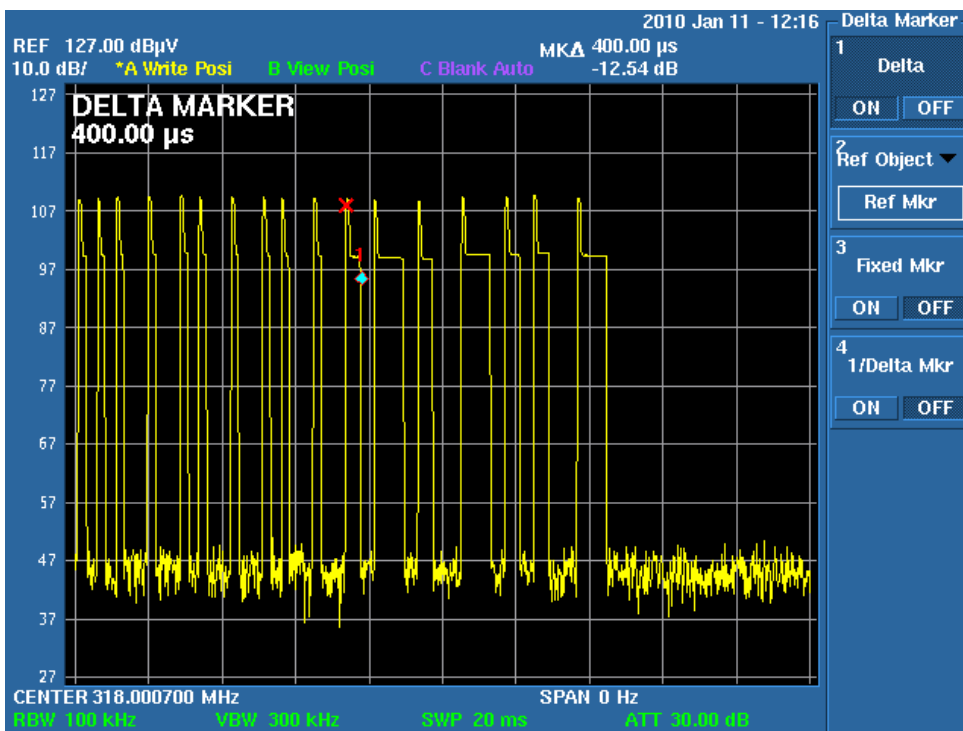
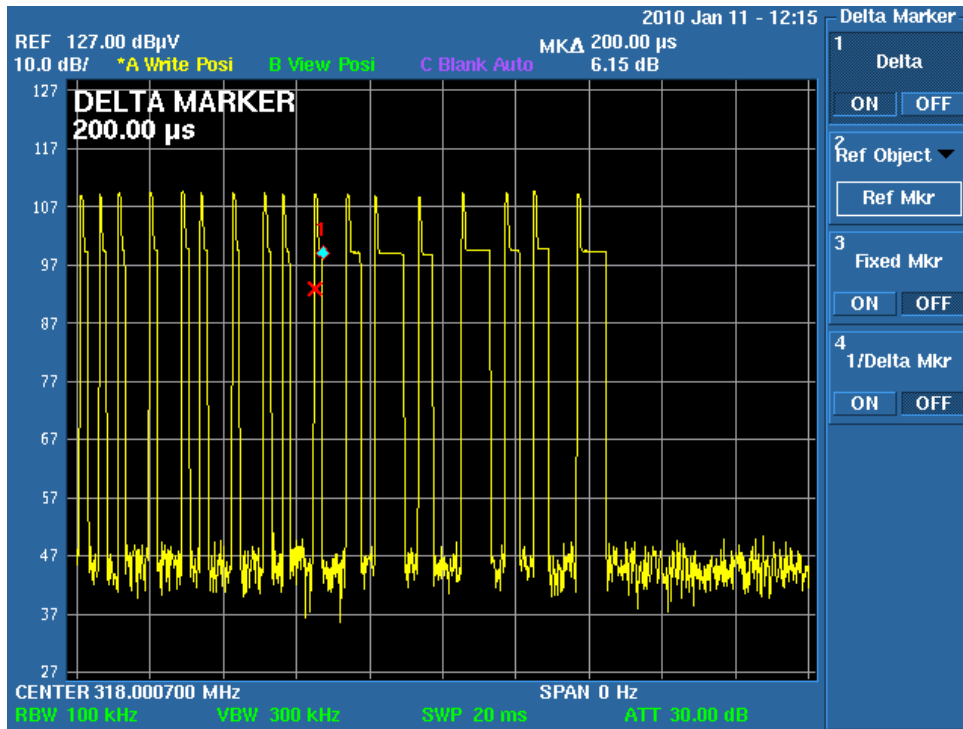


