

DISPOSITION OF PUBLIC COMMENTS

Draft Policy Statement, Electromagnetic Compatibility Demonstration for Airplane Wireless Radio Frequency Networks, PS-ANM-25-13

No.	Comment	Requested Change	Disposition
Commenter: Kumar MYSORE, Head of Airworthiness, Cargolux Airlines International, S.A.			
1	<p>PEDs, RFID based sensors/transmitters & receivers are increasingly installed on cargo ULDs, pallets and embedded in temperature sensitive cargo shipments.</p> <p>Hence, please include this applications explicitly in the FAA policy. Thanks.</p> <p><u>Reference-1 (FAA):</u> <u>ARC.Charter.11.8.1207, related to Docket No. FAA-2012-0752; Portable Electronic Device Aviation Rulemaking Committee – Objective – To make recommendation / to further clarify and provide guidance on allowing additional PEDs without compromising the continued safe operation of the aircraft.</u></p> <p><u>Reference-2 (FAA):</u> <u>AC 20-162 Airworthiness approval & Operational allowance of RFID systems</u></p> <p>Installing and using RFID systems on aviation products and equipment; Acceptable way to use RFID readers or interrogators installed on aircraft, Advice on allowing use of RFID devices on baggage, mail containers, cargo devices and galley/service carts; Using portable RFID readers or interrogators carried onboard aircraft; Passive /or/ Low-power active RFID devices (not RFID devices that communicate using cellular or satellite telephone technology, wireless wide area networks, high power radio transmitters, or other types of tracking devices)</p> <p><u>Reference-3 (EASA)</u> <u>Guidance Material GM1 CAT.GEN.MPA.140</u></p> <p>(a) Definition and categories of PEDs</p>	<p><u>Under “Summary”, request following change:</u></p> <p>This policy statement provides additional Federal Aviation Administration (FAA) policy on demonstrating electromagnetic compatibility (EMC) for wireless radio frequency (RF) systems that are installed on transport category airplanes. The installed wireless RF systems addressed by this policy include those that communicate with portable wireless RF transmitters and receivers brought on board the aircraft by crew members, passengers, or as part of the cargo and those that communicate with other installed wireless RF devices. The installed wireless RF systems use standards for, but are not limited to, Bluetooth, Wi-Fi, WiMAX, or mobile telephony. This policy statement defines acceptable airplane EMC tests to demonstrate compliance with Title 14, Code of Federal Regulation (14 CFR) part 25 airworthiness regulations for installed wireless RF systems.</p>	<p>Agreed. Added “...or in baggage or cargo;” instead of commenter’s suggested language.</p>

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	<p>PEDs are any kind of electronic device, typically but not limited to consumer electronics, brought on board the aircraft by crew members, passengers, or as part of the cargo and that are not included in the approved aircraft configuration. All equipment that is able to consume electrical energy falls under this definition. The electrical energy can be provided from internal sources as batteries (chargeable or non-rechargeable) or the devices may also be connected to specific aircraft power sources.</p> <p>RFID Technology & Application, Ed. Stephen B Miles, Sanjay E Sharma, John R Williams, ISBN 978-0-16961-5, Cambridge University press. Chapter 10. Reducing barriers to ID adaption in the aerospace industry Chapter 11: Cold Chain</p>		
2	Same as above in item 1	<p><u>Under “Definition of Key Terms” request following change:</u></p> <p>“Portable wireless RF transmitters and receivers” refer to the portable electronic devices (PEDs) that include intentional radio frequency (RF) transmitters. Examples of the portable wireless RF transmitters and receivers include mobile telephones, Bluetooth devices, Wi-Fi devices, or WiMAX devices. The portable wireless RF transmitters and receivers may be embedded into cargo shipments, laptop computers, tablet computers, electronic books, handheld electronic games, mobile phones, personal medical devices, electronic flight bags, and portable emergency medical devices.</p> <p>“Installed wireless RF transmitters and receivers” refer to intentional radio frequency transmitters that are in equipment that is installed on the airplane. Examples of these</p>	<p>We agree with the first part of the comment and added, “...and cargo monitoring devices” to the definition of “portable wireless RF transmitters and receivers.”</p> <p>We chose not to add “temperature data loggers” to the examples in the definition of “installed wireless RF transmitters and receivers,” because they are an example of “cargo monitoring devices,” which is being added.</p>

