



TUV SUD BABT is the
Certification Body of TÜV SÜD

Foreword

This guide briefly explains the process and requirements for applications to TÜV SÜD BABT acting as a TCB (or CAB) under the Telecommunications and EMC sectors of the EU-US MRA. Manufacturers of intentional and unintentional radiators (i.e. Radio and non-radio communications products) can obtain a US Grant of approval through TÜV SÜD BABT. Such equipment falls within the scope of FCC 47 CFR.

The scheme enables a manufacturer of product achieving a grant to market the product within the USA.

The scheme is operated under the TÜV SÜD BABT Certification Regulations and implements the FCC regulations insofar as they apply to applications made to TÜV SÜD BABT. The current version of the TÜV SÜD BABT Testing and Certification Regulations may be found [here](#).

If there is any discrepancy between requirements found in this document and those found on US Government Web sites the assumption should be that the US website is more accurate.

All TÜV SÜD BABT publications are available from:



<http://www.tuv-sud.co.uk>

or



TUV SUD BABT

Octagon House
Concorde Way
Segensworth North
Fareham
Hampshire PO15 5RL
United Kingdom
Tel: +44 (0) 1489 558100
Fax: +44 (0) 1489 558101

Email: customer.services@babt.com



Contents

1.	<i>Introduction</i>	5
1.1	Scope	5
1.2	Overview	5
1.3	TUV SUD BABT TCB Scope	6
1.3.1	General Device Types.....	6
1.3.2	Unintentional Radiators.....	6
2.	<i>Making an Application</i>	6
2.1	Types of Application	6
2.2	Who to Apply To	6
2.3	Testing and Application Assembly	6
2.4	Who Can Apply	6
3.	<i>Progressing the Application</i>	7
4.	<i>Application for an Original Equipment Authorisation</i>	9
4.1	Grantee Code and FRN	9
4.2	Application Form BABT 736	9
4.3	Section A.1: Main Contact Detail	9
4.4	Section A.2: Other Contact Information	9
4.5	Section A.3: Payment Details	9
4.6	Section B: Your Grant Requirements	10
4.7	Section C: Product Details	10
4.7.1	Product Name and Details	10
4.7.2	Brief Description of this Product.....	10
4.7.3	FRN	10
4.7.4	FCC ID (Grantee Code)	10
4.7.5	Equipment Product Code	11
4.7.6	Product Installation Category	11
4.7.7	Number of Radiators.....	11
4.7.8	Ports for Connection to a Computer	11
4.7.9	Ancillary Equipment.....	11
4.7.10	Sub-Equipped/De-configured Equipment.....	11
4.8	Section D: Transmitter Details	12
4.8.1	Radio Type	12
4.8.2	Equipment Authorisation Coding (EAC).....	12
4.8.3	FCC Rules	12
4.8.4	Equipment Specifications.....	12
4.8.5	RF Exposure Information	12



4.9	Section E: Agreement	12
5.	<i>Information to Accompany an Application</i>	13
5.1	General	13
5.2	Specific Exhibits	13
5.2.1	Exhibit 1: Label	13
5.2.2	Exhibit 2: Attestation Statement	13
5.2.3	Exhibit 3: External Photos	13
5.2.4	Exhibit 4: Block Diagram	14
5.2.5	Exhibit 5: Schematics	14
5.2.6	Exhibit 6: Technical Report	14
5.2.7	Exhibit 7: Test Set-up Photographs	14
5.2.8	Exhibit 8: User's Manual	14
5.2.9	Exhibit 9: Internal Photographs	14
5.2.10	Exhibit 10: Information Required for Certification of Equipment Other Than That Operating Under Parts 15 and 18.	14
5.2.11	Exhibit 11: RF Exposure	14
5.2.12	Exhibit 12: Operating Description	14
5.2.13	Exhibit 13: Cover Letters	15
6.	<i>Ongoing Surveillance</i>	15
6.1	TUV SUD BABT Certified Quality System	15
6.2	Market Surveillance	15
7.	<i>Application for Change to an Authorized Product or Details Listed on the Grant</i>	16
7.1	Introduction	16
7.2	Class 1 Permissive Changes	16
7.3	Class 2 Permissive changes	16
7.3.1	Introduction	16
7.3.2	Application	16
7.3.3	Required Exhibits	17
7.3.4	Confidentiality	17
7.3.5	Submission Timing	17
7.4	Other Technical Changes	17
7.5	Brandname Products	17
7.6	Changes to the FCC ID	17
7.6.1	Introduction	17
7.6.2	Process	18
7.7	Extensions to Short Term Confidentiality	18
7.8	Changes to the Company Information	19
Annex A	<i>TUV SUD BABT Scope and Equipment Authorisation Codes</i>	20
Annex A.1	Equipment Authorisation Codes (EACs)	20
Annex A.2	TCB Scope	22



A.2.1. TUV SUD BABT Scope in terms of Scope22

A.2.2 Pre-Approval Guidance Procedure (PAG).....22

Annex B Additional Information.....23

Annex B.1 Introduction.....23

Annex B.2 Category of Installation.....23

Fixed Installation.....23

Mobile Installation23

Portable Installation23

Annex B.3 Hearing Aid Compatibility.....25

Annex B.4 Radio Modules.....25

Introduction.....25

Radio Module Approval Requirements.....25

Licensed Radio Modules26

RF Exposure Considerations26

Pros and Cons to Radio Module Approvals.....27

Annex B.5 Devices for Connection to a Computer USB Port27

Annex C Pro Forma Letters.....28

Annex C.1 Sample Agents Letter28

Annex C.2 Sample Confidentiality Letter.....29

1. Introduction

1.1 Scope

This guide explains the process and requirements to apply for US Equipment authorisation through TUV SUD BABT as a TCB for licensed and unlicensed radio devices and unintentional radiators using the certification route.

1.2 Overview

Most telecommunications and IT equipment for use in the United States of America falls under the requirements of FCC 47 CFR.

Under the EU-US MRA, TUV SUD BABT has been appointed as a TCB and are able to perform Certification for a range of products.

This guide identifies those products which TUV SUD BABT as a TCB may certify and details the process to be undertaken when applying through TUV SUD BABT.

1.3 TUV SUD BABT TCB Scope

1.3.1 General Device Types

TUV SUD BABT is generally able to progress applications for the following types of equipment:

- Unintentional radiators or transmitters below 1 GHz (excluding spread spectrum devices, SM)
- Transmitters above 1 GHz except spread spectrum devices
- Unlicensed PCS devices
- Unlicensed National Information Infrastructure (UNII) and spread spectrum devices
- Personal Mobile Radio Services (inc Cellular)
- General Mobile Radio Services
- Maritime and Aviation Radio Services

However, there are some limitations and types of radio equipment within the above categories which TUV SUD BABT as a TCB is unable to progress. Please refer to Annex A for details of the full scope and exclusions applied to TUV SUD BABT as a TCB for intentional radiators.

1.3.2 Unintentional Radiators

Unintentional radiators have different authorisation routes dependant upon the type of equipment. Some require Certification; some require a Declaration of Conformity; while other products are required to follow the Verification route.

Please refer to document BABT 743 for details.

This document describes the requirements related to Unintentional radiators following the TCB Certification route.

2. Making an Application

2.1 Types of Application

The following different types of application which may be made:

- Application for an original Equipment Authorization
- Application for a change to an Authorized product or details listed on the grant

Details of each of these are included in subsequent sections.

2.2 Who to Apply To

The application should be made direct to TUV SUD BABT in Fareham either

- By email to customer.services@babt.com or
- By post (refer to foreword for address details)

Due to the requirements on TUV SUD BABT as a TCB to forward the data to the FCC we are unable to accept applications by phone or via the Fax.

See also www.tuv-sud.co.uk for information and news on the scheme

2.3 Testing and Application Assembly

Where you wish the TUV SUD BABT Testing facility to perform the required tests or use the service from the TUV SUD BABT Certification Services department to prepare and format the application you should apply separately for these services.

2.4 Who Can Apply

Applications can be made by or on behalf of both manufacturers and suppliers of equipment.

Optionally, the applicant may in addition authorise TUV SUD BABT to liaise with another party acting on behalf of the applicant in matters relating to the application.

