

RF exposure Report / MPE Calculation

Product information from applicant

Applicant	: Sony Semiconductor Solutions Corporation
Applicant address	: 4-14-1, Asahicho, Atsugi-shi, Kanagawa, 243-0014, Japan
FCC ID	: 2BUTASMSD-1004
Product description	: 60GHz mmWave Radar sensor
Operation Frequency range	: 57 GHz to 59.4 GHz
Peak output power (Measured)	: 10.69 dBm eirp
Max Antenna gain	: 3 dBi (Manufacture's declares)

MPE Calculation

The power density (S) is calculated using the formula:

$$S = (P_t \times G) / (4 \times \pi \times R^2)$$

Where:

P_t = Transmit Power in Watts

G = Antenna Gain (linear)

R = Distance from the antenna in meters

Parameter	Value	Unit	Description
Transmit Power (P_t)	10.69	dBm	Power of the RF transmitter
Antenna Gain (G)	3	dBi	Gain of the antenna
Distance (R)	0.2	m	Distance from the source to the human body
Transmit Power (P_t)	0.01172	W	Converted to Watts
Antenna Gain (G)	1.99526		Converted to linear scale
Power Density (S)	0.04653	W/m ²	Calculated power density
FCC Limit	10	W/m ²	Maximum permissible exposure limit
Compliance	Compliant		Comparison with FCC limit

Compliance Evaluation

Conclusion: The device is Compliant with FCC RF exposure limits for 60GHz operation.

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