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1. Equipment Under Test (EUT)

RFID Module NUR3-1W6 M2

Manufacturer declaration

The EUT is designed for fixed / mobile applications application environments.

1.1. Fixed / Mobile Application

MPE for bystanders which are considered to be $\geq 20\text{cm}$ away from the front of the transmit antenna

2. Maximum Permissible Exposure FCC

2.1 RFID

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

$$S = \frac{PG}{4\pi R^2}$$

Prediction frequency:	927.25	MHz
Radiated Field Strength at 3m	130.6	dBuV/m
Power Conversion factor for antenna distance 3m	-95.2	dB
Tune up tolerance	1.00	dB
Time Averaging Factor	0	dB
EIRP Peak	36	dBm
EIRP Peak	4365	mW
Prediction distance:	24	cm
Prediction frequency:	927.25	MHz
MPE limit for Uncontrolled/General Population exposure at prediction frequency:	0.620	mW/cm^2
Power density at prediction frequency:	0.603	mW/cm^2
Power density at prediction frequency:	6.031	W/m^2
Test Result	Pass	
Exempt from routine evaluation for RF Exposure 0.603 <= 0.62		

Notes

The table above shows that for a prediction distance of 24 cm, RF exposure evaluation is not required.

3. Maximum permissible exposure IC

Limits for Routine Evaluation — RF Exposure Evaluation
Limits as per RSS 102 Issue 6 (Dec 2023) Table 4

3.1. RFID

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

$$S = \frac{PG}{4\pi R^2}$$

Prediction frequency:	927.25	MHz
Radiated Field Strength at 3metres	130.6	dBuV/m
Adjustment for antenna 3m distance	-95.2	dB
EIRP Peak	35.4	dBm
Time Averaging Factor	0.00	dB
Tune up factor	1.00	dB
EIRP Peak	36.40	dBm
EIRP Peak	4.37	W
Prediction distance:	35.5	cm
Prediction frequency:	927.25	MHz
Power density at prediction frequency and prediction distance:	2.756	W/m^2
Power Density Limit for Uncontrolled/General Population exposure at prediction frequency:	2.792	W/m^2
EUT power meets the Power Density Limits for RF Exposure 2.756 < = 2.792		

Notes

The table above shows that for a prediction distance of 35.5cm, RF exposure evaluation is not required

End of report