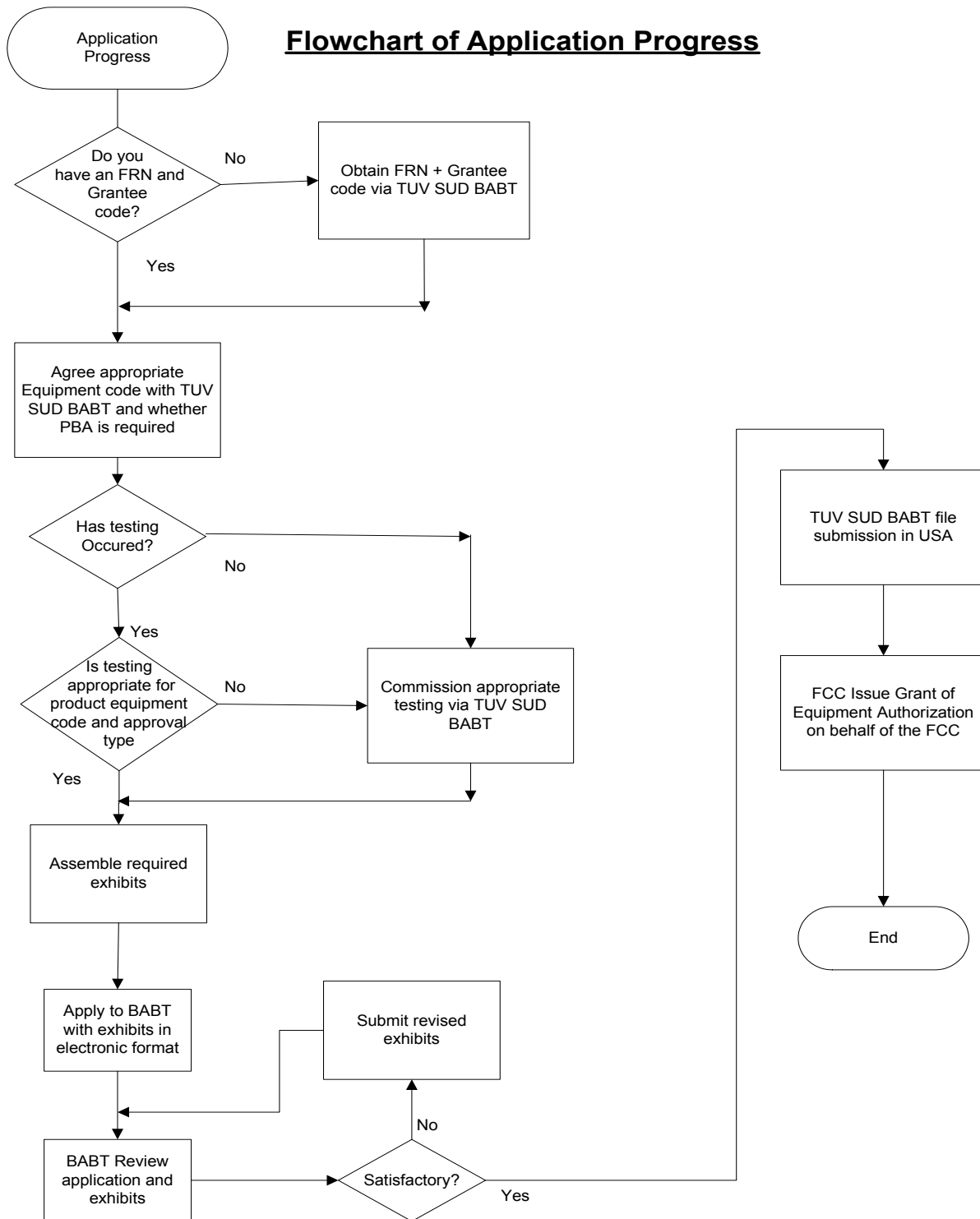
The person making the application should be a duly authorised signatory of the applicant. They should meet the definition of party found in FCC 47CFR 1.2002(b) and must meet the anti-drug abuse criteria required by US law.

3. Progressing the Application

When TUV SUD BABT has received your application and evaluated the initial information, we will:

- ask you to pay an application fee. The fee relates to the assessment of the application and may include additional elements where you request a grantee code or provide documentation in paper form. Where you have identified a specific contact to whom to send the invoice it will be sent to them; otherwise it will be sent to the applicant;
- inform you of the TUV SUD BABT reference number assigned to your application. This number should be quoted in all further correspondence;
- review your application for completeness and consistency;
- advise either the applicant (or the technical contact where one is identified) of any queries/concerns/omitted data; This may result in further work on your application being suspended until you send a satisfactory response;
- Where TUV SUD BABT is satisfied we will formally submit the grant with the FCC. TUV SUD BABT will send an electronic FCC Grant(s) via email to the applicant or to the agent submitting the application on your behalf;
- Where a significant number of originally submitted files are replaced TUV SUD BABT reserves the right to either charge additional fees or to cancel the application and require that a new application be submitted. Any fees due for the first application will still be due
- If there is a significant shortfall which either cannot be remedied, or where the remedy is not submitted in a timely fashion TUV SUD BABT may dismiss the current application (ref 47 CFR 2.917); Any fees due for the first application will still be due;
- If TUV SUD BABT is unable to make the findings specified in 47 CFR 2.915(a) the application may be denied (ref 47 CFR 2.919);

Flowchart of Application Progress



4. Application for an Original Equipment Authorisation

4.1 Grantee Code and FRN

Every company applying to FCC requires a unique Grantee code, and a unique FRN. Since the Grantee code forms a part of the FCC ID which must be referenced in any test report it is necessary to obtain this prior to the formal issue of the test report. However you must have an FRN to obtain a Grantee code

TUV SUD BABT recommends obtaining these directly from the FCC well in advance of testing. TUV SUD BABT can assist you with this but will charge a separate fee for this.

However, if you are ready for submission to TUV SUD BABT and do not have a Grantee code (e.g. your product is a Brandname of another already approved product) you may complete the appropriate request boxes in form BABT 736 for the first product application.

4.2 Application Form BABT 736

You should normally use the TUV SUD BABT form 736 for making applications for licensed and unlicensed radio devices and unintentional radiators.

The following information is required for each section

Alternate Application:

An online application portal can be found on the TUV SUD BABT website (www.tuv-sud.co.uk).

4.3 Section A.1: Main Contact Detail

You should supply the name, address, company and communication details of the main contact.

Main Contact Name and Address:

Details of the authorised signatory within the company applying for the certification and responsible for the certification request and order. This person must meet the criteria define in FCC 47 CFR 1.2002(b).

Where the main applicant is not the person named by the FCC as the Grantee contact you may identify the TUV SUD BABT applicant as the technical or non-technical contact for this grant.

4.4 Section A.2: Other Contact Information

On occasion other contacts are appropriate in addition to the prime contact.

The following details are required as relevant (with address details where this differs from the prime contact).

- Consultant/agent details (where you wish another party to be involved with this application).
- A Technical contact: Where identified the TCB and FCC will address all queries related to this aspect to this person; otherwise the person named by the FCC as the Grantee contact will be used; Note: you do not have to complete part this where you have selected the appropriate "Yes" box in section A.
- A Non-Technical Contact: as above.

4.5 Section A.3: Payment Details

Information related to your intended method of payment.

- Name or address to which invoices and accounts should be sent where the person or address differs from the Main contact listed previously (to be included with supporting information).
- Purchase Order or Credit Card details.

Work is carried out on receipt of either payment in advance or a valid purchase order number. Clients applying directly to TUV SUD BABT (i.e. not through any other TUV Group office), who do not currently have approved credit facilities with either TUV SUD BABT or TÜV SÜD Product Service UK must include a completed Credit Details Form with the application. Alternatively payment in advance is accepted. The appropriate forms may be downloaded from the document library page from the TUV SUD BABT website www.tuv-sud.co.uk

4.6 Section B: Your Grant Requirements

You are required to supply the following information:

- **Type of Application:** Original or Class 2 Permissive Change; Class 1 permissive changes do not have to be identified to a TCB or the FCC.
- **Grant Type: Radio Modules:** Where your application is for a radio module to be used in host products please complete this section. Refer to Annex B of this document for further details about Radio Modules;
- **Hearing Aid Compatibility:** Where your product supports HAC and is within the scope of Part 20 in this respect you may request either HAC and/or T-coil assessment.
- Indication when you require **confidentiality** (a justification in exhibit 13 is required where this is selected);

Confidentiality

There must be a clear justification to make part of any submission confidential. Internal photographs may not normally be declared confidential. Acceptable criteria may be New Technology, encapsulated circuitry, equipment only accessible to a company professional. Trade secrecy is not of itself a justification. The justification for confidentiality should state the period after which the confidentiality may be lifted.

