



November 30, 2011

***KEEN LEAGUE MANUFACTURING LIMITED
Rm.2001, 20/F, Winning Centre, 29 Tai Yau Street, Sam Po Kong,
Kowloon, Hong Kong.***

Dear Jecfield Luk,

***Enclosed you will find your file copy of a Part 15 Certification (FCC ID:
Z7P-BAS0101-R).***

***For your reference, TCB will normally take another 5 days for reviewing the
report. Approval will then be granted when no query is sorted.***

Please contact me if you have any questions regarding the enclosed material.

Sincerely,

A handwritten signature in black ink, appearing to read "Shawn Xing", with a stylized flourish extending from the end.

Shawn Xing

Enclosure



KEEN LEAGUE MANUFACTURING LIMITED

Application
For
Certification
(FCC ID: Z7P-BAS0101-R)

Superheterodyne Receiver

Sample Description : PEE ALARM
Model: BAS0101, PA100

SZ11100289-2
Billy Li
November 30, 2011

- The test results reported in this test report shall refer only to the sample actually tested and shall not refer or be deemed to refer to bulk from which such a sample may be said to have been obtained.
- This report is for the exclusive use of Intertek's Client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this report. Only the Client is authorized to copy or distribute this report. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. The observations and test results referenced from this report are relevant only to the sample tested. This report by itself does not imply that the material, product, or service is or has ever been under an Intertek certification program.
- For Terms And Conditions of the services, it can be provided upon request.
- The evaluation data of the report will be kept for 3 years from the date of issuance.

TRF no.: FCC 15C_RX-Sra
FCC ID: Z7P-BAS0101-R

Intertek Testing Services Shenzhen Ltd. Kejiyuan Branch

6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China
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INTERTEK TESTING SERVICES

LIST OF EXHIBITS

INTRODUCTION

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MEASUREMENT/TECHNICAL REPORT

KEEN LEAGUE MANUFACTURING LIMITED - MODEL: BAS0101, PA100
FCC ID: Z7P-BAS0101-R

This report concerns (check one:) Original Grant ☒ Class II Change ☐

Equipment Type: CYY – Communications Receiver used w/Pt 15 Transmitter

Deferred grant requested per 47 CFR 0.457(d)(1)(ii)? Yes ☐ No ☒

If yes, defer until:
date

Company Name agrees to notify the Commission by:
date

of the intended date of announcement of the product so that the grant can be issued on that date.

Transition Rules Request per 15.37? Yes ☐ No ☒

If no, assumed Part 15, Subpart B for unintentional radiator - the new 47 CFR [10-1-10 Edition] provision.

Report prepared by:

Shawn Xing
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Kejiyuan Branch
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List of attached file

Exhibit type	File Description	filename
Test Report	Test Report	report.pdf
Operation Description	Technical Description	descri.pdf
Test Setup Photo	Radiated Emission	radiated photos.pdf
Test Setup Photo	Conducted Emission	conducted photos.pdf
External Photo	External Photo	external photos.pdf
Internal Photo	Internal Photo	internal photos.pdf
Block Diagram	Block Diagram	block.pdf
Schematics	Circuit Diagram	circuit.pdf
ID Label/Location	Label Artwork and Location	label.pdf
User Manual	User Manual	manual.pdf
Cover Letter	Letter of Agency	agency.pdf

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EXHIBIT 1

GENERAL DESCRIPTION

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1.0 **General Description**

1.1 Product Description

The equipment under test (EUT) is a receiver for a PEE ALARM operating at 433.990 MHz. The EUT is power by 2 x 1.5V AAA batteries or AC 100~240V, 50/60Hz. The EUT will emit an audible beep or shake from Vibes when transmitter transmit a signal.

Antenna Type: Integral antenna

The Model: PA100 is the same as the Model: BAS0101 in hardware aspect. The models are difference in packaging and marketing purpose only.

For electronic filing, the brief circuit description is saved with filename: descri.pdf.

1.2 Related Submittal(s) Grants

This is a single application for certification of a receiver. The transmitter, associated with this receiver, has FCC ID: Z7P-BAS0101-T and has been filed at the same time.

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1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.4 (2003). Radiated emission measurement was performed in Semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters, unless stated otherwise in the "**Justification Section**" of this Application.

1.4 Test Facility

The Semi-anechoic chamber and shielding room used to collect the radiated data and conducted data are **Interterk Testing Services Shenzhen Ltd. Kejiyuan Branch** and located at 6F, D Block, Huahan Building, Langshan Road, Nanshan District, Shenzhen, P. R. China. This test facility and site measurement data have been fully placed on file with the FCC.