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		<p>devices include RF transmitters and receivers built into temperature data loggers, wireless smoke detectors, routers, wireless access points, and in-seat passenger entertainment systems.</p> <p>“Wireless RF system” refers to installed radio transmitters and receivers, associated antennas, data processing required for the system functions, and portable radio transmitters and receivers that communicate with the installed radio transmitters and receivers.</p>	
3	Same as above in item 1	<p><u>Under “Relevant Past Practice”, request following change:</u></p> <p>Use of PEDs, including portable wireless RF transmitters and receivers, on board aircraft is controlled by the aircraft operators, as required by §§ 91.21, 121.306, 125.204, and 135.144. For commercial air carriers, passenger service announcements and flight attendant observations are the primary means of controlling use of PEDs.</p> <p>PEDs installed in cargo shipments require adequate in-built fail-safe systems to switch off to ‘flight safe’ mode when the aircraft start to taxi out. <<FAA has to mention here the test criteria for certification of such an in-built fail-safe systems>></p> <p>Operation of portable wireless RF transmitters and receivers is prohibited unless the operator demonstrates that the airplane model is tolerant to the specific type of portable wireless RF transmitter and receiver.</p>	<p>We disagree with the commenter’s recommendation. However, the following sentence was added: <i>This policy does not change the existing operational regulations and guidance regarding PEDs.</i></p>
4		<p><u>Under “Policy”, please include an additional items as below:</u></p>	<p>We do not agree as this is outside the scope of this policy.</p>

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		<p>5. Unattended, installed wireless RF systems such as those embedded in cargo shipments</p> <p>These PEDs shall have demonstrated inbuilt fail-safe automatic flight safe mode switching as soon as the aircraft starts taxiing.</p>	
RFID	Radio Frequency IDentification		
	Passive RFID, Active RFID		
RFID Device RFID –Based sensors	Active RFID, Transmitting RFID, Battery Assisted Passive (BAP) RFID, Semi-Passive RFID devices, Low powered Active RFID		
	Temperature data loggers used of tracking temperature of perishable products. Other parameter: Humidity, Dew point, Barometric pressure, 3-axis shock, Shock energy, Shock duration, Free fall height, Luminosity		
PED	Portable Electronic Devices		
T-PED	Transmitting PED		
C-PED	Controlled PED which are under configuration control by the operator		
M-PED	Medical PED		
Reader / Interrogator			

No.	Comment	Requested Change	Disposition
	Commenter: Ben Tyson		
1	It seems like the author avoids using the acronym “T-PED” or “TPED” for transmitting PEDs. What is the rationale for this? Using a new acronym for T-PEDs draws attention to the different nature and	Replace all instances of “transmitting PED(s)” with “T-PED(s)” and define the acronym on its first use.	Many of the standards, including RTCA/DO-307, and also FAA regulations, use the term “transmitting PED” rather than, or in addition to, “T-PED.” More recent guidance uses T-PED. For this policy statement, we chose to use

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	requirements of these devices, and makes it instantly clear which type of PED is being discussed.		transmitting PED.
2	The cited regulations do not include an amendment level. It seems like the intended amendment of each 14CFR Part should be explicitly stated, e.g. “14 CFR 25.1309(a) [25-123]”	Add amendment levels to regulation references.	We disagree. Amendment levels are handled at the certification level. This policy is more general and covers all amendment levels.
3	Please include some examples of “low power portable wireless RF transmitters and receivers” to enhance understanding.	Add examples of the most common low power portable wireless RF transmitters and receivers.	Agreed. Added “Bluetooth transmitters” as a common example.