Refer to FCC 47 CFR 0.459 for details

- Indicate if you wish to **defer the grant** with an earliest date for uploading. Where so indicated TUV SUD BABT will progress your application including the production of the grant upload annex but will not upload the grant information until the requested date. Note: The equipment may not legally be marketed in the USA until the grant has been issued. See 47 CFR Section 2.803 and Section 2.195 (c) of the rules.
- **Surveillance option:** Where you are manufacturing the product at a location covered by a TUV SUD BABT ISO9001, PQC or FQA Certificate all surveillance requirements will be met during audit; otherwise your product will be subject to the TUV SUD BABT surveillance route.

4.7 Section C: Product Details

The following details are required

4.7.1 Product Name and Details

This should be the product name under which the product will be marketed. If the product is marketed under more than one name refer to FCC 47 CFR 2.908, 2.924; and 2.933 to ensure the additional name may be included in this application.

4.7.2 Brief Description of this Product

This should be a brief description of the purpose and type of the product. It is used to confirm the appropriate FCC 47 parts have been used and confirm the TCB route is available.

4.7.3 FRN

You should either quote your FRN, or sign to request TUV SUD BABT to obtain one for you.

A FCC Registration Number (FRN) is a 10 digit number issued by the FCC and this number is used to uniquely identify the entity in all transactions with the FCC. Example FRN: 0001234567.

4.7.4 FCC ID (Grantee Code)

You should either quote your Grantee Code, or sign to request TUV SUD BABT to obtain one for you.

A Grantee Code is assigned to a specific applicant at a specific address and is the first portion of each FCC Identifier (ID) for devices authorized under the Certification procedure (Section 2.925 47 CFR). The Grantee Code format is five characters in length and begins with an Arabic numeral; zeroes and ones will not be used. The last four characters may be either capital letters or Arabic numerals; zeroes and ones will not be used.

Note: Where you request TUV SUD BABT to obtain a Grantee code TUV SUD BABT will invoice an appropriate fee for this service as there is an FCC fee associated with the provision of Grantee codes.

Where TUV SUD BABT obtain your Grantee code: You should normally not submit required data which includes the FCC ID until the grantee number is known. Refer to TUV SUD BABT if in doubt.

4.7.5 Equipment Product Code

The Full FCC ID comprises the Grantee code followed by the equipment product code. The equipment product code is allocated by the manufacturer and must be unique when used with the Grantee code. It may be up to 14 alpha-numeric characters long, contain hyphens or dashes (-) and must be unique to the device. No spaces are allowed.

Refer to FCC 47 CFR 2.926 for details of the valid characters for the equipment product code.
Note: "Zeros" must be shown as "Ø".

4.7.6 Product Installation Category

Please indicate the intended installation category for your application. This information is needed as different RF requirements apply according to Installation category.

Refer to Annex B of this document for further details

4.7.7 Number of Radiators

For simple applications with only one transmitter then you will normally only need to complete the first 2 columns. Where more than one radio transmitter is present then you should list here all transmitters indicating which other transmitters may transmit at the same time (i.e. Co-location and co-transmission).

Where one of the transmitters holds (or is in the progress of obtaining) a grant as a radio module and you intend the product which is the subject to this application to act as a host then please indicate the radio modules FCC ID.

For unintentional radiators (e.g. a Receiver) just leave blank or state "Not applicable".

4.7.8 Ports for Connection to a Computer

Products with Ports for Connection to a Computer

Where the product has a port (e.g. USB) for connection to a computer to transfer data (in either direction) then the product will also require authorisation as a Class B computer peripheral. This may be addressed either under the Certification route with an additional grant under the same FCC ID as the transmitter(s) or under the Declaration of Conformity (DoC) rules.

Where you opt to follow the Certification route you should include a copy of the Part 15B test report for the product. Where you opt to follow the DoC route you should include a letter stating your intent to follow this route. We do not advise you include the DoC as this will entail an additional fee as we are required to check any DoC we receive and intend to upload.

4.7.9 Ancillary Equipment

Please list all ancillary equipment or functions which may be provided with your product. In particular the following should be identified:

- Alternative power sources (Batteries, power supplies, AC/DC sources)
(For AC/DC sources please identify the voltage and for AC frequency)
- For body worn equipment any identified Belt clips, lanyards, or Holsters
- Headsets or headset ports (for portable apparatus)
- In built Microphones or speakers
- Any Optional non-intentional radiator modules (e.g. processors etc) or clip-on auxiliary apparatus which may be included with the apparatus

4.7.10 Sub-Equipped/De-configured Equipment

If you intend to market a sub-equipped version of your product but retaining at least one intentional radiator then a separate FCC ID and grant will be needed.

Where the de-configuring is simply an absence of functionality TUV SUD BABT will normally be able to progress secondary applications in parallel with the primary one and do not require a separate BABT 736 to be completed. If, however the same radiator is used in different housing then a completely new application may be needed.

Refer to Annex B of this document for further details. Contact TUV SUD BABT if in doubt.

Note: TUV SUD BABT charges a separate fee for progressing secondary applications.

4.8 Section D: Transmitter Details

A copy of this section should be completed for each separate transmitter to be included under this FCC ID.

4.8.1 Radio Type

Please state in simple terms the type and purpose/intended use of the radio (e.g. GSM radio, RLAN, Cellular, etc).

This assists TUV SUD BABT in ensuring the correct tests have been performed. Furthermore where there are more than one present it provides a ready differentiator where some overlap in frequencies used.

For unintentional radiators please state “unintentional radiator”

4.8.2 Equipment Authorisation Coding (EAC)

The TCB is required to check the Equipment Authorisation code is appropriate for the particular transmitter/product. Where you know the applicable equipment code, please indicate it as this assists in confirming the purpose of the equipment.

Refer to Annex A of this document for details of appropriate Equipment Authorisation codes

Please note for each EAC there is a minimum set of exhibits which are required to be provided. Details of these are given in Annex A.

4.8.3 FCC Rules

Please list the FCC 47 Rule parts which you consider are applicable to this particular radiator (part 15B applies for un-intentional radiators).

Note: If the equipment supports a wire-based computer interface port (i.e. USB data port), then for FCC approval a JBP Grant is required, unless the DoC route is being followed, since the device would be considered a Class B peripheral.

4.8.4 Equipment Specifications

These details shall be completed appropriate to the equipment.

- Frequency Range: Should be given in MHz
- Operating Mode: Where a given radio transmits using different modulations, or codes with different duty cycles each should be defined; also, where differing modes can affect the used bandwidth/channel occupancy (e.g. GPRS) this should be identified.
- Rated RF Power output in watts: Applies only to Transmitting equipment. This should be the expected output; Where this differs by more than 5% from the measured output TUV SUD BABT use the values obtained during test
- Frequency Tolerance: Please also state whether in “%”, “Hz” or “ppm”
- Microprocessor model number: This is only required for unintentional radiators (e.g. digital devices) subject to Part 15B.

4.8.5 RF Exposure Information

Every Transmitter must be assessed for RF Exposure. However the required assessment will depend upon the proximity (closeness) of the Transmitter to parts of the humans body during transmission, and the output power of the transmitter.

You are required to select the appropriate evaluation for each transmitter (e.g. Some products may have one transmitter which operates beside the head (e.g. GSM in voice mode) and another which only operates only when hand held (e.g. A tag reader)).

The FCC issue Knowledge Database documents (KDBs) specifically to help with selecting the correct RF exposure requirements and procedures for particular types of devices.

Example: KDB 447498 D01 for mobile and portable devices.

4.9 Section E: Agreement

This must be completed by the applicant named in section A1 as this will form the contract between the applicant and TUV SUD BABT.

5. Information to Accompany an Application

5.1 General

Submissions from a TCB to the FCC are required to be electronic and in a standard structure. While TUV SUD BABT will accept applications with accompanying data in paper or in unstructured formats TUV SUD BABT may charge the applicant a fee appropriate to the effort involved in correctly formatting the required data.

The application supporting documentation should be submitted electronically as Adobe PDF, MS-Word, or jpg files (as applicable) in the required directory/folder structure. Individual file sizes must be less than 4Mb. If necessary, split documents into logical sections.

