



PING2020 ADS-B Transceiver

300 Pine Needle Lane
Bigfork MT 59911

10/24/2016

TUV SUD BABT TCB
Octagon House,
Segensworth Road,
Fareham,
Hampshire,
PO15 5RL

Dear Sir or Madam,

The worst-case duty cycle of the Ping200S Mode S Transponder is derived from the specifications within TSO-C199 by the FAA. This specification defines the message types that must be supported and the maximum number of replies per second for each message type. The specification also requires each message reply or squitter must be actively limited to the maximum number per second as specified.

Section A4.5.3 of the TO-C199 define the maximum message transmission rate for each message as below,

- 100 Mode A/C replies @ 6.75uS per Reply
- 19 Short ModeS replies @ 30uS per Reply
- 10 Long ModeS replies @ 58uS per Reply
- 1 Short ModeS ES Squitter @ 30uS per Squitter
- 3.7 Long ModeS ES Squitter @ 42.32uS per Squitter

With the transmission rates and durations listed above a total of 2.0116mS of RF power per second is the maximum exposure time. When averaged over the 60s period, this yields a duty cycle that's limited to a maximum of 0.2%.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul Beard", on a light-colored rectangular background.

Paul Beard

CEO uAvionix Inc

paul.uavionix@gmail.com

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