No.	Comment	Requested Change	Disposition
Commenter: Carlos Ayala, International Certification and Regulatory Affairs, Cessna Aircraft Company			
1	Cessna appreciates FAA providing the above mentioned policy as it encourages standardization and provides a path to propose methods of compliance that we know will meet the FAA’s expectations.	No change requested.	No response required.
2			

No.	Comment	Requested Change	Disposition
Commenter: Gogo LLC			
1	Gogo supports the FAA AIR division’s effort to codify the methods, procedures based on industry standards by establishing policy that defines acceptable airplane EMC tests to demonstrate compliance with Title 14, Code of Federal	No change requested.	No response required.

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	Regulation (14 CFR) part 25 airworthiness regulations for installed wireless RF systems.		

No.	Comment	Requested Change	Disposition
Commenter: Andy Wallington			
1	The second paragraph in the Summary section is not clear in its intent and could be misinterpreted	Propose using the same terminology as in the key terms defined immediately below, as follows: 'This policy does not apply to installed airplane radio systems that <i>intentionally</i> communicate with radios outside the airplane...'	Agreed. "Intentionally" added to second paragraph of Summary.

No.	Comment	Requested Change	Disposition
Commenter: AIRBUS SAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France For any question or clarification needed, please contact : Rolf Greiner, rolf.greiner@airbus.com			
1	<p><u>Comment on Section "Definition of Key Terms", Page 1/2:</u></p> <p>On page 1 of the draft policy, FAA defines "Portable wireless RF transmitters and receivers". However, in the context of certification, there is still a mix of devices that are operationally approved for using aboard (EFBs) and other devices for which permission is per-se not available (e.g. for mobile phones). AIRBUS asks for clarification, that such Portable wireless devices are defined only in the context of their potential usage in the A/C. Existing approval procedures (given by FAA AC) are valid for the</p>	<p><u>Replace text of section "Definition of Key Terms" from "Portable wireless RF transmitters..." to "...emergency medical devices." by the following (new text underlined):</u></p> <p>"Portable wireless RF transmitters and receivers" refer to the portable electronic devices (PEDs) that include intentional radio frequency (RF) transmitters. <u>They should include such public available off-the-shelf devices only, which do not have individual permissions. Such off-the-shelf devices may be allowed onboard after conditions are being justified for its usage on an A/C type or an</u></p>	Partially agreed. Our definition is appropriate for the purpose of defining portable wireless RF transmitters and receivers. However, we added a sentence to the last paragraph of Relevant Past Practice, instead of where it was suggested, for clarification. The following sentence was added: <i>This policy does not change the existing operational regulations and guidance regarding PEDs.</i>

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	approval of such devices.	<p><u>individual A/C.</u> <u>Examples are passenger mobile telephones, bluetooth devices, Wi- Fi and WiMAX devices.</u> <u>Such portable wireless RF transmitters and receivers may also be embedded into laptop computers, tablet computers, electronic books, handheld electronic games, mobile phones, and personal medical devices.</u> <u>Portable wireless RF transmitters and receivers used by the crew will usually be approved by operational permissions. Requirements for the approval process have been established by associated FAA Advisory Material and should be applied (see paragraph Current Regulatory and Advisory Material). Examples of such devices are electronic flight bags, embedded into laptop computers or tablet computers, and portable emergency medical devices.”</u></p> <p><u>Before text starting with “Installed wireless RF transmitters...”, introduce the additional note (new text underlined):</u></p> <p><u>Note: The operational approval of such Portable wireless RF transmitters and receivers as mentioned above will not be provided by this Policy Statement, because it is addressed by associated FAA ACs.</u></p>	
2	<p><u>Comment on Section “Current Regulatory and Advisory Material”, Page 2/3:</u></p> <p>In the para “Definition of Key Terms” electronic flight bags are mentioned on page 2 (2nd sentence). Therefore, AIRBUS proposes to add reference to AC 120-76B in order to justify that procedures determined by AC 120-76B are applicable for EFB certification.</p>	<p><u>On Page 3, add reference to AC 120-76B to read:</u></p> <p>“8. AC 120-76B Guidelines for the Certification, Airworthiness, and Operational Use of Electronic Flight Bags.”</p>	Disagree. We deleted the reference to “electronic flight bags,” as this policy does not address their use, so the proposal to add reference to AC 120-76B is not necessary.
3	<p><u>Comment no.1 on Policy Para 1, Page 4:</u> <u>“Installed wireless radio frequency (RF) systems</u></p>	<p><u>Revise Para 1.a. and 1.c. to read (Para 1.b. unchanged.</u></p>	We disagree. The phrase requested to be added is not appropriate for paragraph a. The type certificate data sheet

