



Radio Frequency Exposure Evaluation Report

For:
Visteon Corporation

Brand:
Visteon

Marketing Name:
Battery Pack Control Module

Model Name:
BPCMFx

Product Description:
Battery Pack Control Module

FCC ID: NT8-BPCMFxE
IC: 3043A-BPCMFx

Applied Rules and Standards:
CFR Part1 (1.1307 & 1.1310), Part 2 (2.1091 & 2.1093),
FCC KDB 447498 D01 General RF Exposure Guidance v06
ISED RSS-102 Issue 6

REPORT #: EMC_VISTE_011_25001_RF_Exposure_BPCMFxE_Rev1

DATE: 2026-01-26



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1 Assessment

This RF Exposure evaluation report provides evidence for compliance of the below identified device with the RF Exposure limits for mobile devices as defined in FCC CFR Part 1 (1.1307 & 1.1310), Part 2 (2.1091 & 2.1093) and ISED standard RSS-102 issue 6 under worst case conditions (measured or rated RF output power, antenna gain, distance towards human body, multiple transmitter information as presented by the applicant). In addition, maximum antenna gain or minimum distance towards the human body is calculated respectively, where relevant.

The device meets the limits as stipulated by the above given FCC and ISED rule parts based on available specifications for worst-case conditions at 2 cm distance to the body.

Company	Description	Model #
Visteon Corporation	Battery Pack Control Module	BPCMFx

Responsible for testing Laboratory:

2026-01-26	Compliance	Alvin Ilarina (Director of EMC Services)	Alvin ILARINA Digitally signed by Alvin ILARINA Date: 2026.01.27 14:14:14 -08'00'
Date	Section	Name	Signature

Responsible for the Report:

2026-01-26	Compliance	Guangcheng Huang (Senior EMC Test Engineer)	Guangch eng Huang Digitally signed by Guangcheng Huang DN: cn = Guangcheng Huang, email = guangcheng. Huang@cetecom.com C = U US # = cetecom OU = EMC Date: 2026.01.26 16:50:56 - 08'00'
Date	Section	Name	Signature

The test results of this test report relate exclusively to the test item specified in Section 3.
CETECOM Inc. USA does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples of the type of the equipment represented by the test item. The test report may only be reproduced or published in full. Reproduction or publication of extracts from the report requires the prior written approval of CETECOM Inc. USA.

2 Administrative Data

2.1 Identification of the Testing Laboratory Issuing the EMC Test Report

Company Name:	CETECOM Inc.
Department:	Compliance
Street Address:	411 Dixon Landing
City/Zip Code	Milpitas, 95035 CA
Country	USA
Telephone:	+ 1 (408) 586 6200
Fax:	+ 1 (408) 586 6299
EMC Lab Manager:	Alvin Ilarina
Project Manager:	Ruby Hall

2.2 Identification of the Client

Client's Name:	Visteon Corporation
Street Address:	One Village Center Drive
City/Zip Code	Van Buren Township, MI/48111
Country	USA

2.3 Identification of the Manufacturer

Manufacturer's Name:	same as client
Manufacturers Address:	same as client
City/Zip Code	same as client
Country	same as client

3 **Equipment Under Test (EUT)**

3.1 EUT Specifications

Model No:	BPCMFx
Marketing Name:	Battery Pack Control Module
HW Version :	VPVE1F-12A650-AB
SW Version :	SWE205-28418-002F01
FCC ID :	NT8-BPCMFxE
IC :	3043A-BPCMFx
FWIN:	2.0
HVIN:	BPCMFxE
PMN:	BPCMFx
Product Description:	Battery Pack Control Module
Power Supply / Rated operating Voltage Range:	Min. 8 V, Nom 13.5 V, Max. 16 V powered by the vehicle battery power system
Operating Temperature Range	-40°C to +85°C
Sample Revision	Pre-production
EUT Dimensions	12.4 cm X 40.86 cm X 0+ 3.47 cm
Note: All information provided by the client.	

3.2 Radio Specifications

Embedded Radio Technologies	Proprietary Protocol: 802.15.4 2400 MHz - 2483.5 MHz ISM Band
Frequency Range / number of channels:	1.- ADRF8951 chipset: Low Power 2.4 GHz WBMS radio Frequency Range: 2405 - 2480 MHz Channels: 0-15 2.- ADRF8951 chipset: Low Power 2.4 GHz WBMS radio Frequency Range: 2405 - 2480 MHz Channels: 0-15
Rated max. EIRP	1.- ADRF8951 chipset: 8 dBm 2.- ADRF8951 chipset: 8 dBm
Tested radio technology	Proprietary Protocol 2.4 GHz for both ADR8951 chipset>
Antenna Type / Gain	2.6 dBi
Modes of Operation	1.- ADRF8951 chipset: Proprietary Protocol: 802.15.4 2400 MHz - 2483.5 MHz ISM Band Modulation: GFSK Nominal Channel Bandwidth: 5 MHz Duty Cycle: 27% 2.- ADRF8951 chipset: Proprietary Protocol: 802.15.4 2400 MHz - 2483.5 MHz ISM Band Modulation: GFSK Nominal Channel Bandwidth: 5 MHz Duty Cycle: 27%
Note: All information provided by the client.	