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EXHIBIT 2

SYSTEM TEST CONFIGURATION

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2.0 **System Test Configuration**

2.1 Justification

The system was configured for testing in a typical fashion (as a customer would normally use it), and in the confines as outlined in ANSI C63.4 (2003).

The device is power by 2 x 1.5V AAA batteries and AC 120V when testing.

For maximizing emissions, the EUT was rotated through 360°, the antenna height was varied from 1 meter to 4 meters above the ground plane, and the antenna polarization was changed. The step by step procedure for maximizing emissions led to the data reported in Exhibit 3.0.

The rear of unit shall be flushed with the rear of the table.

The equipment under test (EUT) was configured for testing in a typical fashion (as a customer would normally use it). The EUT was placed on turntable, which enabled the engineer to maximize emissions through its placement in the three orthogonal axes.

The frequency range from 30MHz to 1GHz was searched for spurious emissions from the device. Only those emissions reported were detected. All other emissions were at least 20 dB below the applicable limits.

2.2 EUT Exercising Software

There was no special software to exercise the device. Once the unit is powered up, it received continuously.

2.3 Special Accessories

There is a vibes for compliance of this product.

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2.4 Equipment Modification

Any modifications installed previous to testing by KEEN LEAGUE MANUFACTURING LIMITED will be incorporated in each production model sold/leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd Kejiyuan Branch.

2.5 Measurement Uncertainty

When determining of the test conclusion, the Measurement Uncertainty of test has been considered.

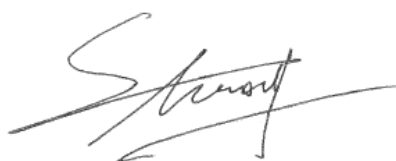
2.6 Support Equipment List and Description

1. Vibes VSS12 Bed Shaker (Provide by Client)

All the items listed under section 2.0 of this report are

Confirmed by:

Shawn Xing
Manager
Intertek Testing Services Shenzhen Ltd Kejiyuan Branch.
Agent for KEEN LEAGUE MANUFACTURING LIMITED



Signature

November 30, 2011

Date

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EXHIBIT 3

EMISSION RESULTS

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3.0 **Emission Results**

Data is included of the worst case configuration (the configuration which resulted in the highest emission levels). A sample calculation, configuration photographs and data tables of the emissions are included.

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3.1 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CF - AG$$

where FS = Field Strength in dB μ V/m
 RA = Receiver Amplitude (including preamplifier) in dB μ V
 CF = Cable Attenuation Factor in dB
 AF = Antenna Factor in dB
 AG = Amplifier Gain in dB

In the following table(s), the reading shown on the data table reflects the preamplifier gain. An example for the calculations in the following table is as follows:

$$FS = RR + LF$$

where FS = Field Strength in dB μ V/m
 RR = $RA - AG$ in dB μ V
 LF = $CF + AF$ in dB

Assume a receiver reading of 52.0 dB μ V is obtained. The antenna factor of 7.4 dB and cable factor of 1.6 dB are added. The amplifier gain of 29 dB is subtracted, giving a field strength of 32 dB μ V/m. This value in dB μ V/m was converted to its corresponding level in μ V/m.

$RA = 52.0$ dB μ V/m	
$AF = 7.4$ dB	$RR = 23.0$ dB μ V
$CF = 1.6$ dB	$LF = 9.0$ dB
$AG = 29.0$ dB	
$FS = RR + LF$	
$FS = 23 + 9 = 32$ dB μ V/m	

Level in μ V/m = Common Antilogarithm $[(32 \text{ dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}$

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3.2 Radiated Emission Configuration Photograph

Worst Case Radiated Emission
at
374.835 MHz

For electronic filing, the worst case radiated emission configuration photographs are saved with filename: radiated photos.doc.

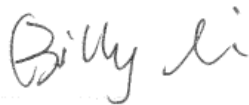
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3.3 Radiated Emission Data

The data on the following page lists the significant emission frequencies, the limit and the margin of compliance. Numbers with a minus sign are below the limit.

