

**Project 25 Compliance Assessment Program  
 Summary Test Report  
 EF Johnson Viking VP900 UHF (470 MHz to 520 MHz) and 700/800 MHz Multi-Band  
 Portable Subscriber Unit  
 STR-EFJ-17071802  
 July 18, 2017**

**Test Item Description**

<b>Manufacturer</b>	EF Johnson Technologies
<b>Manufacturer Contact</b>	Randy O'Connor (972) 819-0911
<b>Product Name</b>	Viking VP900 UHF (470 MHz to 520 MHz) and 700/800 MHz Portable Subscriber Unit
<b>Installed Options</b>	Limited and Full Keypad, SEM installed
<b>Vocoder Identification</b>	Enhanced Full Rate

Test Description
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability

**Laboratory Information**

Laboratory	Details
<b>P25 CAP Laboratory Code</b>	P25CAP081010 (EF Johnson Technologies)
<b>Date(s) of Test</b>	January 22, 2016 to February 24, 2016
<b>Date of Issue</b>	February 26, 2016

Laboratory	Details
<b>P25 CAP Laboratory Code</b>	P25CAP081010 (EF Johnson Technologies)
<b>Date(s) of Test</b>	February 11, 2016 to February 24, 2016
<b>Date of Issue</b>	February 26, 2016

Laboratory	Details
<b>P25 CAP Laboratory Code</b>	P25CAP081010 (EF Johnson Technologies)
<b>Date(s) of Test</b>	October 5, 2012
<b>Date of Issue</b>	October 8, 2012

Laboratory	Details
<b>P25 CAP Laboratory Code</b>	P25CAP081016 (Timco Engineering)
<b>Date(s) of Test</b>	July 24, 2012
<b>Date of Issue</b>	July 31, 2012

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Laboratory	Details
P25 CAP Laboratory Code	P25CAP081017 (Harris)
Date(s) of Test	December 11, 2012
Date of Issue	December 17, 2012

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	January 28, 2013
Date of Issue	February 4, 2013

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	June 5, 2014 to June 6, 2014
Date of Issue	July 3, 2014

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	May 10, 2017
Date of Issue	June 14, 2017

### Informative References

Date	Title
Mar 2010	P25-CAB-CAI_TEST_REQ – March 2010

### Other Devices Tested with Viking VP900 Portable Subscriber Unit

Manufacturer	Product Name, Definition, and Unique ID	Installed Options
Tait	TN9400 TaitNet P25	Firmware 3.70, Kernel 3.60
EF Johnson	IP25 Trunked Infrastructure	Release 3.1-RC1
Harris	P25 Trunked Infrastructure	Release PR9D
EF Johnson	Atlas Trunked Infrastructure	TSNI 1.0.5-1
Motorola Solutions	ASTRO Trunked Infrastructure	Release 25.7.17

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**Receiver Tests (UHF) – Conventional**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b>

Receiver Tests (UHF)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P5
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P6
2.1.6	Signal Delay Spread Capability	≥ 50 μs	P7
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P8
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 75 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	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	P
	Both Talk Group and Encryption	≤ 460 ms	P
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

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**Receiver Tests (700/800 MHz) – Conventional**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b>

Receiver Tests (700/800 MHz)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P2
2.1.6	Signal Delay Spread Capability	≥ 50 μs	P3
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P4
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 75 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	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	P
	Both Talk Group and Encryption	≤ 460 ms	P
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

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**Transmitter Tests (UHF) – Conventional**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b>

Transmitter Tests (UHF)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	$\geq 67$ dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	$\leq 50$ ms	P
	Encoder Attack Time	$\leq 100$ ms	P
2.2.14	Transmitter Throughput Delay	$\leq 125$ ms	P
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 $t_1 = 10$ ms	$ \Delta f  \leq 12.5$ kHz	P
	Time Interval $t_2 = 25$ ms	$ \Delta f  \leq 6.25$ kHz	P
	Time Interval $t_3 = 10$ ms	$ \Delta f  \leq 12.5$ kHz	P

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**Transmitter Tests (800 MHz) – Conventional**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b>

Transmitter Tests (800 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	$\geq 67$ dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	$\leq 50$ ms	P
	Encoder Attack Time	$\leq 100$ ms	P
2.2.14	Transmitter Throughput Delay	$\leq 125$ ms	P
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

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**Transmitter Tests (700 MHz) – Conventional**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b>