The following directories and content is required (as appropriate to your particular application).

Documentation Identification and Issue Status

All documents submitted electronically should be clearly named to indicate their purpose and contents. Documents submitted in paper format should be identified by document number and issue status (e.g. Issue number or date); For multi-page documents each page should hold such information and a page number indication.

5.2 Specific Exhibits

Different Equipment Classes require different sets of exhibits. Refer to Annex A of this document for a list of those applicable for original submission for your class of equipment.

See the following FCC website address for a detailed list of the Equipment Class and Rule Part combinations available:

https://fjallfoss.fcc.gov/oetcf/report_detail.cfm?report_url=/oetcf/eas/reports/EquipmentRulesList.cfm

5.2.1 Exhibit 1: Label

You should provide a copy of the label, with information related to how and where it is fixed on the equipment. The required elements should be able to be verified. All equipment subject to Part 15 requires a compliance statement on the label.

Where additional equipment type information is required this exhibit should include all labels necessary to demonstrate this information will be placed upon the product.

Where your product is smaller than a man's palm or is intended to be built into another product (e.g. Car Radio) refer to TUV SUD BABT for details.

Refer FCC 47 CFR 2.803; 2.925; 2.926; 2.954; 2.1033(b) (7) and (c)(11); 15.19; 15.25; 15.121(f)(1)(2); 15.233(h); 15.247; 15.249;15.311; 15.407(f)[ET Docket 98-76]

5.2.2 Exhibit 2: Attestation Statement

Where this is required it should be signed by the person signing the test data (e.g. Test Report). Where reports from more than one Test company are included an attestation from each to the relevant requirements is required where one of the companies does not take responsibility for all the results.

Refer FCC 47 CFR 2.911(c), (d) and (e)

5.2.3 Exhibit 3: External Photos

External photos are required for all original filings. For equipment within the scope of FCC 47 parts 15, and 18 clause 2.1033(b) (7) applies. This defines the required views and the size of the photographs. While the quality of the photographs is not defined the requirement that identification and FCC label can be viewed ensures a certain quality.

For equipment within scope of parts other than 15, and 18 of FCC 47 clause 2.1033(c) (12) applies.

External Photos

Photographs should be provided for everything accessible to the customer (e.g. top, bottom, front and back). TUV SUD BABT advise that colour photographs are used. Where a digital camera is used we advise that the resolution be sufficient to view the results clearly.

Finally due to uploading constraints we strongly recommend that both external and internal photographs are supplied in separate documents to each other and the test reports **Refer FCC 47 CFR 2.1033 (b) and (c)**

5.2.4 Exhibit 4: Block Diagram

Where applicable a Block diagram should be provided showing the signalling paths, frequency of oscillator, and any tuning ranges.

Refer FCC 47 CFR 2.1033(b) (5)

5.2.5 Exhibit 5: Schematics

Where required schematics should be provided.

Refer to FCC 47 CFR 2.1033(b)(5) and (c)(10)

5.2.6 Exhibit 6: Technical Report

The Technical Report must come from a test company listed with the FCC or listed under the EU-US MRA. The report shall contain all the required aspects listed under the appropriate clauses. Note that since FCC ID is one of the requirements a Grantee code is required in advance of the production of the report.

Refer to the checklist in the application form (BABT 736) for specific requirements for Test reports FCC 47 CFR 2.911(b)+(d)+(e); 2.946; 2.947; 2.948; 2.1033(b)(6) + (c), apply as appropriate

5.2.7 Exhibit 7: Test Set-up Photographs

These must be supplied for submissions for Parts 11, 15, and 95. However diagrams are permitted in place of photographs.

5.2.8 Exhibit 8: User's Manual

Where required a copy of the installation and operating instructions must be provided. Where this is in final draft this must be clearly identified and the final version must be supplied at a later date.

Refer FCC 47 CFR 2.1033(b)(3) + (c)(3); and 15: 15.21; 15.105

5.2.9 Exhibit 9: Internal Photographs

Where required these must be sufficiently clear to enable component values and identities to be seen. Refer to the note with Exhibit 3.

5.2.10 Exhibit 10: Information Required for Certification of Equipment Other Than That Operating Under Parts 15 and 18.

Where appropriate this shall contain the tune-up procedure over the power range or at specific operating levels.

5.2.11 Exhibit 11: RF Exposure

Licensed Fixed Devices subject to site licensing do not require this exhibit. Applications for Unlicensed Fixed devices and Mobile devices shall be accompanied by either an MPE calculation and declaration (where the product falls within the appropriate power limitation), or MPE measurement where the power is above the limit. Part 2 clause 2.1091(d) applies all these apparatuses.

Applications for Portable devices which are categorically excluded from routine evaluation and are below the applicable low threshold require a letter asserting exclusion; Applications for all other Portable devices shall include a separate test report demonstrating compliance to the SAR requirements appropriate to the equipment use.

**Refer FCC 47 CFR 1.1307; 1.1310; Part 2: 2.1091; 2.1093; KDB447498 D01
Refer also to Annex B of this document.**

5.2.12 Exhibit 12: Operating Description

This only applies to intentional transmitters. You must provide a brief description of the circuit functions along with a statement describing how the device operates.

Antenna Details

Photographs should be provided showing the visible construction of all antennas included within the grant, and

the placement of the antenna ([either within the device or external to it). Note these photos may be supplied either a part of this exhibit or the External or Internal photos (as appropriate). Details of the type and gain of all antennas must also be provided.

5.2.13 Exhibit 13: Cover Letters

This exhibit only applies where appropriate as follows:

- Agent letter: (Refer Part 2 2.911(c) (e)) Where you have identified an agent (Consultant) who you wish to be involved with the application you must provide a letter of authorisation on company headed paper (or equivalent).
- Confidentiality Letter: (Refer Part 0: 0.457(d); 0.459, 0.461) Where you have identified in your application that you wish certain aspects of your application to be treated with confidentiality you will need to provide a description of the relevant parts with a justification for the confidentiality. For each requested part you must specify whether permanent or short-term confidentiality are being requested. (Note: The scope of exhibits for which permanent confidentiality may be requested is more limited than for short term confidentiality). Short-Term Confidentiality lasts for up to 180 days after the grant is allowed, however is invalidated once you place the product on the market. Where Short-term confidentiality exists, you are required to advise TUV SUD BABT at once when you place the product on the market so that the short-term confidentiality may be lifted.

Pro forma of the Agents and Confidentiality letters are included in this document in Annex C

Other letters may be required. The following should be considered;

- IPR: Where you are using test results obtained under another grantee code a letter from that grantee permitting use of the results is required. Note: This is most common where an already approved module is being included within a product, but the applicant opts to progress the application as an entire product rather than as a host with an approved module
- Use of Test Results obtained under other FCC IDs: Where test results which were obtained under different FCC IDs (e.g. Radio Modules being included in host product as a part of that product, or deconfigured variants of a product) then details of the relationship between the products and a justification for the relevance of the test results to this product must be provided
- Technical Descriptions: This could be used to clarification functionality to justify why tests do not apply or justify more than one model being covered by the same FCC ID; or otherwise assist the evaluation.

6. Ongoing Surveillance

TUV SUD BABT are required to undertake surveillance on products for which we have recommended a grant. You must meet one of the two following requirements.

6.1 TUV SUD BABT Certified Quality System

Where you manufacture your product at a facility and under a quality system which is covered by an appropriate TUV SUD BABT ISO 9001, PQC or FQA quality assurance system Certificate with products of that broad technology type within the scope of quality system certification, then the manufacture of the product covered by the grant is considered to meet the surveillance requirements automatically.

6.2 Market Surveillance

Where the manufacturing location is not covered by such a Certificate you are liable to the market surveillance process.

Under this TUV SUD BABT may at certain intervals send you an enquiry requesting the following information:

- Details of any changes significantly affecting the products design or specifications, or changes in standards which compliance of the product is certified, or changes in the ownership, structure or management, or any other circumstances indicating that the product may no longer comply with the requirements of the certification system.
- A copy of all advertising material currently in use bearing our logo.
- Details of a location where the product may be evaluated for the use of our mark on the product.

- A copy of your complaint log since the last surveillance for review.
- A sample be supplied to us for surveillance testing.

TUV SUD BABT will review this information and will advise you of the outcome.