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	<p><u>that communicate with other installed wireless RF transmitters and receivers”:</u></p> <p>AIRBUS experience justifies that tests are not the only way to demonstrate EMC. Analysis should be used in cases where exhaustive EMC information is available for a given A/C where an applicant intends to install wireless system(s). Analysis shall base on an assessment of approved qualification data of installed A/C equipment. Therefore AIRBUS proposes to add “analysis” as an additional means to demonstrate EMC.</p>	<p><u>Additional text underlined):</u></p> <p>“a. The applicant for certification of installed wireless RF systems that only communicate with installed wireless RF transmitters and receivers should demonstrate electromagnetic compatibility (EMC) to comply with §§ 25.1301(a)(4), 25.1309(a), 25.1353(a), and 25.1431(c). <u>The applicant may use information of the airplane manufacturer that provides the level of EMI immunity for this wireless RF transmission system on a specific A/C type or an individual A/C (based on data of TCDS & CofA and additional information).”</u></p> <p>“c. Airplane EMC ground tests, flight tests <u>or analysis</u> should be used to demonstrate compliance with §§ 25.1301(a)(4), 25.1309(a), 25.1353(a), and 25.1431(c) for the installed wireless RF system. The applicant should define the appropriate pass/fail criteria for these airplane EMC tests.”</p>	<p>(TCDS) and the certificate of airworthiness (CofA) do not provide adequate information to demonstrate EMC. Ground and/or flight tests are standard practice for industry and are the methods normally accepted by FAA.</p>
4	<p><u>Comment no.2 on Policy Para 1, Page 4: “Installed wireless radio frequency (RF) systems that communicate with other installed wireless RF transmitters and receivers”:</u></p> <p>If T-PED tolerance is already shown for a particular A/C and if the T-PED tolerance covers the RF system frequencies and power level, no further actions are necessary. AIRBUS proposes to add paragraph 1.d.</p>	<p><u>Introduce new Para 1.d. to read:</u></p> <p>“d. If transmitting portable electronic device (T-PED) tolerance/immunity (as per DO-307 or an equivalent standard, ED-130) is already available and accepted by airworthiness authorities then demonstration to §§ 25.1301(a)(4), 25.1309(a), 25.1353(a), and 25.1431(c) is covered without further actions.”</p>	<p>We disagree. Paragraph 1 does not require any demonstration of T-PED tolerance. It does define standard EMC practice. This paragraph only deals with installed wireless systems, not PEDs. Added clarification in paragraph 1a of the Policy section.</p>
5	<p><u>Comment on Policy Para 2.a., Page 4:</u></p> <p>AIRBUS understands the intention of this policy is not to define T-PED tolerance.</p>	<p><u>Revise Para 2.a. to read (additional text underlined):</u></p> <p>“a. The applicant for certification of installed</p>	<p>We disagree with the proposed language because paragraph 2 is for airplanes with demonstrated transmitting PEDs tolerance. However, we clarified with the following sentence,</p>

