

**Project 25 Compliance Assessment Program
 Summary Test Report
 EF Johnson Viking VM900 VHF and 700/800 MHz Multi-Band Mobile Subscriber
 Unit
 STR-EFJ-16092302
 September 23, 2016**

Test Item Description

Manufacturer	EF Johnson Technologies
Manufacturer Contact	Randy O'Connor (972) 819-0911
Product Name	Viking VM900 VHF and 700/800 MHz Mobile Subscriber Unit
Installed Options	SEM Installed
Vocoder Identification	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
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	February 11, 2016 to February 19, 2016
Date of Issue	February 22, 2016

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	February 10, 2016 to February 19, 2016
Date of Issue	February 22, 2016

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081017 (Harris)
Date(s) of Test	February 18, 2015
Date of Issue	February 18, 2015

Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	March 11, 2015 to March 12, 2015
Date of Issue	March 27, 2015

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Laboratory	Details
P25 CAP Laboratory Code	P25CAP081010 (EF Johnson Technologies)
Date(s) of Test	March 27, 2015
Date of Issue	March 27, 2015

Informative References

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

Other Devices Tested with Viking VM900 Mobile Subscriber Unit

Manufacturer	Product Name, Definition, and Unique ID	Installed Options
Harris	P25 Trunked Infrastructure	RFSS: MASTR V Firmware R7G13 FNE: VIDA Premiere SR10A
EF Johnson	ATLAS Trunked Infrastructure	TSNI 1.2.1-8
Motorola Solutions	ASTRO Trunked Infrastructure	ASTRO 25 7.16

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Receiver Tests (VHF) – 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	DTR-P25CAP081010-16022202

Receiver Tests (VHF)			
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	P3
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	DTR-P25CAP081010-16022202

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 (VHF) – 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	DTR-P25CAP081010-16022202

Transmitter Tests (VHF)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 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 $t_1 = 5$ 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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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	DTR-P25CAP081010-16022202

Transmitter Tests (800 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 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	DTR-P25CAP081010-160222022

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 _{dev} ≤ 3111 Hz	P
2.2.16	Low Level Signal Deviation	848 Hz < f _{dev} ≤ 1037 Hz	P
	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t ₁ = 20 ms	Δf ≤ 12.5 kHz	P
	Time Interval t ₂ = 50 ms	Δf ≤ 6.25 kHz	P
	Time Interval t ₃ = 10 ms	Δf ≤ 12.5 kHz	P

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Receiver Tests (VHF) – 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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

Receiver Tests (VHF)			
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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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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

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 (VHF) – 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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

Transmitter Tests (VHF)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 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 $t_1 = 5$ 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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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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

Transmitter Tests (800 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		
	Power Attack Time	≤ 50 ms	P
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

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
	Encoder Attack Time	≤ 100 ms	P
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM		
	High Level Signal Deviation	2544 Hz < f _{dev} ≤ 3111 Hz	P
	Low Level Signal Deviation	848 Hz < f _{dev} ≤ 1037 Hz	P
2.2.16	Modulation Fidelity	≤ 5% (Class A)	P
2.2.18	Transient Frequency Behavior		
	Time Interval t ₁ = 20 ms	Δf ≤ 12.5 kHz	P
	Time Interval t ₂ = 50 ms	Δf ≤ 6.25 kHz	P
	Time Interval t ₃ = 10 ms	Δf ≤ 12.5 kHz	P

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Trunked Subscriber Unit Tests (VHF) – 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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

Trunked Subscriber Unit Tests (VHF)			
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	DTR-P25CAP081010-16022202 DTR-P25CAP081010-16022201

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 VM900 Mobile (See note N8)

Product	Detailed Test Report Identification
Harris Trunked Infrastructure	DTR-P25CAP081017-1150218E
EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-15032702
Motorola Solutions ASTRO Trunked Infrastructure	DTP-P25CAP081010-16080203

Test Case	Description	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
2.2.1	Full Registration			
2.2.1.4.1	Test Case 1 - Valid Registration			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.1.4.2	Test Case 2 – Denied or Refused Registration			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.1.4.3	Test Case 3 - Unverified Registration			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.2	Group Voice Call			
2.2.2.4.1	Test Case 1 – Group Call Granted			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.2.4.2	Test Case 2 – Group Call Denied			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.2.4.3	Test Case 3 – Group Call Request Queued			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6