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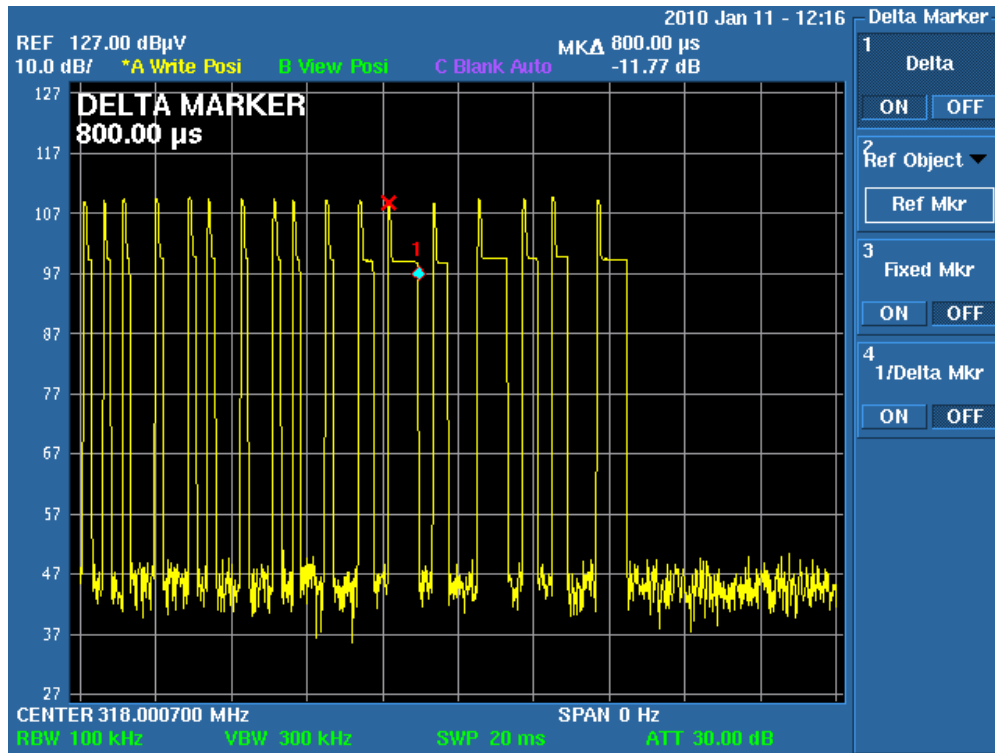


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### 5.1.3 Test result

whole period=54.15ms
Pulse 1= 2.75ms
Pulse 2= 0.2ms
Pulse 3= 0.4ms
Pulse 4= 0.8ms
$T_{on}=(2.75+0.2*44+0.4*4+0.8*3)ms=15.55ms$
Average factor= $20 \log(15.55ms/54.15ms)=20 \log(0.584)=-10.8dB$

Remarks:

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File No. **E4064136601KY**

## 5.2 Radiated Emission

For test instruments and accessories used see section 6.

### 5.2.1 Description of the test location

Test location: Semi-anechoic Chamber

Test distance: 3m

### 5.2.2 Photo documentation of test



### 5.2.3 Test result

The test was carried out in the following operation mode(s):

- Transmitting mode

Frequency range: 30MHz to 3180MHz

Min. limit margin: -10.8dB at 318MHz

The requirements of section 15.231(b) are **FULFILLED**.

- Remarks:**
- 1) The emissions lower than 20dB below the limit are not measured.
  - 2) Testing is include the rotation of the EUT through three orthogonal axes to determine the maximum emission.

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## 5.2.4 Test protocol

Worst Case Operation mode: Transmitting mode

Result: PASS

Remarks:

Date: Jul. 26, 2010

Tested by: Kidd Yang

Start frequency [MHZ]	Stop frequency [MHZ]	Resolution bandwidth	Video bandwidth	step size	Measurement time	Detector
30	1000	120 KHz	1 MHz	40 KHz	100ms	Peak
1000	4340	1 MHz	3 MHz	400 KHz	100ms	Peak

Polarization	Frequency (MHz)	Read Value (dBuV/m)	Antenna Factor(dB)	Cable Loss(dB)	Measured Result (dBuV/m)	PK limit (dBuV/m)	margin (dB)
V	318.00	52.9	14.8	1.1	68.8	95.8	-27.0
H	318.00	60.4	14.3	1.1	75.8	95.8	-20.0
V	636.00	23.0	19.3	2.0	44.3	75.8	-31.5
H	636.00	21.2	20.4	2.0	43.6	75.8	-32.2
V	954.00	14.5	23.1	2.2	39.8	75.8	-36.0
H	954.00	14.9	23.4	2.2	40.5	75.8	-35.3
V	1272.00	12.6	25.3	3.1	41.0	75.8	-34.8
H	1272.00	13.2	25.9	3.1	42.2	75.8	-33.6