7. Application for Change to an Authorized Product or Details Listed on the Grant

7.1 Introduction

All Changes must be assessed by the Manufacturer. A change in the Grant or other information is required for some categories of Change while others only require the manufacturer to formerly hold evidence of continuing compliance. See **KDB 178919** for Permissive Change Policy. This document defines general permissive change policies but also refers out to other more specific policies in related documents.

FCC 47 CFR 2.932 and 2.1043 deal with changes to authorised equipment. The following summarises the actions to be taken.

Refer to FCC 47 CFR 2.908; 2.924; 2.933 for changes to the identity of products or additional product identities. Refer to FCC 47 CFR 2.907; 2.932; 2.1043 for other changes to products

7.2 Class 1 Permissive Changes

These include those modifications to the equipment which do not degrade the characteristics reported in the application to the TCB (or FCC). No filing is required for such changes.

Ref FCC 47 CFR 2.932, 2.1043 (b)(1) + (3)

7.3 Class 2 Permissive changes

7.3.1 Introduction

These include those modifications which degrade the performance as reported with the application but still meet the minimum requirements of the applicable rules.

They also include the addition of replacement or alternative Antennas for part 15 devices where a higher gain antenna is used, or a different type of antenna is used.

Refer FCC 47 CFR 2.932, 2.1043 (b)(2) + (3) for more details

7.3.2 Application

TUV SUD BABT can progress permissive changes within our scope of appointment whether or not we progressed the original application.

Where TUV SUD BABT have not previously progressed an application (original or Class 2 permissive change) for this product a fully completed version of application form BABT 736 is required.

Where TUV SUD BABT have previously progressed an application (original or Class 2 permissive change) and a TUV SUD BABT TCB reference has been provided for this product then the following sections of Document BABT 736 should be completed:

- Section A1: Name and company only; under address write: "Refer to TUV SUD BABT reference US/00xxxx" citing the existing TUV SUD BABT reference number
- Sections A2 and A3: Where applicable please complete these as we cannot "carry over" such details from previous applications
- Section B: Please complete this section
- Section C: C.5 if the installation type is changing; Section C.8 if additional Ancillary equipment is required
- Section D Section D.1 must be completed each transmitter subject to the change (especially required for composite products) Complete remainder as appropriate to the change (e.g. If increasing the power, or adding a new mode, complete D.3 and D.4)
- Section E must always be completed for each transmitter subject to the change.

7.3.3 Required Exhibits

The following exhibits are required:

- Exhibit 2: Attestation statement: Stating that the product, on the whole, remains compliant
- Exhibit 13: Covering letter requesting the class 2 permissive change. This may be merged with the change description letter if convenient.
- Exhibit 13: Covering letter describing the change. This should detail the change to a degree sufficient to determine the required testing, and to justify which potential aspects are unchanged (e.g. A board re-layout which uses the original circuit should either state this, or also describe the additional modifications). Where components (e.g. Antennas, Batteries, etc) are involved the letter should specify whether such items are “Replacements” for the existing components, or whether they are “Alternatives” to those items.

Other exhibits will be required as appropriate to the particular change, in particular test reports, schematics/BOMs.

7.3.4 Confidentiality

Where you require certain exhibits to be treated as short or long term confidential you must include a confidentiality request addressed to TUV SUD BABT. All Class 2 changes must, if confidentiality is required, include specific a confidentiality request within the exhibit s previous requests cannot be carried over.

Furthermore, where the FCC (or another TCB) have issued a grant supported by confidential information TUV SUD BABT may require copies of those documents to enable the evaluation of the Class II change to progress. If in doubt either enclose duplicate copies of the documents (to permit TUV SUD BABT access to them) or hold them in readiness.

7.3.5 Submission Timing

Filings by TCBs are subject to a 30-day audit period wherein the FCC may audit the submission and require some data clarified. It is recommended that wherever possible permissive changes are not made within this 30 day window.

7.4 Other Technical Changes

FCC 47 CFR 2.932, 2.1043 (c) applies. Refer to TUV SUD BABT for details.

7.5 Brandname Products

The record of product approval is registered under the FCC ID and not the product name.

The product may (subject to the normal trademark etc constraints) be marketed under any name provided the product is electrically identical to the one on the grant with respect to those aspects under the grant. Product supplied as such must bear the original FCC ID

For such “Brandname” products you should ensure that any new labels and user manuals still contain the information required within the appropriate regulations.

Should you wish to supply the identical product but change the FCC ID refer to the following section:

“Changes to the FCC ID”

7.6 Changes to the FCC ID

7.6.1 Introduction

New FCC IDs may be required for a number of reasons:

1. Brandname products where the new supplier wishes to use their own Grantee code and equipment product code
2. Products for which the IPR has been transferred to another grantee
3. Products where the grantee wishes to change the equipment product code
4. Products which have changes which fall outside the scope of permissive changes and require a new filing

Where you need a new FCC ID for reasons 1-3 then the following process should be followed; where you need a new FCC ID for reason 4 a complete new filing must be made but may make use of appropriate information from the original filing.

FCC 47 CFR 2.933, 2.1043 (d) applies

7.6.2 Process

For applications to TUV SUD BABT please include

- A Completed BABT 736 application form as follows
 - Section A1: Complete in Full
 - Section A2 and A3: complete only if relevant
 - Section B: C1: select "Other" and write "Change in FCC ID"
 - Section B2-5 complete as relevant
 - Section C1 to C8: Complete
 - Section D: Complete for each transmitter/grant to have a new FCC ID (Note this should match each original grant)
 - Section E: Complete
- Exhibit 1: Label
Either a sample label; or a photograph or artwork of the product label indicating the new FCC ID.
- Exhibit 3: External Photos
Photographs of the exterior of the equipment (as required in an original submission)
- Exhibit 8: User Manual
As convenient or where you have made substantial changes which are not readily summarized you should either include a copy (or draft) of the "new" user guide or a statement describing the differences to be applied to that guide.
- Exhibit 13: A Covering Letter requesting the new FCC ID
This should be on letter headed paper and include the following details/statements
 - Actual request for a new FCC ID
 - The new intended FCC ID
 - The original FCC ID
 - The date of the original grant of the original product
 - The dates of any permissive changes to the original product which you are making use of
 - How the equipment with the new Id differs from the original supplied product. (As a minimum this should state the label)
 - A statement on the applicability of the original test results to the "new" product
 - Where a new User guide is not being submitted a statement any changes to the user guide which relate to regulatory statements (e.g. FCC ID; EMC Warnings, Antenna statements, ancillary products); where the original guide is being retained please state.
- Exhibit 13: A Change of IPR letter
Where the grantee is being changed you should provide "evidence" of your right to use the original data for your grant. This will normally be a covering letter from them (on their headed paper) stating the product IPR has been transferred; or similar documentation clearly establishing your rights over the product
(Note: Where several products have been transferred the evidence may list them all; rather than have specific letters for each)

7.7 Extensions to Short Term Confidentiality

Where you have not yet placed the product on the market place and you wish to extend the short-term confidentiality on one or more items you should write to TUV SUD BABT listing the items for which you require an extension, the justification for continued confidentiality, and a statement that the product has not been placed on the market. This request must be made to TUV SUD BABT at least 5 days before short term confidentiality expires. TUV SUD BABT are not permitted to extend the confidentiality beyond the FCC limits. Note: TUV SUD BABT charges an additional fee for this service.



7.8 Changes to the Company Information

FCC 47 CFR 2.929 applies. Refer to TUV SUD BABT for details.

7.9 Supersede Procedures

Current FCC procedures allow TUV SUD BABT to supersede attachments to applications within 30 days of issuing a Grant of Equipment Authorisation. If the application has been granted for more than 30 days a TUV SUD BABT can still supersede after consultation with the FCC if justification and a covering letter are provided.

KDB 546630 refers.

Annex A TUV SUD BABT Scope and Equipment Authorisation Codes

Annex A.1 Equipment Authorisation Codes (EACs)

The following table lists the appropriate equipment authorisation codes for different types of equipment. Additionally the Exhibits appropriate for original grants for that EAC are listed.

The Exhibits for permissive type II changes are a subset of these, refer to TUV SUD BABT for details.

Finally the Scope statement is provided to correlate with the TCB exclusion and scope statements.

