

European Aviation Safety Agency

European Technical Standard Order (ETSO)

Subject: SECONDARY SURVEILLANCE RADAR MODE S TRANSPONDER

1 – Applicability

This ETSO gives the requirements which Secondary Surveillance Radar Mode S Transponder Equipment that are manufactured on or after the date of this ETSO must meet in order to be identified with the applicable ETSO marking.

2 – Procedures

2.1 – General

Applicable procedures are detailed in CS-ETSO, Subpart A.

2.2 – Specific

None.

3 – Technical conditions

3.1 – Basic

3.1.1 – Minimum performance standard

Standards set forth in the EUROCAE ED-73E, 'Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders', dated May 2011.

3.1.2 – Environmental standard

See CS-ETSO, Subpart A, paragraph 2.1.

3.1.3 – Software

See CS-ETSO, Subpart A, paragraph 2.2.

3.1.4 – Airborne Electronic hardware

See CS-ETSO, Subpart A, paragraph 2.3.

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3.2 — Specific

3.2.1 Failure condition classification

Failure of the function defined in paragraph 3.1.1 of this ETSO has been determined to be a major failure condition. The applicant must develop the system to at least the design assurance level commensurate with this failure condition.

4 — Marking

4.1 — General

Marking as detailed in CS-ETSO, Subpart A, paragraph 1.2.

4.2 — Specific

The marking must also include the transponder's functional level and optional additional features as provided in ED-73E section 1.4.2.2, as well as minimum peak output power identified by the transponder class as defined in ED-73E section 1.4.2.4.

5 — Availability of referenced document

See CS-ETSO, Subpart A, paragraph 3.