2.2.2.1.1.2 Class A1 ADS-B Transponder Based Transmitter Power

The minimum RF peak output power for Class A1 ADS-B Transponder Based equipment **shall** be 21.0 dBW (125 W).

2.2.2.1.1.3 Class A2 ADS-B Transponder Based Transmitter Power

The minimum RF peak output power for Class A2 ADS-B Transponder Based equipment **shall** be 21.0 dBW (125 W).

2.2.2.1.1.4 Class A3 ADS-B Transponder Based Transmitter Power

The minimum RF peak output power for Class A3 ADS-B Transponder Based equipment **shall** be 21.0 dBW (125 W).

Note: *Future versions of these MOPS may require that Class A3 1090 MHz ADS-B systems have a transmission capability with a minimum RF peak power of 23 dBW (200 Watts) measured at the antenna terminals. This 2 dB increase from the 21 dBW minimum RF peak power specified by this MOPS and DO-181C may be required in order to support the longer range air-to-air applications (e.g., flight path de-confliction), especially when over-flying moderate to high traffic density airspace.*

2.2.2.1.1.5 Class B ADS-B Transponder Based Transmitter Power

The minimum RF peak output power for Class B ADS-B Transponder Based equipment **shall** be 18.5 dBW (70 W).

2.2.2.1.2 RF Peak Output Power (maximum)

The maximum RF peak output power of each pulse of each transmitted message at the terminals of the antenna **shall** be fixed at 27.0 dBW (500 W) for all classes of Transponder based equipment.

2.2.2.2 Stand Alone Transmitters

Transmitters for Class A0 and Class B equipment may be implemented independent of a Mode S transponder. Such transmitters **shall** meet the requirements specified in the following subparagraphs.

Note: *A 1090 MHz non-transponder device (NTD) is intended to provide the lowest cost implementation of Extended Squitter for low-end General Aviation (GA) users. A NTD implementation does not use the 1090 MHz spectrum as efficiently nor provide all of the system benefits as a transponder implementation. For this reason, its use is restricted to class A0 operation in order to limit the number of such devices. Examples of the spectrum efficiency and system benefit issues related to NTDs are as follows:*