Class	Equipment Description	Rule Parts	Required Exhibits	Scope
5GB	Part 30 Fixed Transmitter	30	1,3,4,5,6,7,8,9,12	A2
5GM	Part 30 Mobile Transmitter	30	1,3,4,5,6,7,8,9,12	A2
5GT	Part 30 Transportable Transmitter	30	1,3,4,5,6,7,8,9,12	A2
8CC	Part 18 Consumer Device	18	1,3,4,5,6,8,9	A1
AIS	Automatic Identification Systems	80	1,2,3,5,6,8,9,10,12	B3
AMP	Amplifier for Licences Radio Services	21,22,24,26,27,73,74, 80,87, 90, 95, 97,101	1,3,5,6,8,9,10,12	B1, B2, B3, B4
B2I	Part 20 Industrial Booster (CMRS)	22, 22H, 24D, 24E, 27, 90S	1,3,5,6,8,9,10,12	B1, B2
B2P	Part 20 Provider-Specific Consumer Booster (CMRS)	22H, 24E, 27, 90S	1,3,5,6,8,9,10,12	B1, B2
B2W	Part 20 Wideband Consumer Booster (CMRS)	22H, 24E, 27, 90S	1,3,5,6,8,9,10,12	B1, B2
B9A	Part 90 Class A Industrial Booster (non-SMR)	90	1,3,5,6,8,9,10,12	B1, B2
B9B	Part 90 Class B Industrial Booster (non-SMR)	90	1,3,5,6,8,9,10,12	B1, B2
BOS	All other signal boosters other than 20.21/90.219	101, 22, 25, 74, 90, 97	1,3,5,6,8,9,10,12	B1,B2
BPL	Access Broadband Over Powerline System	15G	1,3,5,6,8,9,10,12	A1
CBD	Citizens Band Category A and B Devices	96	1,3,5,6,8,9,10,12	B1, B2
CBE	Citizens Band End User Devices	96	1,3,5,6,8,9,10,12	B1, B2
CRD	Radar Detector	15B	1,3,4,5,6,7,8,9,12	A2
CRR	Super-regenerative receiver	15B	1,3,4,5,6,7,8,9,12	A1
CSE	Compulsory Ship Equipment Receiver	80	1,3,5,6,8,9,10,12	B3
CSR	Scanning Receiver	15B	1,2,3,4,5,6,7,8,9,12	A1
CXX	Communications Receiver	15B	1,3,4,6,7,8,9	A1
CYY	Low Power Com Device Receiver	15B	1,3,4,6,7,8,9	A1
DCD	Low Power Transmitter below 1705 kHz	15B	1,3,4,5,6,7,8,9,12	A1
DSC	Security/Remote Control Transmitter	15.231; 15.231(e)	1,3,4,5,6,7,8,9,12	A1, A2
DSR	Security/Remote Control Transceiver	15C	1,3,4,5,6,7,8,9,12	A1, A2
DSS	Spread Spectrum Transmitter	15C	1,3,4,5,6,7,8,9,12	A4
DTS	Digital Transmission System	15C	1,3,4,5,6,7,8,9,12	A4
DWM	Part 15 Wireless Microphone	15C	1,3,4,5,6,7,8,9,12	A2
DXT	Low Power transceiver (RX verified)	15B/15C	1,3,4,5,6,7,8,9,12	A1
DXX	Low power Com Device transmitter	15C	1,3,4,5,6,7,8,9,12	A1, A2
EAD	Emergency Alert Device	11	1,3,4,5,6,7,8,9,12	A1
EAV	Automatic Vehicle Identification System	15.251	1,3,4,5,6,7,8,9,12	A2
ETB	Cordless Telephone Base Transceiver (46-49 MHz)	15C	1,3,4,5,6,7,8,9,12	A1
ETR	Cordless Telephone Remote Transceiver (46-49 MHz)	15C	1,3,4,5,6,7,8,9,12	A1
ETS	Cordless Telephone System (46-49 MHz)	15C	1,3,4,5,6,7,8,9,12	A1
FAP	Anti-Pilfering device	15C	1,3,4,5,6,7,8,9,12	A1
FDS	Field Disturbance Sensor	15.245, 15.253	1,3,4,5,6,7,8,9,12	A1, A2
FRB	Family Radio Base Station transmitter	95B	1,3,4,5,6,7,8,9,12	B2
FRE	Family Radio Ear held transmitter	95B	1,3,4,5,6,7,8,9,12	B2
FRF	Family Radio Face held transmitter	95B	1,3,4,5,6,7,8,9,12	B2
FRT	Family Radio Body worn transmitter	95B	1,3,4,5,6,7,8,9,12	B2
GAT	Auditory Assistance Device (Transmitter)	15.237	1,3,4,5,6,7,8,9,12	A1
GEP	406 MHz EPIRB	80.1101(c)(5)	1,2,3,5,6,8,9,10,12	B3
GHF	HF transmitter for GMDSS	80.1101(c)(5)	1,2,3,5,6,8,9,10,12	B3
GHH	VHF Hand held transmitter for GMDSS	80.1101(c)(7)	1,2,3,5,6,8,9,10,12	B3
GMF	MF transmitter for GMDSS	80.1101(c)(3)	1,2,3,5,6,8,9,10,12	B3

Class	Equipment Description	Rule Parts	Required Exhibits	Scope
GVH	VHF transmitter for GMDSS	80.1101(c)(4)	1,2,3,5,6,8,9,10,12	B3
HID	TV Interface device	15B	1,3,4,6,7,8,9	A1
JAB	Part 15 Class B Digital Device	15B	1,3,4,6,7,8,9	A1
JAD	Part 15 Class A Digital Device	15B	1,3,4,6,7,8,9	A1
JAV	Other Non-Digital SDoC Devices	15B	1,3,4,6,7,8,9	A1
JBC	Class B Personal Computer	15B	1,3,4,6,7,8,9	A1
JBP	Class B Peripheral	15B	1,3,4,6,7,8,9	A1
LMS	Location and monitoring transmitter	90.353	1,3,5,6,8,9,10,12	B2
LPR	Level Probing Radar	15.209, 15.256	1,3,4,5,6,7,8,9,12	A2
MRD	Marine and Weather Radar	80, 90	1,3,5,6,8,9,10,12	B2, B3
MWR	Marine watch receiver	80.269	1,3,5,6,8,9,10,12	B3
NII	Part 15 unlicensed national information infrastructure transmitter	15E	1,3,4,5,6,8,9,11,12	A4
PCB	Licensed PCS Base transmitter	24E, 24D, 22, 90, 101	1,3,5,6,8,9,10,12	B1
PCE	Licensed PCS Ear held transmitter	24E, 24D, 22, 90, 101	1,3,5,6,8,9,10,11,12	B1
PCF	Licensed PCS Face held transmitter	24E, 24D, 22, 90, 101	1,3,5,6,8,9,10,11,12	B1
PCT	Licensed PCS Body Worn transmitter	24E, 24D, 22, 90, 101	1,3,5,6,8,9,10,11,12	B1
PLB	Personal Locator Beacons	95K	1,3,5,6,8,9,10,12	B2, B3
PUB	Unlicensed PCS Base transmitter	15D	1,2,3,4,5,6,7,8,9, 11, 12	A3
PUE	Unlicensed PCS Ear held transmitter	15D	1,2,3,4,5,6,7,8,9, 11, 12	A3
PUF	Unlicensed PCS Face held transmitter	15D	1,2,3,4,5,6,7,8,9, 11, 12	A3
PUT	Unlicensed PCS Body Worn transmitter	15D	1,2,3,4,5,6,7,8,9, 11, 12	A3
RNV	NAVTEX Receiver	80.1101(c)(1)	1,2,3,5,6,8,9,10, 12	B3
SRT	Radar Transponder	80.1101(c)(6)	1,2,3,5,6,8,9,10, 12	B3
TBC	Broadcast Transmitter	73,74	1,3,5,6,8,9,10,12	B2
TBE	Broadcast Ear held Transmitter	73, 74	1,3,5,6,8,9,10,12	B2
TBF	Broadcast Face held Transmitter	74.861	1,3,5,6,8,9,10,12	B2
TBT	Broadcast body worn Transmitter	74.861	1,3,5,6,8,9,10,12	B2
TDC	DSC Controller	80.1101(c)(2)+(3)+(4)	1,2,3,5,6,8,9,10,12	B3
TLD	Licensed LPAS Device	74H	1,3,5,6,8,9,10,12	B2
TNB	Licensed non-broadcast base transmitter	21,22,25,26,27, 80,87,90, 90.217(b), 90.217(c), 90.210, 90.259, 90.265, 95A, 95C, 95D, 95F, 95G, 95I, 101	1,3,5,6,8,9,10,12	B1, B2, B3, B4
TNE	Licensed non-broadcast ear held transmitter	22,25,26,27, 80,87,90, 90.217(b), 90.217(c), 90.210, 90.259, 90.265, 95A, 95C, 95D, 95F, 95G, 95I, 101	1,3,5,6,8,9,10,12	B1, B2, B3, B4
TNF	Licensed non-broadcast face held transmitter	22,25,26,27, 80,87,90, 90.217(b), 90.217(c), 90.210, 90.259, 90.265, 95A, 95C, 95D, 95F, 95G, 95I, 101	1,3,5,6,8,9,10,12	B1, B2, B3, B4
TNT	Licensed non-broadcast body worn transmitter	21,22,25,26,27, 80,87,90, 90.217(b), 90.217(c), 90.210, 90.259, 90.265, 95A, 95C, 95D, 95F, 95G, 95I, 101	1,3,5,6,8,9,10,12	B1, B2, B3, B4
UWB	Part 15 Ultra Wide Band Transmitter	15C	1,3,4,5,6,8,9,12	A1, A2
VRD	Part 95 Vehicular Radar Systems	95M	1,3,5,6,8,9,10,12	B2, B3
WBT	Wideband Transmitter	15.25	1,3,4,5,6,8,9,12	A2
WBT	Wideband Transmitter	15.252	1,3,4,5,6,8,9,12	A2
WG1	White Space Device with Geo-location-Mode 1	15H	1,3,4,5,6,8,9,12	A2
WG2	White Space Device with Geo-location-Mode 2	15H	1,3,4,5,6,8,9,12	A2
WGF	White Space Device with Geo-location-Fixed	15H	1,3,4,5,6,8,9,12	A2
WS1	White Space Device with Sensing-Mode 1	15H	1,3,4,5,6,8,9,12	A2
WS2	White Space Device with Sensing-Mode 2	15H	1,3,4,5,6,8,9,12	A2
WSF	White Space Device with Sensing-Fixed	15H	1,3,4,5,6,8,9,12	A2