Transmitter Tests (700 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio		
	Offset From Center Frequency (kHz)		
	9.375	≥ 40 dB	P
	15.625, 21.875, 37.5	≥ 60 dB	P
	62.5, 87.5, 150, 250, 350	≥ 65 dB	P
	>400 kHz to 12 MHz	≥ 75 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
2.2.14	Encoder Attack Time	≤ 100 ms	P
	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High Level Signal Deviation	2544 Hz < f <sub>dev</sub> ≤ 3111 Hz	P
2.2.16	Low Level Signal Deviation	848 Hz < f <sub>dev</sub> ≤ 1037 Hz	P
	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t <sub>1</sub> = 20 ms	Δf  ≤ 12.5 kHz	P
	Time Interval t <sub>2</sub> = 50 ms	Δf  ≤ 6.25 kHz	P
	Time Interval t <sub>3</sub> = 10 ms	Δf  ≤ 12.5 kHz	P

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**Receiver Tests (UHF) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Receiver Tests (UHF)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P5
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P6
2.1.6	Signal Delay Spread Capability	≥ 50 μs	P7
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P8
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 70 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 70 dB (Class A)	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P

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**Receiver Tests (700/800 MHz) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Receiver Tests (700/800 MHz)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm (Class A)	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm (Class A)	P2
2.1.6	Signal Delay Spread Capability	≥ 50 μs	P3
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class A)	P4
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB (Class A)	P
2.1.10	Intermodulation Rejection	≥ 75 dB (Class A)	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P

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**Transmitter Tests (UHF) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Transmitter Tests (UHF)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	$\geq 67$ dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	$\leq 50$ ms	P
	Encoder Attack Time	$\leq 100$ ms	P
2.2.14	Transmitter Throughput Delay	$\leq 125$ ms	P
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 $t_1 = 10$ ms	$ \Delta f  \leq 12.5$ kHz	P
	Time Interval $t_2 = 25$ ms	$ \Delta f  \leq 6.25$ kHz	P
	Time Interval $t_3 = 10$ ms	$ \Delta f  \leq 12.5$ kHz	P

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**Transmitter Tests (800 MHz) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Transmitter Tests (800 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	$\geq 67$ dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	$\leq 50$ ms	P
	Encoder Attack Time	$\leq 100$ ms	P
2.2.14	Transmitter Throughput Delay	$\leq 125$ ms	P
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

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**Transmitter Tests (700 MHz) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Transmitter Tests (700 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio		
	Offset From Center Frequency (kHz)		
	9.375	≥ 40 dB	P
	15.625, 21.875, 37.5	≥ 60 dB	P
	62.5, 87.5, 150, 250, 350	≥ 65 dB	P
	>400 kHz to 12 MHz	≥ 75 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
2.2.14	Encoder Attack Time	≤ 100 ms	P
	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High Level Signal Deviation	2544 Hz < f <sub>dev</sub> ≤ 3111 Hz	P
2.2.16	Low Level Signal Deviation	848 Hz < f <sub>dev</sub> ≤ 1037 Hz	P
	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t <sub>1</sub> = 20 ms	Δf  ≤ 12.5 kHz	P
	Time Interval t <sub>2</sub> = 50 ms	Δf  ≤ 6.25 kHz	P
	Time Interval t <sub>3</sub> = 10 ms	Δf  ≤ 12.5 kHz	P

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**Trunked Subscriber Unit Tests (UHF) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Trunked Subscriber Unit Tests (UHF)			
Test Case	Description	Requirement	Results
2.3.1	Trunking Control Channel Slot Times (45 ms slot) N7		
	Encode Attack Time	$2.00 \text{ ms} \leq t \leq 11.65 \text{ ms}$	P
	RF Power Attack Time	$0 \text{ ms} \leq t \leq 11.65 \text{ ms}$	P
	RF Power Turn Off Time	$\leq 1.57 \text{ ms}$	P
2.3.2	Trunking Request Time	$\leq 167.5 \text{ ms}$	P
2.3.3	Trunking Voice Access Time	500 ms (Manufacturer Specified)	P
2.3.5	Transmitter Time to Key on a Traffic Channel		
	Short Channel Form	$\leq 150.0 \text{ ms}$	P

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**Trunked Subscriber Unit Tests (700/800 MHz) – Trunked**

Test Identification	Detailed Test Report Identification
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance	<b>DTR-P25CAP081010-16022601</b> <b>DTR-P25CAP081010-16022602</b>

