

RF Exposure Statement: JP25A8VK 001Page 1 of 2
Seite 1 von 2

Client: MinebeaMitsumi Inc.
1-9-3, Higashi-shimbashi, Minato-ku, Tokyo, 105-0021, Japan

Test item: Parking Sensor

Identification: NDPM006US

FCC Requirement

Exemption Threshold for each Transmitter

According to §1.1307 (b)(3), transmitter device is qualified as exemption of RF human exposure, when the transmitter power is below the threshold calculated by its relevant formula defined in § 1.1307 (b)(3)(i)(B), 1.1307 (b)(3)(i)(C), Table 1, respectively:

Transmitter	Frequency [MHz]	Min. Separation Distance d [cm]	Threshold P _{th} [mW]
Sub-GHz Transmitter	902.42	20	1840
24GHz Transmitter	24150	20	768

Note: The Threshold ERP P_{th} is valid as Distance d is larger than $\lambda / 2\pi$ i.e. 1.98mm for 24GHz Transmitter.

Measurement Result

The maximum ERP from the transmitter (**EUT**) is given in the following table:

1) Sub-GHz Transmitter

Transmitter	Freq. Range [MHz]	Max. Cond. Average Power		Antenna Gain [dBi]	Maximum ERP [mW]
		[dBm]	[mW]		
Sub-GHz Transmitter	902.42 - 927.58	12.68	18.54 (*)	-5.0	3.57

Note: Maximum ERP [mW] = $10^{(\text{Max Cond. Average Power [dBm]} + \text{Antenna Gain [dBi]} - 2.15)/10}$

The conducted power is cited from the test JP25KRGU 001 by TUV Rheinland Japan.

(*) The maximum time-averaged power (Cond. power) or ERP, whichever is greater applied.

2) 24GHz Transmitter (Non-specific SRD 24GHz)

Transmitter	Freq. Range [MHz]	Field Strength [dBμV/m]	Distance [m]	Maximum ERP [mW]
24GHz Transmitter	24150	101.6	3	2.64

Note: Maximum ERP [mW] = $(10^{(\text{Field Strength [dBμV/m]}/20)} / 10^6 \times \text{Distance [m]})^2 / 49.2 \times 1000$

The field strength is cited from the test JP25E48F 001 by TUV Rheinland Japan.

RF Exposure Statement: JP25A8VK 001**Page 2 of 2**
Seite 2 von 2**Evaluation for Single RF Sources**

Standalone operation from each transmitter is evaluated by the following.

Transmitter	Frequency [MHz]	Maximum Power [mW]	Min. Separation Distance d [cm]	Threshold P_{th} [mW]
Sub-GHz Transmitter	902.42	18.54	20	1840
24GHz Transmitter	24150	2.64	20	768

Evaluation for Simultaneous Transmissions

As per §1.1307 (b)(3)(ii)(B) and the product specification, the following possible combinations are evaluated to identify the overall worst case for the Multiple RF Sources.

Transmitter	Maximum Power [mW]	Threshold P_{th} [mW]	Ratio	Sum of Ratios	Limit
Sub-GHz Transmitter	18.54	1840	0.0101	0.0135	1
24GHz Transmitter	2.64	768	0.0034		

Conclusion

The both transmitters are classified as Mobile Device by the client. Simultaneous transmission operations are evaluated.

SAR evaluation is not required, since the ERP/Conducted output power of each single RF source and all possible simultaneous transmissions are below the FCC SAR exemption threshold ERP P_{th} and the summation ratio (≤ 1) (**0.0135**) at the separation distance of **20cm** between a body of an operator and transmitters, respectively.

Hence, the device can be qualified as exemption from Routine Environmental Evaluation.