Judgement: Passed by 7.2 dB

TEST PERSONNEL:



Signature

Billy Li, Team Leader
Typed/Printed Name

November 30, 2011
Date

INTERTEK TESTING SERVICES

Applicant: KEEN LEAGUE MANUFACTURING LIMITED

Date of Test: November 30, 2011

Model: BAS0101

Test Mode: Receive

Table 1

FCC Class B Radiated Emissions

Polarization	Frequency (MHz)	Reading (dBμV)	Pre-Amp Gain (dB)	Antenna Factor (dB)	Net at 3m (dBμV/m)	Limit at 3m (dBμV/m)	Margin (dB)
V	189.080	35.7	20.0	10.7	26.4	43.5	-17.1
V	205.085	35.2	20.0	11.1	26.3	43.5	-17.2
V	223.515	37.0	20.0	11.9	28.9	46.0	-17.1
V	335.550	34.1	20.0	15.7	29.8	46.0	-16.2
V	374.835	42.8	20.0	16.0	38.8	46.0	-7.2
V	481.050	33.7	20.0	18.5	32.2	46.0	-13.8

NOTES: 1. Peak Detector Data unless otherwise stated.

2. All measurements were made at 3 meters. Harmonic emissions not detected at the 3-meter distances were measured at 0.3-meter and an inverse proportional extrapolation was performed to compare the signal level to the 3-meter limit. No other harmonic emissions than those reported were detected at a test distance of 0.3-meter.

3. Negative sign in the column shows value below limit.

4. All emissions below 1000MHz are below the QP limit and all emissions above 1000MHz are below the AV limit.

5. Peak detector was used when the frequency above 1000MHz.

Test Engineer: Billy Li

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3.4 Conducted Emission Configuration Photograph

Worst Case Line-Conducted Configuration
at
0.498 MHz

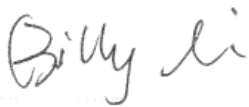
For electronic filing, the worst case conducted emission configuration photograph is saved with filename: conducted photos.pdf.

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3.5 Conducted Emission Data

Judgement: Passed by 5.5 dB margin

TEST PERSONNEL:



Billy Li, Team Leader
Typed/Printed Name

November 30, 2011
Date

INTERTEK TESTING SERVICES

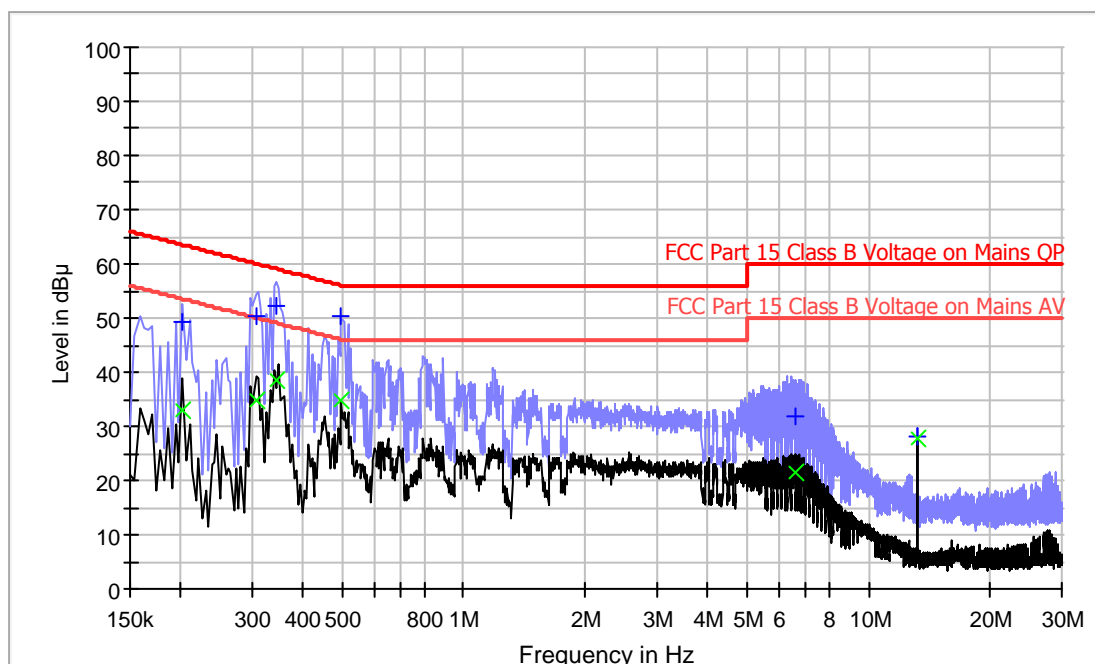
Applicant: KEEN LEAGUE MANUFACTURING LIMITED