Trunked Subscriber Unit Tests (700/800 MHz)			
Test Case	Description	Requirement	Results
2.3.1	Trunking Control Channel Slot Times (45 ms slot) N7		
	Encode Attack Time	$2.00 \text{ ms} \leq t \leq 11.65 \text{ ms}$	P
	RF Power Attack Time	$0 \text{ ms} \leq t \leq 11.65 \text{ ms}$	P
	RF Power Turn Off Time	$\leq 1.57 \text{ ms}$	P
2.3.2	Trunking Request Time	$\leq 167.5 \text{ ms}$	P
2.3.3	Trunking Voice Access Time	500 ms (Manufacturer Specified)	P
2.3.5	Transmitter Time to Key on a Traffic Channel		
	Short Channel Form	$\leq 150.0 \text{ ms}$	P

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Test Identification	Product
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability	EF Johnson Viking VP900 Portable <b>(See note N8)</b>

Product	Detailed Test Report Identification
TN9400 TaitNet P25	DTR-TIMCO081016-VP600TN9400
EF Johnson IP25 Trunking Infrastructure	DTR-P25CAP081010-12100801
Harris Trunked Infrastructure	DTR-P25CAP081017-1121211E01
EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-13020401
Motorola Solutions ASTRO Trunked Infrastructure	DTR-P25CAP081010-17061403

Test Case	Description	TN9400 TaitNet P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
<b>2.2.1</b>	<b>Full Registration</b>					
<b>2.2.1.4.1</b>	Test Case 1 - Valid Registration					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.1.4.2</b>	Test Case 2 – Denied or Refused Registration					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.1.4.3</b>	Test Case 3 - Unverified Registration					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.2</b>	<b>Group Voice Call</b>					
<b>2.2.2.4.1</b>	Test Case 1 – Group Call Granted					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.2.4.2</b>	Test Case 2 – Group Call Denied					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6

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Test Case	Description	TN9400 TaitNet P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
2.2.2.4.3	Test Case 3 – Group Call Request Queued					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6

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Test Identification	Product
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability	EF Johnson Viking VP900 Portable

Product	Detailed Test Report Identification
TN9400 TaitNet P25	DTR-TIMCO081016-VP600TN9400
EF Johnson IP25 Trunking Infrastructure	DTR-P25CAP081010-12100801
Harris Trunked Infrastructure	DTR-P25CAP081017-1121211E01
EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-13020401
Motorola Solutions ASTRO Trunked Infrastructure	DTR-P25CAP081010-17061403

Test Case	Description	TN9400 Tait Net P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
<b>2.2.3</b>	<b>Unit-To-Unit Voice Call</b>					
<b>2.2.3.4.1</b>	Test Case 1 – Unit-To-Unit Call With Target Availability Check					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.2</b>	Test Case 2 – Unit-To-Unit Call Target Availability Check Denied By					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.3</b>	Test Case 3 – Unit-To-Unit Call Queued With Target Availability Check – traffic channel assignment after target availability check					
	Home Operation	N/A 1	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.4</b>	Test Case 4 – Unit-To-Unit Call Queued With Target Availability Check – traffic channel assignment before target availability check					
	Home Operation	P	N/A 2	N/A 2	N/A 2	N/A 2
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.5</b>	Test Case 5 – Unit-To-Unit Call Without Target Availability Check					

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Test Case	Description	TN9400 Tait Net P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
	Home Operation	N2	N2	P	N2	N2
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.6</b>	Test Case 6 – Unit-To-Unit Call Queued Without Target Availability Check					
	Home Operation	N2	N2	P	N2	N2
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.3.4.7</b>	Test Case 7 – Unit-To-Unit Call					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6

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Test Identification	Product
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability	EF Johnson Viking VP900 Portable

Product	Detailed Test Report Identification
TN9400 TaitNet P25	DTR-TIMCO081016-VP600TN9400
EF Johnson IP25 Trunking Infrastructure	DTR-P25CAP081010-12100801
Harris Trunked Infrastructure	DTR-P25CAP081017-1121211E01
EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-13020401
Motorola Solutions ASTRO Trunked Infrastructure	DTR-P25CAP081010-17061403

Test Case	Description	TN9400 Tait Net P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
<b>2.2.4</b>	<b>Broadcast Voice Call</b>					
<b>2.2.4.4.1</b>	Test Case 1 – Broadcast Voice Call					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.5</b>	<b>Affiliation</b>					
<b>2.2.5.4.1</b>	<i>Test Case 1 - Radio Permitted To Affiliate With New Group</i>					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.5.4.2</b>	<i>Test Case 2 - Radio Denied Affiliation To New Group</i>					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.6</b>	<b>Announcement Group Call</b>					
<b>2.2.6.4.1</b>	Test Case 1 - Collection Of Talk Groups Receive Call					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.7</b>	<b>Emergency Alarm</b>					
<b>2.2.7.4.1</b>	Test Case 1 - Emergency Alarm					
	Home Operation	P	P	P	P	P