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Test Identification	Product
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Product	Detailed Test Report Identification
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EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-15032702
Motorola Solutions ASTRO Trunked Infrastructure	DTP-P25CAP081010-16080203

Test Case	Description	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
2.2.3	Unit-To-Unit Voice Call			
2.2.3.4.1	Test Case 1 – Unit-To-Unit Call With Target Availability Check			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.3.4.2	Test Case 2 – Unit-To-Unit Call Target Availability Check Denied By Target			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.3.4.3	Test Case 3 – Unit-To-Unit Call Queued With Target Availability Check – traffic channel assignment after target availability check			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.3.4.4	Test Case 4 – Unit-To-Unit Call Queued With Target Availability Check – traffic channel assignment before target availability check			
	Home Operation	N/A 1	N/A 1	N/A 1
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.3.4.5	Test Case 5 – Unit-To-Unit Call Without Target Availability Check			
	Home Operation	N3	N2	N2
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6

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Test Case	Description	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
2.2.3.4.6	Test Case 6 – Unit-To-Unit Call Queued Without Target Availability Check			
	Home Operation	N3	N2	N2
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.3.4.7	Test Case 7 – Unit-To-Unit Call Denied			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6

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Test Identification	Product
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Product	Detailed Test Report Identification
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EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-15032702
Motorola Solutions ASTRO Trunked Infrastructure	DTP-P25CAP081010-16080203

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

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Product	Detailed Test Report Identification
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EF Johnson Atlas Trunked Infrastructure	DTR-P25CAP081010-15032702
Motorola Solutions ASTRO Trunked Infrastructure	DTP-P25CAP081010-16080203

Test Case	Description	Harris Trunked Infrastructure	EF Johnson Atlas Trunked Infrastructure	Motorola Solutions ASTRO Trunked Infrastructure
2.2.8	Emergency Group Call			
2.2.8.4.1	Test Case 1 - Emergency Call			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.10	Encryption			
2.2.10.4.1	Test Case 1 - Call Privacy For Encrypted Call			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6
2.2.11	Intra-Location Registration Area Roaming			
2.2.11.4.1	Test Case 1 – Idle Radio			
	Home Operation	P	P	P
	Inter-System Operation	N5	N4	N6
	Inter-WACN Operation	N5	N4	N6

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 Summary Test Report
 EF Johnson Viking VM900 VHF and 700/800 MHz Multi-Band Mobile Subscriber Unit
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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 VM900 Series Mobile	Viking VM900 Mobile	Firmware: V 8.10.29 Firmware: V 8.12.7 Firmware: V 8.14.18

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

N/A 1:	Test case 2.2.3.4.4 is not applicable for these infrastructures; see results of test 2.2.3.4.3.
N2:	Infrastructure and EF Johnson Viking VM900 does not support this mode of operation.
N3:	EF Johnson VM900 subscriber does not support this mode of operation.
N4:	EF Johnson trunking system release Atlas TSNI 1.3.1-8, and EF Johnson Viking VM900 subscriber do not support these features.
N5:	Harris infrastructure release SR10A and EF Johnson Viking VM900 subscriber do not support these features.
N6:	Motorola infrastructure release 25 7.15 and EF Johnson Viking VM900 subscriber do not support these features.
N7:	VM900 meets timing requirements in the 45 ms slot timing mode.
N8:	EF Johnson VM400, VM600, and VM900 series mobiles 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 VM series mobiles as encompassing all frequency bands for the purposes of trunking interoperability.
P1:	EF Johnson Viking VM9000 VHF and 700/800 MHz subscriber passes Reference Sensitivity (≤ -116 dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P2:	EF Johnson Viking VM900 VHF and 700/800 MHz subscriber passes Faded Reference Sensitivity (≤ -108 dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.
P3:	EF Johnson Viking VM900 VHF and 700/800 MHz subscriber passes Signal Delay Spread Capability specification for C4FM (Non-Simulcast) (≥ 50 μ s) and Simulcast modulations (≥ 80 μ s).
P4:	EF Johnson Viking VM900 VHF and 700/800 MHz subscriber passes Adjacent Channel Rejection (≥ 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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