



**FCC 47 CFR § 2.1093  
IEEE Std 1528-2013**

**SAR EVALUATION REPORT**

**FOR**

**BLE**

**MODEL NUMBER: EJ-PN770**

**FCC ID: A3LEJPN770**

**REPORT NUMBER: 4789238252-S1V2**

**ISSUE DATE: 11/25/2019**

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**TL-637**

**Revision History**

Rev.	Date	Revisions	Revised By
V1	11/21/2019	Initial Issue	-
V2	11/25/2019	Revised Sec.1.	Sunghoon Kim

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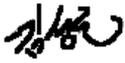
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# 1. Attestation of Test Results

Applicant Name	SAMSUNG ELECTRONICS CO.,LTD.
FCC ID	A3LEJPN770
Model Number	EJ-PN770
Applicable Standards	FCC 47 CFR § 2.1093 Published RF exposure KDB procedures IEEE Std 1528-2013
Exposure Category	Handheld operation
	Exempted from SAR test

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

**Note:** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released By: 	Prepared By: 
Justin Park Lead Test Engineer UL Korea, Ltd. Suwon Laboratory	Sunghoon Kim Test Engineer UL Korea, Ltd. Suwon Laboratory

## 2. Test Specification, Methods and Procedures

The tests documented in this report were performed in accordance with FCC 47 CFR § 2.1093, IEEE STD 1528-2013, the following FCC Published RF exposure [KDB](#) procedures:

- 447498 D01 General RF Exposure Guidance v06
- 690783 D01 SAR Listings on Grants v01r03
- 865664 D01 SAR measurement 100 MHz to 6 GHz v01r04
- 865664 D02 RF Exposure Reporting v01r02

## 3. Facilities and Accreditation

The test sites and measurement facilities used to collect data are located at

Suwon
SAR 1 Room
SAR 2 Room
SAR 3 Room
SAR 4 Room
SAR 5 Room

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637.

The full scope of accreditation can be viewed at <http://www.iasonline.org/PDF/TL/TL-637.pdf>.

## 4. Device Under Test (DUT) Information

### 4.1. DUT Description

Device Dimension	Overall : 5.80 mm x 4.35 mm x 105.18 mm
User condition	This device are designed hand-held use near the body of users.

### 4.2. Wireless Technologies

Wireless technologies	Frequency bands	Operating mode	Duty Cycle used for SAR testing
BLE	2.4 GHz	BLE-1Mbps	66.5%

### 4.3. Nominal and Maximum Output Power from Tune-up Procedure

KDB 447498 sec.4.1. at the maximum rated output power and within the tune-up tolerance range specified for the product, but not more than 2 dB lower than the maximum tune-up tolerance limit

RF Air interface	Mode	Max. RF Output Power (dBm)
BLE		1.0

## 5. Standalone SAR Test Exclusion Considerations

### 5.1. BLE

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$ , for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

- $f_{(\text{GHz})}$  is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion.

#### Standalone Exposure Conditions

RF Air interface	Max. tune-up tolerance limit		Min. test separation distance (mm)	Frequency (GHz)	SAR test exclusion Result*
	(dBm)	(mW)			
BLE	1.0	1	5	2.480	0.3

#### **Conclusion:**

\*: The computed value is  $< 3$ ; therefore, Bluetooth qualifies for Standalone SAR test exclusion.

**END OF REPORT**