Date of Test: November 30, 2011

Model: BAS0101

Test Mode: Receive

Conducted Emission Test - FCC



Result Table-QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.202	49.4	L1	9.6	14.1	63.5
0.306	50.5	L1	9.6	9.6	60.1
0.345	52.1	L1	9.6	7.0	59.1
0.498	50.5	L1	9.6	5.5	56.0
6.570	31.7	L1	9.9	28.3	60.0
13.226	28.2	L1	10.0	31.8	60.0

Result Table-AV

Frequency (MHz)	Average (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.202	32.8	L1	9.6	20.7	53.5
0.306	35.0	L1	9.6	15.1	50.1
0.345	38.5	L1	9.6	10.6	49.1
0.498	34.9	L1	9.6	11.1	46.0
6.570	21.4	L1	9.9	28.6	50.0
13.226	27.7	L1	10.0	22.3	50.0

Test Engineer: Billy Li

TRF no.: FCC 15C_RX-SRa
FCC ID: Z7P-BAS0101-R

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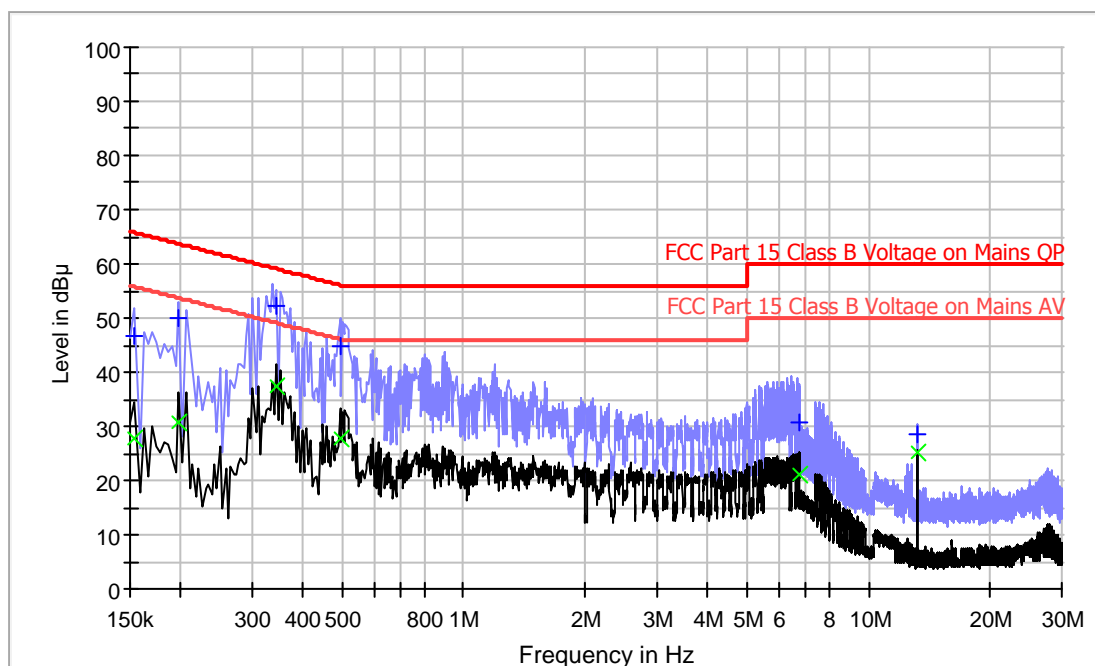
Applicant: KEEN LEAGUE MANUFACTURING LIMITED

Date of Test: November 30, 2011

Model: BAS0101

Test Mode: Receive

Conducted Emission Test - FCC



Result Table-QP

Frequency (MHz)	QuasiPeak (dB μ V)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)
0.154	46.5	N	9.6	19.3	65.8
0.198	50.0	N	9.6	13.7	63.7
0.346	52.3	N	9.6	6.8	59.1
0.494	44.8	N	9.6	11.3	56.1
6.718	30.9	N	9.9	29.1	60.0
13.226	28.7	N	10.0	31.3	60.0

Result Table-AV

Frequency (MHz)	CAverage (dBμV)	Line	Corr. (dB)	Margin (dB)	Limit (dBμV)
0.154	27.8	N	9.6	28.0	55.8
0.198	30.6	N	9.6	23.1	53.7
0.346	37.3	N	9.6	11.8	49.1
0.494	27.8	N	9.6	18.3	46.1
6.718	21.0	N	9.9	29.0	50.0
13.226	25.3	N	10.0	24.7	50.0

Test Engineer: Billy Li

TRF no.: FCC 15C_RX-SRa
FCC ID: Z7P-BAS0101-R

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EXHIBIT 4

EQUIPMENT PHOTOGRAPHS

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4.0 **Equipment Photographs**

For electronic filing, the photographs are saved with filename: external photos.doc and internal photos.doc.

