

Project 25 Compliance Assessment Program  
 Summary Test Report  
 EF Johnson ATLAS 1200 800 MHz Conventional Repeater  
 STR-EFJ-15032501  
 March 25, 2015

Test Item Description	
<b>Manufacturer</b>	EF Johnson Technologies
<b>Manufacturer Contact</b>	John Oblak (507) 837-5116
<b>Product Name</b>	ATLAS 1200 800 MHz Conventional Repeater
<b>Installed Options</b>	Standard
<b>Vocoder Identification</b>	Not Applicable – The repeater does not incorporate a vocoder

Test Description
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Conventional Base Station/Repeater Performance

Test Information	
<b>P25 CAP Laboratory Code</b>	P25CAP081010 (EF Johnson Technologies)
<b>Date(s) of Test</b>	March 3, 2015 to March 20, 2015
<b>Date of Issue</b>	March 25, 2015

Informative References	
Date	Title
March 2010	P25-CAB-CAI_TEST_REQ-March 2010

Other Devices Tested with ATLAS 1200 800 MHz Conventional Repeater		
Manufacturer	Product Name, Definition, and Unique ID	Installed Options
None		

Project 25 Compliance Assessment Program  
 Summary Test Report  
 EF Johnson ATLAS 1200 800 MHz Conventional Repeater  
 STR-EFJ-15032501  
 March 25, 2015

<b>P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Conventional Base Station/Repeater Performance</b>		<b>DTR-P25CAP081010-15032501</b>	
<b>Receiver Tests</b>			
<b>Test Case</b>	<b>Description</b>	<b>Requirement</b>	<b>Results</b>
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 90 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 80 dB (Class A)	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P
2.1.17	Late Entry Unsquelch Delay		
	No Talk Group or Encryption	≤ 125 ms	N1
	Talk Group Only	≤ 370 ms	N1
	Encryption Only	≤ 370 ms	N1
	Both Talk Group and Encryption	≤ 460 ms	N1
2.1.18	Receiver Throughput Delay	≤ 125 ms	N1

Project 25 Compliance Assessment Program  
 Summary Test Report  
 EF Johnson ATLAS 1200 800 MHz Conventional Repeater  
 STR-EFJ-15032501  
 March 25, 2015

<b>P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Conventional Base Station/Repeater Performance</b>		<b>DTR-P25CAP081010-15032501</b>	
<b>Transmitter Tests</b>			
<b>Test Case</b>	<b>Description</b>	<b>Requirement</b>	<b>Results</b>
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	$\geq 67$ dB	P
2.2.14	Transmitter Throughput Delay	$\leq 125$ ms	N2
2.2.15	Frequency Deviation for C4FM High Level Signal Deviation	$2544 \text{ Hz} < f_{\text{dev}} \leq 3111 \text{ Hz}$	P
	Low Level Signal Deviation	$848 \text{ Hz} < f_{\text{dev}} \leq 1037 \text{ Hz}$	P
2.2.16	Modulation Fidelity	$\leq 5\%$ (Class A)	P
2.2.18	Transient Frequency Behavior Time Interval $t_1 = 20$ ms	$ \Delta f  \leq 12.5$ kHz	P
	Time Interval $t_2 = 50$ ms	$ \Delta f  \leq 6.25$ kHz	P
	Time Interval $t_3 = 10$ ms	$ \Delta f  \leq 12.5$ kHz	P

Project 25 Compliance Assessment Program  
 Summary Test Report  
 EF Johnson ATLAS 1200 800 MHz Conventional Repeater  
 STR-EFJ-15032501  
 March 25, 2015

<b>Model Class Definition</b>	<b>Applied to P25-CAB-CAI_Test_Req March 2010, 2.2.3.2</b>	
<b>Model Class Name</b>	<b>Product Name, Definition, and Unique ID</b>	<b>Installed Options</b>
ATLAS 1200 800 MHz Conventional Repeater	ATLAS 1200 Conventional Repeater	<b>Firmware:</b> 3.7.7
		<b>Firmware:</b> 3.8.0

<b>Test Case Result Definitions</b>	
<b>No Test Performed</b>	---
<b>Test Does Not Apply to the Test Object</b>	N/A
<b>Test Object Meets Requirements</b>	P (Pass)
<b>Test Object Does Not Meet Requirements</b>	F (Fail)
<b>Test Object is Not Conclusive</b>	I (Inconclusive)

<b>Comments</b>
N1: The receiver does not incorporate a vocoder.
N2: The transmitter does not incorporate a vocoder.

Project 25 Compliance Assessment Program  
Summary Test Report  
EF Johnson ATLAS 1200 800 MHz Conventional Repeater  
STR-EFJ-15032501  
March 25, 2015

The information contained herein has been provided by the manufacturer of the product with permission to make the information publicly available. The Department of Homeland Security (DHS) is making this information available as a public service; however, DHS IS PROVIDING THE INFORMATION "AS IS". DHS MAKES NO EXPRESS OR IMPLIED WARRANTIES AND SPECIFICALLY, DHS MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, REGARDING THE ACCURACY OR USE OF THIS INFORMATION. Reference to any specific commercial products, processes, or services by trade name, trademark, manufacturer, or otherwise does not constitute an endorsement by or recommendation from DHS.

**OMB NO:** 1640-0015

**EXPIRATION DATE:** 07/31/2015

**Burden Statement**

An agency may not consider or sponsor information collection and a person is not required to respond to this information collection unless it displays a current valid Office of Management and Budget control number and expiration date. The control number for this collection is 1640-0015 and this form will expire on 07/31/2015. The estimated average time to complete this form is 60 minutes per respondent. If you have any comments regarding the burden estimate you can write to Department of Homeland Security, Science and Technology Directorate, Washington, DC 20528.

DHS FORM 10056 – June 2009