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	<p>Most of A/Cs are T-PED tolerant by design against a subgroup of wireless communication standards. E. g. most a/c will be tolerant against the 2.4GHz Wi-Fi standard. Therefore, AIRBUS proposes to change the last sentence to introduce the term “installed RF wireless system” instead keeping the frequency range more or less undetermined.</p>	<p>wireless RF systems that communicate with portable wireless RF transmitters and receivers should provide evidence of approved data that shows the airplane has demonstrated transmitting PED tolerance using RTCA/DO-307, section 3, table 3-1 or an equivalent standard. An equivalent standard should define system RF susceptibility requirements consistent with RTCA/DO-307 table 3-1, including the frequency range and RF power levels which will be <u>supported by the installed RF wireless system.”</u></p>	<p>“For example, PED tolerance demonstrated using ED-130 should include RF susceptibility tests that start at 100 MHz.”</p>
6	<p><u>Comment on Policy Para 2.b., Page 4:</u> AIRBUS considers point 2.b. as an alternative way of demonstration (to item 2.a).</p>	<p><u>Revise Para 2.b. to read (additional text underlined):</u> “b. <u>Alternatively</u>, if airplane manufacturer service information is used as evidence of the airplane transmitting PED tolerance, the service information should reference the approved data or documents that demonstrate airplane transmitting PED tolerance <u>for the concerned A/C.”</u></p>	<p>We agree but changed the text differently. We deleted the original 2b and added this revised sentence: “The applicant must provide evidence that PED tolerance data for that airplane model has been approved by the FAA.”</p>
7	<p><u>Comment on Policy Para 2.d., Page 5:</u> AIRBUS considers also “analysis” as applicable means. Other change addresses simplifying the requirements concerning location.</p>	<p><u>Revise Para 2.d. to read (new text underlined, deleted text marked with strikethrough):</u> “d. Airplane EMC ground tests, flight tests <u>or analysis should</u> be used to demonstrate compliance with §§ 25.1353(a) and 25.1431(c) for the installed wireless RF system. The airplane EMC ground or flight tests should be performed with the installed wireless RF system equipment transmitting <u>in a mode that is representative for normal operation. Normal operation means the system is connected to PEDs in all areas accessible by passengers and crew. to and receiving from transmitting PEDs.</u> The number of transmitting PEDs should be selected to cause the system to operate at high</p>	<p>We disagree. The intention is that these tests should be performed in all occupied areas of the airplane to ensure the installed system operates at a high capacity.</p>

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		<p>capacity. The transmitting PEDs should be operated in all areas of the airplane that passengers or crewmembers can occupy. The areas should include the passenger cabin, aisles, galleys, toilets, flight deck, and crew rest areas. At least one transmitting PED should be operated in each area. The intent is to show that airplane compatibility is demonstrated when the installed wireless RF system is operating. It is not intended to further demonstrate PED tolerance for the airplane, since this has already been established. Note that testing in the flight deck does not authorize the use of PEDs in the flight deck. The use of PEDs is strictly controlled and is checked and approved operationally as part of the issuance of the operational specifications.”</p>	
8	<p><u>Comment on Policy Para 2, Page 5:</u> Airbus proposes to introduce an additional Subpara 2.e to identify the aircraft receiver systems that must be assessed for T-PED spurious emissions tolerance.</p>	<p><u>Introduce new Para 2.e. to read:</u> “e. Demonstrate the airplane interference path loss (IPL) satisfies the target IPL requirements in section 4, RTCA DO-307.”</p>	<p>We disagree. See Boeing comment #1 below: The scope of this policy only addresses installation of transmitting wireless RF systems. It does not address the general issue of PEDs that could interfere with airplane radio receivers. It is not our intent to expand the scope at this time.</p>
9	<p><u>Comment on Policy Para 3.a., Page 5:</u> AIRBUS considers also “analysis” as acceptable means to demonstrate electromagnetic compatibility and proposes to adapt the text accordingly.</p>	<p><u>Revise Para 3.a. to read (additional text underlined):</u> “a. Installed wireless RF systems that communicate with portable wireless RF transmitters and receivers on airplanes that have not demonstrated transmitting PED tolerance require specific tests/<u>analysis</u> to demonstrate electromagnetic compatibility. The applicant should use tests/<u>analysis</u> and criteria described in paragraph 1c in this policy.”</p>	<p>We disagree with the suggested addition of “analysis.” However, we deleted some of the text, added text, and reorganized the section to eliminate the prescriptiveness of tests.</p>
10	<p><u>Comment on Policy Para 3.b., Page 5:</u> AIRBUS considers RF susceptibility a/c tests are described exhaustively in the relevant standards</p>	<p><u>Revise Para 3.b. to read (new text underlined, deleted text marked with strikethrough):</u> “b. <u>In addition, the applicant should perform</u></p>	<p>Agreed. We reorganized this section and deleted/added text for clarification.</p>