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EXHIBIT 5

PRODUCT LABELLING

INTERTEK TESTING SERVICES

5.0 **Product Labelling**

For electronics filing, the FCC ID label artwork and the label location are saved with filename: label.pdf.

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EXHIBIT 6

TECHNICAL SPECIFICATIONS

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6.0 Technical Specifications

For electronic filing, the block diagram and schematic of the tested EUT are saved with filename: block.pdf and circuit.pdf respectively.

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EXHIBIT 7

INSTRUCTION MANUAL

INTERTEK TESTING SERVICES

7.0 **Instruction Manual**

For electronic filing, a preliminary copy of the Instruction Manual is saved with filename: manual.pdf.

This manual will be provided to the end-user with each unit sold/leased in the United States.

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EXHIBIT 8

MISCELLANEOUS INFORMATION

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8.0 **Miscellaneous Information**

This miscellaneous information includes emission measuring procedure.

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8.1 Emissions Test Procedures

The following is a description of the test procedure used by Intertek Testing Services in the measurements of computer peripheral operating under Part 15, Subpart B rules.

The test set-up and procedures described below are designed to meet the requirements of ANSI C63.4 – 2003.

The computer peripheral equipment under test (EUT) is placed on a wooden turntable which is four feet in diameter and approximately one meter in height above the ground plane. During the radiated emissions test, the turntable is rotated and any cables leaving the EUT are manipulated to find the configuration resulting in maximum emissions. The antenna height and polarization are varied during the testing to search for maximum signal levels. The height of the antenna is varied from one to four meters.

Detector function for radiated emissions is in QP mode from the frequency band 30MHz to 1GHz and RBW setting is 120kHz. Detector function for conducted emissions are in QP & AV mode and IFBW setting is 9kHz from the frequency band 150kHz to 30MHz.

For radiated emission, the frequency range scanned is 30MHz to 1GHz. For line-conducted emissions, the range scanned is 150kHz to 30MHz.

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8.1 Emissions Test Procedures (cont'd)

The EUT is warmed up for 15 minutes prior to the test.

AC power to the unit is varied from 85% to 115% nominal and variation in the fundamental emission field strength is recorded. If battery powered, a new, fully charged battery is used.

Conducted measurements were made as described in ANSI C63.4 - 2003.

The IF bandwidth used for measurement of radiated signal strength was 100 kHz or greater when frequency is below 1000 MHz. Above 1000 MHz, a resolution bandwidth of 1 MHz is used.

Measurements are normally conducted at a measurement distance of three meters. All measurements are extrapolated to three meters using inverse scaling, unless otherwise reported. Measurements taken at a closer distance are so marked.

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EXHIBIT 9

TEST EQUIPMENT LIST

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9.0 Test Equipment List

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.	Cal. Date	Due Date
SZ061-03	BiConiLog Antenna	ETS	3142C	00066460	15-Oct-2011	15-Oct-2012
SZ185-01	EMI Receiver	R&S	ESCI	100547	08-Mar-2011	08-Mar-2012
SZ061-08	Horn Antenna	ETS	3115	00092346	29-Aug-2011	29-Feb-2012
SZ056-03	Spectrum Analyzer	R&S	FSP 30	101148	24-Sep-2011	24-Mar-2012
SZ181-04	Preamplifier	Agilent	8449B	3008A02474	08-Mar-2011	08-Mar-2012
SZ188-01	Anechoic Chamber	ETS	RFD-F/A-100	4102	06-Mar-2011	06-Mar-2012
SZ062-02	RF Cable	RADIAL	RG 213U	--	03-Sep-2011	03-Mar-2012
SZ062-06	RF Cable	RADIAL	0.04-26.5GHz	--	03-Sep-2011	03-Mar-2012
SZ062-12	RF Cable	RADIAL	0.04-26.5GHz	--	03-Sep-2011	03-Mar-2012
SZ185-02	EMI Test Receiver	R&S	ESCI	100692	12-Nov-2011	12-Nov-2012
SZ187-01	Two-Line V-Network	R&S	ENV216	100072	12-Nov-2011	12-Nov-2012
SZ188-03	Shielding Room	ETS	RFD-100	4100	16-Sep-2011	16-Sep-2012
SZ180-01	Signal Generator	R&S	SML03	103286	08-Mar-2011	08-Mar-2012