

## EXHIBIT 12 – TRANSMITTER POWER OUTPUT

The transmitter power output for the station is **66 watts**. This has been calculated based on the following:

1. The authorized effective radiated power is 0.019 kW (19.0 watts).
2. The transmission line is 34 meters of Andrew LDF4-50A coaxial cable. This type of cable has 2.17 dB loss per 100m<sup>1</sup>, or 0.74 dB for the length in use. This equates to an efficiency of 84.3%.
3. An EMR Corporation model 6354-SN2 dual-cavity filter is installed at the output of the transmitter. The filter and its associated interconnect cables have a total insertion loss of 1.32 dB<sup>2</sup>. This is equivalent to an efficiency of 73.8%
4. The gain of the Shively SLV-1 "Versa2une" single-bay non-directional antenna is 0.46<sup>3</sup>.
5. The transmitter power output is this calculated as follows:

Authorized effective radiated power:	19.0 watts
Transmission line efficiency:	÷ 84.5 %
Filter efficiency:	÷ 73.8 %
Antenna gain:	<u>÷ 0.46</u>
Transmitter power output:	66.2 watts

6. Rounding to the nearest 1 watt increment per 47 CFR §73.212(a), the transmitter output power is thus 66 watts.

W259BU utilizes an Armstrong model FMX-100LCD transmitter. This unit is certificated for operation under Part 73 and Part 74 at this power level.

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<sup>1</sup> Manufacturer's specification

<sup>2</sup> Measured using an Agilent E5070B network analyzer

<sup>3</sup> Manufacturer's specification