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	<p>DO-294 and ED-130. AIRBUS proposes to delete the test specification mentioned in 3.b. because it does not provide additional value.</p>	<p>an airplane RF susceptibility demonstration as per applicable standards. (i.e. <u>RTCA/DO-294C, Guidance on Allowing Transmitting Portable Electronic Devices (T-PEDS) on Aircraft or ED-130</u>). In addition to the airplane EMC ground or flight tests, the applicant should perform an airplane RF susceptibility test. This airplane RF susceptibility test should expose the airplane electrical and electronic systems to RF fields that represent the fields from the transmitting PEDs that communicate with the installed wireless RF system. The airplane RF susceptibility test must demonstrate acceptable performance for all aircraft systems that perform functions that are required by regulation (such as flight data recorders), or that have major, hazardous and/or catastrophic failure conditions. The RF susceptibility tests should be performed using a transmitter and antenna operating at the maximum effective isotropic radiated power (EIRP) authorized by the national spectrum authorities where the airplane is intended for use. The EIRP should be increased by a multiple equipment factor for systems where the EIRP seen at the airplane systems increases when multiple portable devices can transmit simultaneously. <u>RTCA/DO-294C, Guidance on Allowing Transmitting Portable Electronic Devices (T-PEDS) on Aircraft</u>, provides guidance on determining the multiple equipment factor. The multiple equipment factor should be determined assuming that the number of transmitting portable devices is equal to the number of passenger and crew member seats in the airplane, unless a different number is justified by the applicant.”</p>	

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11	<p><u>Comment on Policy Para 3.c., Page 6:</u></p> <p>AIRBUS considers the example is misleading. There are different Wi-Fi standards available. AIRBUS proposes to remove the example.</p>	<p><u>Revise Para 3.c. to read (deleted text marked with strikethrough):</u></p> <p>“c. The maximum authorized EIRP may vary among national spectrum authorities, so typically the highest EIRP should be used. For example, the U.S. Federal Communications Commission (FCC) allows the maximum EIRP for spread spectrum devices such as Wi-Fi to operate at 4 watts EIRP, while other authorities authorize lower power.”</p>	<p>We disagree with the deletions in the comment. However, we reorganized this section and deleted/added text for clarification.</p>
12	<p><u>Comment on Policy Para 3.d., Page 6:</u></p> <p>AIRBUS proposes text changes in Para 3.d. because the statement, as written by FAA, is restricting the use of PEDs completely in the flight deck. AIRBUS assumes that this is not the intention of the FAA.</p>	<p><u>Revise Para 3.d., 6th and 7th sentence to read (additional text underlined):</u></p> <p>“ Note that testing in the flight deck does not authorize the use of PEDs in the flight deck <u>without further permissions</u>. The use of PEDs/T-PEDs <u>of flight crew</u> is strictly controlled and is checked and approved operationally as part of the issuance of the operational specifications.”</p>	<p>We partially agree and added “by the flight crew” to the last sentence of paragraph 3e (paragraph identifier changed with the reorganization of this section).</p>
13	<p><u>Comment on Policy Para 4.a., Page 6:</u></p> <p>Aircraft manufacturers’ experiences show that 100mW do not affect A/C systems. AIRBUS proposes to adapt the policy accordingly.</p>	<p><u>Revise Para 4. a. to read (changed text underlined):</u></p> <p>“The applicant for installed wireless RF systems that communicate exclusively with low power portable wireless RF transmitters are not required to demonstrate transmitting PED tolerance as described in section 2 and RF susceptibility as described in section 3 in this policy. For this policy, low power portable wireless RF transmitters are those that transmit on the order of <u>100</u> milliwatts EIRP or less.”</p>	<p>We disagree. There is no technical basis for the change.</p>
14	<p><u>Comment on Policy Para 4.b., Page 6:</u></p> <p>See comment to 1.c. and 2.b. and 3.a.</p>	<p><u>Revise Para 4. b. to read (additional text underlined):</u></p>	<p>See Airbus comment #3 also. We disagree that analysis is appropriate for this demonstration. Ground and/or flight tests are standard practice for industry and are the methods</p>

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		“The applicant should use tests <u>or analysis</u> and criteria described in paragraph 1c in this policy to demonstrate electromagnetic compatibility.”	normally accepted by FAA.