4 RF Exposure Exemption Limits for FCC and IC

4.1 FCC Rule Part

4.1.1 Single RF source

§ 2.1091(c)(1)

Evaluation of compliance with the exposure limits in § 1.1310 of this chapter, and preparation of an EA if the limits are exceeded, is necessary for mobile devices with single RF sources having either more than an available maximum time-averaged power of 1 mW or more than the ERP listed in Table 1 to § 1.1307(b)(3)(i)(C), whichever is greater.

TABLE 1 TO § 1.1307(b)(3)(i)(C)—SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1.920 R^2$.
1.34-30	$3.450 R^2 / f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

For mobile devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 of this chapter is necessary if the ERP of the device is greater than ERP_{20cm} in the formula below. If the ERP of a single RF source at distances from 20 centimeters to 40 centimeters and frequencies from 0.3 GHz to 6 GHz is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP) in comparison with the following formula only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

$$P_{th}(\text{mW}) = ERP_{20\text{ cm}}(\text{mW}) = \begin{cases} 2040f & 0.3\text{ GHz} \leq f < 1.5\text{ GHz} \\ 3060 & 1.5\text{ GHz} \leq f \leq 6\text{ GHz} \end{cases}$$

§ 2.1093(c)(1)

The following formula shall only be used in conjunction with portable devices not exempt by § 1.1307(b)(3)(i)(C) at distances from 0.5 centimeters to 20 centimeters and frequencies from 0.3 GHz to 6 GHz

$$P_{th}(\text{mW}) = \begin{cases} ERP_{20\text{ cm}}(d/20\text{ cm})^x & d \leq 20\text{ cm} \\ ERP_{20\text{ cm}} & 20\text{ cm} < d \leq 40\text{ cm} \end{cases}$$

4.1.2 Multiple RF sources

§ 1.1307(b)(3)(ii)(A)

Exempt, if the available maximum time-averaged power of each source is no more than 1 mW and there is a separation distance of two centimeters between any portion of a radiating structure operating and the nearest portion of any other radiating structure in the same device, except if the sum of multiple sources is less than 1 mW during the time-averaging period, in which case they may be treated as a single source (separation is not required).

§ 1.1307(b)(3)(ii)(B)

Exempt, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure Limit_k} \leq 1$$

4.2 IC Rule Part

4.2.1 Exemption limits for routine evaluation on SAR according to RSS-102 i6, cl.6.3

Frequency (MHz)	≤ 5 mm (mW)	10 mm (mW)	15 mm (mW)	20 mm (mW)	25 mm (mW)	30 mm (mW)	35 mm (mW)	40 mm (mW)	45 mm (mW)	> 50 mm (mW)
≤ 300	45	116	139	163	189	216	246	280	319	362
450	32	71	87	104	124	147	175	208	248	296
835	21	32	41	54	72	96	129	172	228	298
1900	6	10	18	33	57	92	138	194	257	323
2450	3	7	16	32	56	89	128	170	209	245
3500	2	6	15	29	50	72	94	114	134	158
5800	1	5	13	23	32	41	54	74	102	128

4.2.2 Exemption limits for routine evaluation on field reference level exposure according to RSS-102 i6, cl.6.6

Frequency [MHz]	Time-averaged EIRP [W]
Below 20	1
20-48	$4.49/f^{0.5}$
48-300	0.6
300-6000	$1.31 \cdot 10^{-2} \cdot f^{0.6834}$
Above 6000	5

5 Evaluations

Analysis of RF Exposure

- Radiation source to human body distance: min. 2 cm.
- Evaluations are based on ERP/EIRP measured or calculated from given antenna gain and conducted output power.
- Device embeds two identical RF sources, activates only one at a time, no simultaneous transmission.

5.1 FCC Exemption

Radio	F Low [MHz]	Output Power [dBm]	Output Power [mW]	AG [dBi]	AG_i linear	ERP [mW]	ERP _{20cm} [mW]	ERP Limit at 2 cm (mW)	Verdict
Proprietary 2.4 GHz	2440	6.7	4.7	2.6	1.82	5.19	3060	39	Exempt

Note:

1. Exemption option: § 1.1307(b)(3)(i)(C)
2. Antenna gain provided by customer
3. Choose the maximum power to do MPE analysis.

Conclusion:

ERP is below the threshold. Hence, it is exempt from RF exposure evaluation.

5.2 IC Exemption

Radio	F Low [MHz]	Max Output Power Antenna Port [dBm]	Output Power [mW]	AG [dBi]	AG linear	RF EIRP mW	Power Limit [mW]	Verdict
Proprietary 2.4 GHz	2440	6.7	4.7	2.6	1.82	8.55	32	Exempt at 2cm and beyond.

Note:

1. Exemption option: clause 6.3
2. Antenna gain provided by the customer
3. Choose the maximum power to do MPE analysis.

Conclusion:

EIRP is below the threshold. Hence, the device is exempt from RF exposure evaluation, if deployed at 2 cm and beyond to human body.

6 Revision History

Date	Report name	Changes to report	Prepared by
2025-12-18	EMC_VISTE_011_25001_RF_Exposure_BPCMFxE	Initial version	Guangcheng Huang
2026-01-26	EMC_VISTE_011_25001_RF_Exposure_BPCMFxE _Rev1	Update model name	Guangcheng Huang

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