Annex A.2 TCB Scope

A.2.1. TUV SUD BABT Scope in terms of Scope

A1	A2	A3	A4
B1	B2	B3	B4

A.2.2 Pre-Approval Guidance Procedure (PAG)

The Commission has established a Pre-Approval Guidance Procedure (PAG) to enhance the authorisation approval process for certain types of applications where the Commission has only issued partial guidance or wishes to still oversee the approval process. For a list of devices subject to PAG refer to KDB 388624 D02.

The PAG Procedure is contained in KDB Publication Number 388624 D01.

Annex B Additional Information

Annex B.1 Introduction

There are a number of aspects other than transmitter use which govern the applicable requirements, required testing, approval structure and grant conditions.

This annex is intended to provide guidance over these aspects.

Annex B.2 Category of Installation

Your equipment must be defined to be used in one of the following installation categories. The applicable testing and grant conditions will in part depend on the installation category of your product.

In brief there are the following installation categories

- Fixed Installations
- Mobile Installations
- Portable Installations

Fixed Installation

Broadly a fixed installation is one that meets one of the following definitions:

- Screwed or permanently fixed in a given position
- Of such a size/weight that it cannot be readily moved without the use of machinery or moving devices
- Part of an assembly including antenna which are mounted distant from the transmitter

Refer Part 2 Clause 1091 (b) for further details

If in doubt refer to TUV SUD BABT.

For Licenced fixed installations RF (Maximum Permitted Exposure [MPE]) evaluation normally takes place at site licencing time due to individual site considerations (e.g. collocated Antenna, mast heights, etc). For unlicensed fixed installations MPE evaluation is a part of the approval evaluation.

Mobile Installation

Broadly a mobile installation is one which is not fixed but is intended for use with more than 20 cms distance between the antenna and the user or other people.

Normally the 20 cm separation distance excludes the hands and feet. Thus a hand-held product may be categorized as mobile apparatus. (see Also comments on portable body worn)

Note: Mobile apparatus may require a “fixed” connection to enable it to work; but this does not in itself change the category.

Typical examples of mobile apparatus could be:

- Cordless Phone Basestation
- Small mains powered radio device
- A T1 (Wireline) to RLAN router {note Part 68 Approval would also be needed for this device}

Refer Part 2 Clause 1091 (b) for further details

For Mobile Apparatus RF (Maximum Permitted Exposure [MPE]) evaluation is normally required; exceptionally for handheld apparatus which uses very high energy transmissions hand SAR may be required. (However, since TCBs cannot evaluate Hand SAR such applications would require submission to the FCC). To determine whether a mobile RF device is categorically excluded please refer to 2.1091(c).

The RF Exposure Evaluation Guidance for Mobile Conditions, Standalone operations and / or Simultaneous transmission operations can be found in KDB 447498 D01.

Portable Installation

These are installations where the product is intended for use (or in the view of the TCB/or FCC could reasonably be expected to be used) within 20 cms of the head, trunk, arms or legs of a person.

Refer Part 2 Clause 2.1091 (b), 2.1093 and for further details

SAR evaluation is always required for portable installations. However certain transmitters are categorically excluded from test where their transmission power level is below the threshold. Please refer to KDB 447498 D01 Section 4.3 for Standalone and Simultaneous transmission SAR test exclusion considerations.

There are 3 sub-groups of Portable Apparatus (which is reflected in the EAC for the product)

- Portable Body Worn apparatus
- Portable Ear Held apparatus
- Portable Face held apparatus

The significance of these is as follows:

Portable Body Worn Apparatus

- This is equipment which is typically worn either on the belt or otherwise on the body (e.g. holsters, radios integrated in clothing).
- Note: Equipment which is normally hand held at over 20 cms from the body but may be carried on a belt or in a body worn holster and transmit while being body worn must be declared within this category.

Portable Ear Held Apparatus and Portable Face Held Apparatus

- This typically includes anything with an inbuilt microphone which does not normally operate in hands free mode. Cellular and GSM phone handsets fall into this category, and for such equipment, head SAR testing is required. Additionally, where the equipment has a headset attachment or port then Body SAR testing is normally required

Other SAR considerations

Ancillary Equipment

SAR evaluation currently takes into consideration all ancillary equipment, belt clips, headsets, and powering/battery options. Failure to disclose intended ancillary equipment could render its use outside the terms of the grant and thus illegal.

Separation Distances

Where SAR compliance is dependent on a certain separation distance being maintained between the product and the body this should be declared and agreed at the time of test, with this information conveyed within the application and written in the User Manual. This is to ensure that resulting grant condition is agreeable to all parties.

Occupational Limits

Where apparatus is intended for use (and by practical purpose) limited to trained personnel then more relaxed SAR limits are applicable. Refer to 2.1093(d)(1).

Where occupational exposure is applicable the users must be fully aware of and be able to exercise control over their exposure to qualify for higher occupational exposure limits. RF exposure training must be included in the equipment manuals.

Note: The SAR occupational limits are not normally permitted where the marketing strategy may limit the access to the device but where such a device has a reasonable use by any public person.

Products with More than One Transmitter

Where such products are subject to SAR evaluation then additional requirements apply. Where only one radio may transmit at any time then you must declare how this is ensured. Where more than one radio can transmit at the same time then additional testing may be required. The FCC have a general policy for such apparatus, and special policies for laptops, and mobile phones. Simultaneous transmission SAR requirements are detailed in KDB 447498 D01 (for all devices), KDB 616217 D04 (for laptop/tablet devices), KDB 648474 D04 (for mobile phones, PDA's). For such products we advise you contact TUV SUD BABT in advance of testing to ensure sufficient and adequate testing has been performed.

Refer to Part 2 Clause 2.1093 (d) (1)

Annex B.3 Hearing Aid Compatibility

Portable held to ear equipment which is subject to Parts 24E, 22H, or 90S may additionally be assessed for Hearing aid compatibility.

Where the equipment is shown to be compliant to the appropriate parts of ANSI C63.19 it may be marketed with the appropriate HAC marking (M and/or T rating)

Refer to Part 20 Clause 20.19, and Docket DA 06-1215, FCC 05-116, and DA 05-1134

For further details please refer to TUV SUD BABT.

