US Tech Test Report:	FCC Part 15/IC RSS Certification
FCC ID:	2ADWT-ICSR01
IC:	12660A-ICSR01
Test Report Number:	24-0098
Issue Date:	June 28, 2024
Customer:	Southern States, LLC
Model:	ICS/TFDIR Receiver

Maximum Public Exposure to RF (MPE) CFR 1.1310 (e), CFR 2.1091, CFR 15.247 (i)

The maximum exposure level to the public from the RF power of the EUT shall not exceed a power density, **S**, as per the respective limits in Table 1 below, at a distance, **d**, of 20 cm (Mobile condition) from the EUT.

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Averaging Time (minutes)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	*180/f^2	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

f = frequency in MHz * = Plane-wave equivalent power density

Therefore, for:

MPE for 2400 MHz – 2483.5 MHz for this EUT:

Limit: 1.0 mW/cm^2
Peak Power (dBm) = +4.0 dBm
Peak Power (Watts) = 0.003 W
Gain of Transmit Antenna = 5.3dB$_i$ = 3.39 numeric (Highest Gain)
d = Distance = 20 cm = 0.2 m

S = (PG/ 4πd^2) = EIRP/4A = 0.003(3.39)/4*π*0.2*0.2
= 0.01017/0.5030 = 0.0202 W/m^2
= (0.0202 W/m^2) (1m^2/W) (0.1 mW/cm^2)
= 0.00202 mW/cm^2

which is << less than S = 1.0 mW/cm^2

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RF Exposure Evaluation – IC

According to RSS-102, 2.5.2 Exemption Limits for Routine Evaluation:

At or above 300 MHz and below 6 GHz and the source-based time averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} \times f^{0.6834}$ in Watts (adjusted for tune up tolerance where applicable), where f = frequency in MHz.

For 2.4 GHz Band:

Limit = $1.31 \times 10^{-2} \times 2440^{0.6834}$ = 2.7 Watts

Max EIRP for this EUT = 4.0 dBm + 5.3 dB = 9.3 dBm = 8.511 mW << 2700 mW