Polarization	Frequency (MHz)	Detector	Measured Result (dBuV/m)	Average Factor (dB)	Calculated Average Value (dBuV/m)	AV limit (dBuV/m)	margin (dB)
V	318.00	Peak	68.8	-10.8	58.0	75.8	-17.8
H	318.00	Peak	75.8	-10.8	65.0	75.8	-10.8
V	636.00	Peak	44.3	-10.8	33.5	55.8	-22.3
H	636.00	Peak	43.6	-10.8	32.8	55.8	-23.0
V	954.00	Peak	39.8	-10.8	29.0	55.8	-26.8
H	954.00	Peak	40.5	-10.8	29.7	55.8	-26.1
V	1272.00	Peak	41.0	-10.8	30.2	55.8	-25.6
H	1272.00	Peak	42.2	-10.8	31.4	55.8	-24.4

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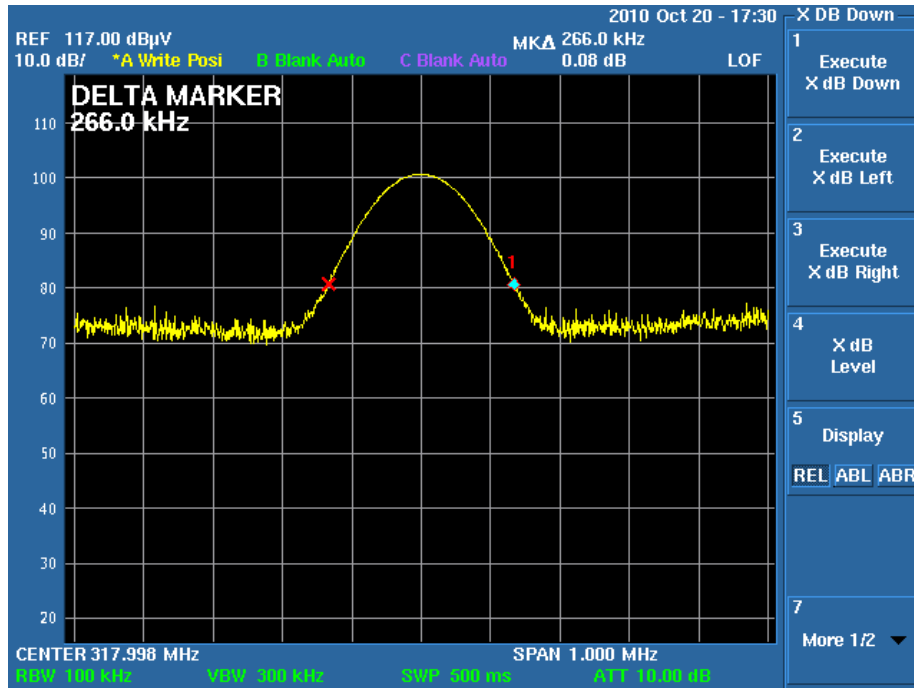
### 5.3 Bandwidth

For test instruments and accessories used see section 6.

#### 5.3.1 Description of the test location

Test location: Shielded Room

#### 5.3.2 Photo documentation of the test



#### 5.3.3 Test result

Measured Occupied Bandwidth (kHz)	Limit (kHz)
266.0	795.0

The requirements of section 15.231(c) are **FULFILLED**

Remarks:

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## 5.4 Conducted disturbance

For test instruments and accessories used see section 6.

### 5.4.1 Description of the test location

Test location: Shield Room

### 5.4.2 Photo documentation of the test set-up



### 5.4.3 Test result

Frequency range: 0.15MHz – 30.00MHz

The test was carried out in the following operation mode(s):

- Transmitting mode

Min. limit margin -5.4 dB at 0.152MHz.

The requirements of section 15.207 are **FULFILLED**

**Remarks:** 1)Other emission with more than 10dB margin below the limit is not measured.

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#### 5.4.4 Test protocol

Product Description : LIGHTING REMOTE CONTROL	Result: <b>PASS</b>
Model : PR-318	
Test mode : Transmitting mode	
Date : 12-10-2010	

