

Project 25 Compliance Assessment Program
 Summary Test Report
 EF Johnson ATLAS 1200 VHF Conventional Repeater
 STR-EFJ-14091001
 September 10, 2014

Test Item Description	
Manufacturer	EF Johnson Technologies
Manufacturer Contact	John Oblak (507) 837-5116
Product Name	ATLAS 1200 VHF Conventional Repeater
Installed Options	Standard
Vocoder Identification	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	
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	August 6, 2014 to August 29, 2014
Date of Issue	September 10, 2014

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

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

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Conventional Base Station/Repeater Performance		DTR-P25CAP081010-14091001	
Receiver Tests			
Test Case	Description	Requirement	Results
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	≥ 70 dB (Class B)	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 Unsquench 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

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Transmitter Tests			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.14	Transmitter Throughput Delay	≤ 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 $t_1 = 5$ ms	$ \Delta f \leq 12.5$ kHz	P
	Time Interval $t_2 = 20$ ms	$ \Delta f \leq 6.25$ kHz	P
	Time Interval $t_3 = 5$ ms	$ \Delta f \leq 12.5$ kHz	P

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Model Class Definition	Applied to P25-CAB-CAI_Test_Req March 2010, 2.2.3.2	
Model Class Name	Product Name, Definition, and Unique ID	Installed Options
ATLAS 1200 VHF Conventional Repeater	ATLAS 1200 Conventional Repeater	Firmware: 3.7.7
		Firmware:

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

Comments
N1: The receiver does not incorporate a vocoder.
N2: The transmitter does not incorporate a vocoder.

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OMB NO: 1640-0015

EXPIRATION DATE: 07/31/2015

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