Annex B.4 Radio Modules

Introduction

Some transmitters are manufactured as radio modules with the intent that they may be used in a variety of host products. Radio Module Transmitters must meet all the usual rules for a transmitter in the appropriate frequency but also have specific requirements. Co-location/co-transmission is prohibited unless addressed in the approval or covered by multi-transmitter SAR or RF Exposure policy.

The approval requirements applicable to such radio modules depend upon a number of factors as follows:

- Whether the Radio is a licensed or unlicensed radio
- Whether the approval is intended for use in specified named hosts or is to be more general.

The following sections briefly address these matters.

Refer to the section about composite products for the use of more than one radio module in a host, or use of a radio module in a host which itself is an intentional transmitter

Radio Module Approval Requirements

Refer to KDB 996369 D01.

The following requirements need to be met in order to obtain a Part 15 Single Modular Approval. These requirements are also useful guidelines in the case of Licensed Single Modular approvals which fall under Parts other than Part 15 and Part 18.

- 1: The Modular transmitter must have its own RF shielding
- 2: The Modular transmitter must buffer modulation/inputs to ensure compliance under excessive data rates or over modulation
- 3: The modular transmitter must have its own power supply regulation
- 4: The modular transmitter must comply with the antenna requirements of 15.203/204
- 5a: The modular transmitter must be tested “Stand-alone” (e.g. outside any host but may be on an extender from a host
- 5b: Unless the modular transmitter is battery powered it must comply with AC line conducted requirements in 15.207
- 6a: The modular transmitter must be labeled with its own FCC ID
- 6b: If this modular transmitter ID cannot be seen once installed in typical hosts then the applicant/grantee must provide either a label or clear instructions for the contents of a label which specifies words similar to “Contains FCC ID: xxx” or “Includes FCC ID: xxx”.
- 7: The modular transmitter must meet all specific rules applicable to the transmitter including all the conditions provided in the integration instructions by the Grantee.
- 8: The modular transmitter must meet the RF exposure requirements.
-

For further info refer to FCC Docket DA 00-1407 and KDB 996369 (Transmitter Module Equipment Authorization Guide)

Where the modular transmitter meets the above in full a modular approval may be granted for use in hosts under specific installation conditions. The modular transmitter (with the declared antenna) may then be used in hosts

after the grantee/integrator has satisfied themselves that the spurious transmissions, and RF compliance is not adversely effected by the inclusion in the host.

If the above are not met in full a limited modular approval (LMA) may be given after a named host is tested with the module and shown to meet any conditions the module cannot meet by itself. The grant would then be limited to use within that host. Further hosts can be added (as Class 2 Permissive changes) after testing showing compliance to a similar set of tests.

Licensed Radio Modules

In general licensed radiators are higher powered than unlicensed radios; as such the requirements are slightly different.

Licensed transmitter modules are not subject to specific modular approval rules as are Part 15 intentional radiators. However, applications for single or limited-single modules under the rules for licensed devices are permitted for the following conditions:

1. Split-modular approvals or limited split-modular approvals are not permitted for licensed modular devices;
2. The applicant can use Section 15.212 provisions for additional guidelines for good engineering practice. In this case, the modular approval cover letter must also include an itemized list documenting compliance with analogous conditions.
3. The Grantee is required to provide other parties (e.g. host manufacture, Original Equipment Manufacturers) and end users, clear documented instructions.
4. The Grantee is responsible for full compliance;
5. Licensed modular grant conditions shall be listed on the grant (e.g maximum antenna gain to ensure compliance with the rules, RF Exposure requirements and host product limitations).
6. For guidance on FCC labeling see KDB 784748.
7. Licensed modular devices must be compliant to all specific applicable licensed radio service rules.

The labeling requirements specified for unlicensed radio modules also apply to licensed radio modules (e.g. Labels with “FCC ID: xxx” on module and “Contains FCC ID: xxx” or “Includes FCC ID: xxx” for host). A Class “Permissive change would be required to add a differing type of host to the grant.

RF Exposure Considerations

KDB Publication 447498 provides more detailed guidance to determine SAR test requirements for modular transmitters for use in mobile and portable devices. When these modules can be installed by an end user in host products with pre-installed antennas, some type of bi-directional authentication function must be used to ensure that only the combinations of approved hosts and modules can be used together. This must be documented in the filing.

Modular approvals for devices operating in mobile or fixed exposure conditions are not automatically considered to be limited modular approvals; however, restrictions for specific host or particular product configurations may result in limited modular conditions for other reasons.

See KDB 616217 to determine conditions for a module to be used in various laptop and netbook configurations with minimal subsequent SAR evaluations in qualified hosts.

In general modular transmitters for portable devices (hosts) that use the trace antenna implemented on third party hosts the approval will be limited to specific host platform depending on the operating conditions to address the SAR test requirements. If the module design uses host trace antenna and operates at power levels below the exclusion thresholds (for SAR) and is intended for standalone use it may be approved as single module if pre-approved by the FCC. This approval must be made through a non-TCB PAG inquiry.

Transmitters which permit power management based on various sensor operations on the host, for example proximity sensors can only be approved as limited modular transmitters under special restrictions on the host. Such applications must be approved through a non-TCB PAG inquiry.



Pros and Cons to Radio Module Approvals

When deciding whether to seek approval for a complete product to that for a radio module the following may be considered

- There are additional requirements for radio modules; e.g. the requirement to list the radio module FCC ID on the host affects the host labeling space.
- Including a transmitter within a host may “hide” the use of transmitters manufactured by companies other than the host grantee.
- Approval of a transmitter within a host permits changes of antenna, power, or installation category which may be host specific.

Annex B.5 Devices for Connection to a Computer USB Port

For some examples of these devices (e.g. USB dongles) there are special RF exposure requirements. We advise you discuss this with TUV SUD BABT prior to completion of any RF testing/assessment. Refer KDB 4474998 D02.



Annex C Pro Forma Letters

Annex C.1 Sample Agents Letter

The following is an example of pro-forma for an Agent Letter. Where appropriate please submit a similar letter on headed paper as a cover letter exhibit.

COMPANY LETTERHEAD

Date (dd/mm/yyyy)

TUV SUD BABT TCB
Octagon House,
Concorde Way
Segensworth North,
Fareham,
Hampshire,
PO15 5RL

Dear Sir or Madam,

We, (*Name and Address of Firm, i.e. applicant*), hereby authorize (*Name [company or individual, address and phone]*) to act as our agent in all matters relating to applications for equipment authorization, including the signing of all documents relating to these matters.

This authorization expires on (*insert date [recommend at least 6 months duration]*).

Sincerely,

Company Officer:
Telephone Number:
Email:



Annex C.2 Sample Confidentiality Letter

The following is an example of a pro-forma for a confidentiality request Letter which is required in most cases. Where appropriate please submit a similar letter on headed paper as a cover letter exhibit.

COMPANY LETTERHEAD

Date (dd/mm/yyyy)

TUV SUD BABT TCB
Octagon House,
Concorde Way
Segensworth North,
Fareham,
Hampshire,
PO15 5RL

Confidentiality Request

FCC ID:

Pursuant to Sections 0.457(d)(1)(ii) and 0.459 of the Commission's Rules, *(Company Name)* hereby requests permanent confidential treatment of information accompanying this application as outlined below:

<< List of Exhibits either by name or type e.g. "Schematics" [exhibit type] or "Design Drawings" [description of data which must be uploaded] >>

*[Common exhibits for which confidentiality is requested are:
Schematics
Bill of Materials/Parts List
Block Diagrams
Theory of Operation]*

(Company Name) also hereby requests short-term confidential treatment of information accompanying this application as outlined below for a period of *(up to 180)* days:

<< List of Exhibits either by name or type e.g. "Internal Photos" [exhibit type]>>

*[Common exhibits for which short-term confidentiality is requested are:
Internal Photos
External Photos
User Manual
Test Set-up Photographs]*

The above materials contain trade secrets and proprietary information not customarily released to the public. The public disclosure of these matters might be harmful to the Applicant and provide unjustified benefits to its competitors.

The Applicant understands that pursuant to Rule 0.457(d)(1)(ii), disclosure of this Application and all accompanying materials will not be made before the date of the Grant for this Application.

Yours sincerely,

Company Officer:
Telephone Number:

(signed by FCC listed Grantee contact)



Email: