

SAR Exemption Exhibit

Certification

Applicant Name:

Universal Electronics Inc

Date of Issue:

June 06, 2020

Address:201 East Sandpointe Ave 7th Floor
Santa Ana, CA 92707, U.S.A.**Test Site/Location:**Hyundai C-Tech, Inc. dba HCT America, Inc.
1726 Ringwood Avenue San Jose, California USA**Report No.:** HCTA-R-2002-006-01**FCC ID:**

MG3-R324854

IC:

2575A-R324854

APPLICANT:

Universal Electronics Inc

Model Name:

R324854

Part Number:

R324854A98-00001

Project Name:

BV KITA Android Platform RCU 2019

EUT Type:

BLE Remote Control Unit

Frequency Range:

2402 MHz – 2480 MHz

The measurements shown in this report were made in accordance with the procedures specified in §2.947.

I assume full responsibility for the accuracy and completeness of these measurements, and for the qualifications of all persons taking them



Steve In
Test Engineer
Certification Division



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Technical Manager
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Version

TEST REPORT NO.	DATE	DESCRIPTION
HCTA-R-2002-006	February 26, 2020	First Issue
HCTA-R-2002-006-01	June 6, 2020	-Revision due to Tune-up Power added

EXPOSURE EVALUATION OF PORTABLE DEVICE

The RF exposure from portable device (47 CFR §2.1091), as defined by FCC, must be evaluated with respect to FCC-adopted limits for SAR.

When no other RF exposure testing or reporting are required, a statement of justification and compliance must be included in the equipment approval, in lieu of the SAR report, to qualify for SAR test exclusion.

SAR Test Exclusion Thresholds for 100 MHz – 6 GHz and ≤ 50 mm

Approximate SAR Test Exclusion Power Thresholds at Selected Frequencies and Test Separation Distances are illustrated in the following Table. The equation and threshold in 4.3.1 must be applied to determine SAR test exclusion.

MHz	5	10	15	20	25	mm
150	39	77	116	155	194	SAR Test Exclusion Threshold (mW)
300	27	55	82	110	137	
450	22	45	67	89	112	
835	16	33	49	66	82	
900	16	32	47	63	79	
1500	12	24	37	49	61	
1900	11	22	33	44	54	
2450	10	19	29	38	48	
3600	8	16	24	32	40	
5200	7	13	20	26	33	
5400	6	13	19	26	32	
5800	6	12	19	25	31	

For 100 MHz to 6 GHz and test separation distances ≤ 50 mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:

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

EVALUATION RESULTS

Modulation Mode	Freq.(MHz)	Measured value (dBm)	Adjusted for tune-up Max Power (dBm)	Max Power (mW)	Limit (mW)
1Mbps	2402	4.32	5.0	3.16	10.087
	2440	4.41	5.0	3.16	10.018
	2480	4.49	5.0	3.16	9.948

$$\frac{(\text{max. power of channel, including tuneup tolerance, mW})}{(\text{min. test separation distance, mm})} \times [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR}$$

$$= \frac{3.16 \text{ mW}}{5 \text{ mm}} \times [\sqrt{2.480 \text{ GHz}}] = 0.995 \leq 3.0$$

Worst SAR Test Exclusion Thresholds is < 9.95 mW and 3.0 for separation distance 5mm.

Conclusion

The result after calculation is less than or equal to 3, the limit for 1-g SAR, therefore this device is exempt from SAR evaluation.