No.	Comment	Requested Change	Disposition
Commenter: Boeing Commercial Airplanes, Terry L. McVenes, Director, System Safety & Regulatory Affairs			
1	Page 5, Para 3.b. Page 4, Para 2.a. This paragraph [for airplanes that have not shown portable electronic devices (PED) tolerance] does not address spurious emissions from wireless devices, radiating into the aircraft’s antenna systems.	We recommend expanding this section to address “front door” coupling compliance, and to reference Section 4 of RTCA/DO-307, “ <i>Aircraft Design and Certification for Portable Electronic Device (PED) Tolerance.</i> ” Recommend also referencing RTCA/DO-307, Change 1, Table 4-7. Rationale for Suggested Change: -To mention the other half of DO-307 PED coupling compliance. -To mention the section that identifies specific requirements for “front door” coupling compliance IPL target values, similar to the already mentioned Table 3-1 “back door” coupling compliance test recommendations.	We disagree. The scope of this policy only addresses installation of transmitting wireless RF systems. It does not address the general issue of PEDs that could interfere with airplane radio receivers. It is not our intent to expand the scope at this time.
2	Page 5, Para 3.b This paragraph (for airplanes that have not shown PED tolerance) does not address other factors beyond Multiple Equipment Factor (MEF), while RTCA/DO-294C [“ <i>Guidance on Allowing Transmitting Portable Electronic Devices (T-PEDS)</i> ”] does.	If this is a proposed <u>change from</u> the minimum 10 dB margin in accordance with DO-294C (Appendices 6.D and 6.G.), then we recommend that the text state that the 10 dB margin is not mandatory. If this is intended to <u>be in line with</u> DO-294C, then we recommend mentioning other factors including margin. Rational for Suggested Change:	The intent was not to be too prescriptive. We revised this paragraph for clarification to avoid misinterpretation of the intended use of the guidance in DO-294.

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		Consistency with DO-294C seems to be lacking – is this intentional or unintentional?	
3	Page 6, Para 3.c This paragraph (for airplanes that have not shown PED tolerance) implies that use of maximum effective isotropic radiated power (EIRP) is allowed, but it makes no connection to adding other factors to this value as a final value for the test.	We request that the intent of this paragraph be clarified with regard to our comment. The instruction does not appear to be aligned with DO-294C. Rational for Suggested Change: Consistency with DO-294C seems to be lacking – is this intentional or non-intentional?	See Boeing comment #2 above. The intent was not to be too prescriptive. We revised this paragraph for clarification to avoid misinterpretation of the intended use of the guidance in DO-294.

No.	Comment	Requested Change	Disposition
Commenter: Scott E. Pratt PAI, EA-FSDO-65, 412 Yellowbird Road, Portland, Maine 04102			
1	Does this Policy only apply to CFR Part 25 aircraft? WiFi is also being installed into CFR Part 23, 27 & 29 aircraft. Should there be an applicability paragraph?		The Summary states that this policy statement is for wireless RF systems that are installed on <i>transport category airplanes</i> . It also says that the policy statement defines acceptable tests to demonstrate compliance with <i>part 25</i> airworthiness regulations. This policy may be applied to other categories of aircraft at the discretion of the applicable aircraft certification office, but it is not required.

No.	Comment	Requested Change	Disposition
Commenter: Adrian Honer, Lead ODA Administrator, Envoy Aerospace ODA			
1	Is this policy intended to eliminate the need for an issue paper for the installation of these systems?		It is the intention of the Transport Standards Staff to replace issue papers with permanent policy as the policy becomes stable and generally applicable. This proposed policy should eliminate the need of an issue paper where the policy overlaps existing issue papers. However, projects that involve the

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			installation of cellular and wireless data RF systems often require policy to address additional issues. Those additional issues that are not covered by existing guidance may still need issue papers.