LINE	Frequency	Measured QP Value	Limit	Margin
	[MHz]	[dB $\mu$ V]	[dB $\mu$ V/m]	[dB]
Line1	0.150	57.6	66.0	-8.4
Line1	0.172	55.5	63.7	-8.2
Line1	0.182	54.3	64.4	-10.1
Line1	0.206	51.6	63.5	-11.9
Line1	0.238	46.5	62.2	-15.7
Line1	0.250	43.8	61.7	-17.9
Line1	0.257	44.9	61.5	-16.6
Line1	0.276	43.2	61.0	-17.8
Neutral	0.152	60.4	65.8	-5.4
Neutral	0.167	57.8	65.2	-7.4
Neutral	0.190	54.5	64.0	-9.5
Neutral	0.206	52.2	63.4	-11.2
Neutral	0.218	49.6	62.9	-13.3
Neutral	0.240	46.3	62.0	-15.7
Neutral	0.252	46.9	61.6	-14.7
Neutral	0.278	44.6	60.9	-16.3
Neutral	0.290	43.2	60.5	-17.3

LINE	Frequency	Measured AV Value	Limit	Margin
	[MHz]	[dB $\mu$ V]	[dB $\mu$ V/m]	[dB]
Line1	0.150	33.8	56.0	-22.2
Line1	0.170	26.4	55.0	-28.6
Neutral	0.152	31.2	55.8	-24.6
Neutral	0.190	26.3	54.0	-27.7

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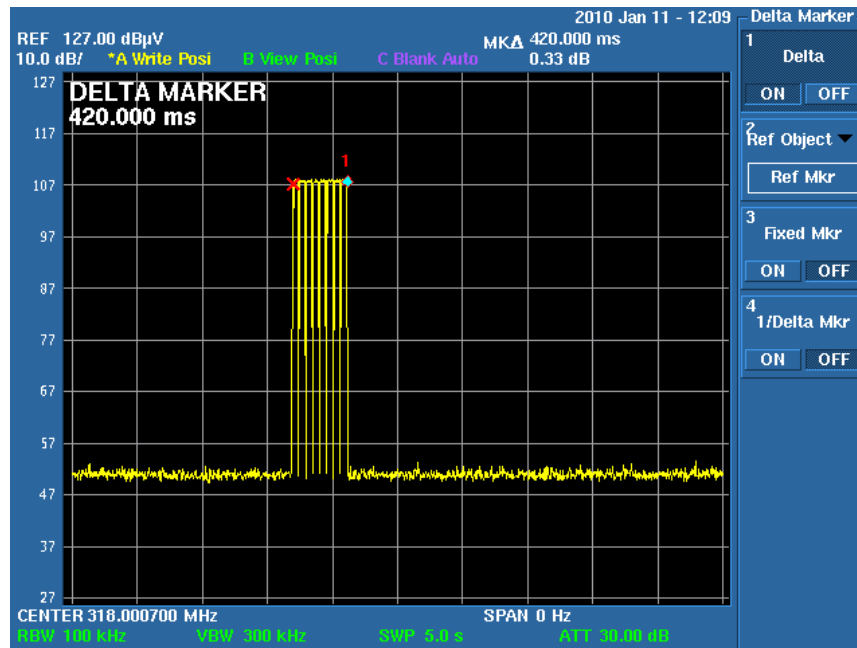
## 5.5 Provision of Momentary operation

For test instruments and accessories used see section 6.

### 5.5.1 Description of the test location

Test location: Shielded Room

### 5.5.2 Photo documentation of the test



### 5.5.3 Test result

The time of stopping transmission after switch releasing (s)	Limit (s)
0.42	5.00

The requirements of section 15.231(a)(1) is **FULFILLED**

Remarks:

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## **6 USED TEST EQUIPMENT AND ACCESSORIES**

All test instruments used, in addition to the test accessories, are calibrated and verified regularly.

<b>Test Item</b>	<b>Kind of Equipment</b>	<b>Model / Type</b>	<b>Manufacturer</b>	<b>Next Cal. Date</b>	<b>Equipment No.</b>
Radiated Emission	EMI Test Receiver	ESPI3	Rohde & Schwarz	Mar. 25,2011	04-02/03-06-002
	Spectrum Analyzer	U3772	Advantest	Mar. 25,2011	04-02/11-08-001
	Biconilog Antenna	3142C	EMCO	Jan. 08,2011	04-02/24-06-001
	Horn Antenna	3117	ETS Lindgren	Feb. 04,2011	04-02/24-07-001
Bandwidth	Spectrum Analyzer	U3772	Advantest	Mar. 25,2011	04-02/11-08-001
Momentary operation	Spectrum Analyzer	U3772	Advantest	Mar. 25,2011	04-02/11-08-001
Average Factor	Spectrum Analyzer	U3772	Advantest	Mar. 25,2011	04-02/11-08-001
Conducted emission	Test Receiver	ESPI3	Rohde & Schwarz	Mar. 25,2011	04-02/03-06-002
	LISN	ESH2-Z5	Rohde & Schwarz	Mar. 25,2011	04-02/20-06-001

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