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Test Case	Description	TN9400 Tait Net P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6

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Test Identification	Product
P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability	EF Johnson Viking VP900 Portable

Product	Detailed Test Report Identification
TN9400 TaitNet P25	DTR-TIMCO081016-VP600TN9400
EF Johnson IP25 Trunking Infrastructure	DTR-P25CAP081010-12100801
Harris Trunked Infrastructure	DTR-P25CAP081017-1121211E01
EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-13020401
Motorola Solutions ASTRO Trunked Infrastructure	DTR-P25CAP081010-17061403

Test Case	Description	TN9400 Tait Net P25	EF Johnson IP25 Trunking Infrastructure	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
<b>2.2.8</b>	<b>Emergency Group Call</b>					
<b>2.2.8.4.1</b>	Test Case 1 - Emergency Call					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.10</b>	<b>Encryption</b>					
<b>2.2.10.4.1</b>	Test Case 1 - Call Privacy For					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6
<b>2.2.11</b>	<b>Intra-Location Registration Area</b>					
<b>2.2.11.4.1</b>	Test Case 1 – Idle Radio					
	Home Operation	P	P	P	P	P
	Inter-System Operation	N3	N4	N5	N4	N6
	Inter-WACN Operation	N3	N4	N5	N4	N6

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### Model Class Definition

Applied to P25-CAB-CAI\_Test\_Req Mar 2010, 2.1.3.2

Model Class Name	Product Name, Definition, and Unique ID	Installed Options
Viking VP900 Series Portable	Viking VP900 Portable	<b>Firmware:</b> V 8.12.10 <b>Firmware:</b> V 8.14.18 <b>Firmware:</b> V 8.18.12

### 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

Comments
N/A 1: Test case 2.2.3.4.3 is not applicable for TN9400 Taitnet P25 Infrastructure; see results of test case 2.2.3.4.4.
N/A 2: Test case 2.2.3.4.4 is not applicable for these infrastructures; see results of test 2.2.3.4.3.
N1: EF Johnson VP600/VP900 subscriber does not support these features.
N2: Infrastructure does not support this mode of operation.
N3: TN9400 TaitNet P25 and EF Johnson Viking VP600/VP900 subscriber do not support these features.
N4: EF Johnson trunking system release 3.1-RC1, EF Johnson Atlas TSNI 1.0.5-1, and EF Johnson Viking VP600/VP900 subscriber do not support these features.
N5: Harris infrastructure release PR9D and EF Johnson Viking VP600/VP900 subscriber do not support these features.
N6: Motorola infrastructure release 25 and EF Johnson Viking VP600/VP900 subscriber do not support these features.
N7: VP900 meets timing requirements in the 45 ms slot timing mode.
N8: EF Johnson VP400, VP600, and VP900 series portables utilize common trunking software across all frequency bands. Leveraging this frequency band independence of the trunking software, EF Johnson defines a common model class for VP series portables as encompassing all frequency bands for the purposes of trunking interoperability.
P1: EF Johnson Viking VP900 700/800 MHz subscriber passes Reference Sensitivity ( $\leq -116$ dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P2: EF Johnson Viking VP900 700/800 MHz subscriber passes Faded Reference Sensitivity ( $\leq -108$ dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P3: EF Johnson Viking VP900 700/800 MHz subscriber passes Signal Delay Spread Capability specification for C4FM (Non-Simulcast) ( $\geq 50$ $\mu$ s) and Simulcast modulations ( $\geq 80$ $\mu$ s).
P4: EF Johnson Viking VP900 700/800 MHz subscriber passes Adjacent Channel Rejection ( $\geq 60$ dB) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P5: EF Johnson Viking VP900 UHF subscriber passes Reference Sensitivity ( $\leq -116$ dBm) specification

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for C4FM (Non-Simulcast) and Simulcast modulations.
P6: EF Johnson Viking VP900 UHF subscriber passes Faded Reference Sensitivity ( $\leq -108$ dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P7: EF Johnson Viking VP900 UHF subscriber passes Signal Delay Spread Capability specification for C4FM (Non-Simulcast) ( $\geq 50$ $\mu$ s) and Simulcast modulations ( $\geq 80$ $\mu$ s).
P8: EF Johnson Viking VP900 UHF subscriber passes Adjacent Channel Rejection ( $\geq 60$ dB) specification for C4FM (Non-Simulcast) and Simulcast modulations.

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**OMB NO:** 1640-0015

**EXPIRATION DATE:** 06/30/2019

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