

Project 25 Compliance Assessment Program

Summary Test Report

XTL 5000, XTL 2500, XTL 1500 Mobile Subscribers

STR-MOT-XTL5000-01092013

January 9, 2013

Device Under Test Description	
Manufacturer	Motorola Solutions
Manufacturer Contact	Debra Brown 847-576-3318
Product Name	XTL 5000, XTL 2500, XTL 1500 Mobile Subscribers
Frequency Bands	VHF, UHF, 700/800MHz
Installed Options	Trunking, Encryption
Installed Vocoder	Baseline Full Rate with System Improvements

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. (Home Configuration tests are the same as the September 2009 CAB. Inter-System and Inter-WACN roaming configurations are not supported on the Motorola infrastructure.)

Informative References	
Date	Title
March 2010	P25-CAB-CAI_TEST_REQ

Other Devices Tested with Motorola Solutions XTL 5000, XTL 2500, XTL 1500 Subscribers		
Manufacturer	Product Name and Definition	Installed Options
Motorola Solutions	ASTRO®25	System Release 7.7
		System Release 7.8
		System Release 7.9
		System Release 7.11
		System Release 7.13
Harris	Harris Master V P25 Station	System Release PR9B
Tait/EADS	P25 Trunked Radio System	TaitNet P25/EADS COR P25 Network
Cassidian	Cassidian COR P25 Infrastructure	TB5000i Base Station Model Class
PowerTrunk	PowerTrunk 25 FNE B800014	System Release Ver. 9.4.52
EF Johnson	Trunking	System Release 3.1-RC1

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Testing Laboratory Information

Laboratory Information	
P25 CAP Laboratory Code	Motorola Performance CAI Subscriber FL P25CAP081014
Dates of Test	February 9, 2011; April 1, March 31, 2010; July 20-August 19, 2009
Date of Issue	February 16, 2011; April 1, 2010; August 12-August 19, 2009
P25 CAP Laboratory Code	TIMCO Engineering Inc.(Infrastructure used Motorola Solutions) P25CAP081016
Date(s) of Test	March 3, 2011
Date of Issue	March 8, 2011
P25 CAP Laboratory Code	Harris Corp P25CAP081017
Date(s) of Test	January 20, 2011
Date of Issue	January 24, 2011
P25 CAP Laboratory Code	Teltest Laboratories (Infrastructure used TAIT/EADS) P25CAP081015
Date(s) of Test	October 28, 2010
Date of Issue	November 15, 2010
P25 CAP Laboratory Code	TIMCO Engineering Inc.(Infrastructure used PowerTrunk) P25CAP081016
Date(s) of Test	June 14, 2010
Date of Issue	June 28, 2010
P25 CAP Laboratory Code	EF Johnson Technologies P25CAP081010
Date(s) of Test	October 14, 2009
Date of Issue	November 16, 2009

Performance Test Cases and Results

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081014-P25-0009 (VHF, 136-174MHz) DTR-P25CAP081014-P25-0007 (700/800MHz) DTR-P25CAP081014-P25-0010 (UHF-R1 380-470MHz) DTR-P25CAP081014-P25-0008 (UHF-R2 450-520MHz)	
PERFORMANCE – Conventional Receiver Tests XTL 5000, XTL 2500, XTL 1500 (VHF 136-174, UHF-R1 380-470, UHF-R2 450-520, 700, 800)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm	P2
2.1.6	Signal Delay Spread Capability	≥ 50 μs	P3
2.1.7	Adjacent Channel Rejection	≥ 60 dB	P4
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB	P
2.1.10	Intermodulation Rejection	≥ 75 dB	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P
2.1.17	Late Entry Unsquench Delay		
	No Talk Group or Encryption	≤ 125 ms	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	P
	Both (On Clear or Encrypted Channel)	≤ 460 ms	P
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Conventional Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (800MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter 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 ≤ fdev ≤ 3111 Hz	P
	Low Level Signal Deviation	848 ≤ fdev ≤ 1037 Hz	P
2.2.16	Modulation Fidelity	≤ 5%	P
2.2.18	Transient Frequency Behavior		
	Time Interval t ₁ = 20.0 ms	{Δf} ≤ 12.5 kHz	P
	Time Interval t ₂ = 50.0 ms	{Δf} ≤ 6.25 kHz	P
	Time Interval t ₃ = 10.0 ms	{Δf} ≤ 12.5 kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Conventional Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (700MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio		
	Offset From Center Frequency (kHz)	ACPR (dB)	
	9.375	40	P
	15.625, 21.875, 37.5	60	P
	62.5, 87.5, 150, 250, 350	65	P
	>400 kHz to 12 MHz	75	P
	12 MHz to paired RX Band	75	P
	In the Paired RX Band	100	P
2.2.12	Transmitter 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 ≤ fdev ≤ 3111 Hz	P
	Low Level Signal Deviation	848 ≤ fdev ≤ 1037 Hz	P
2.2.16	Modulation Fidelity	≤ 5%	P
2.2.18	Transient Frequency Behavior		
	Time Interval t ₁ = 20.0 ms	{Δf} ≤ 12.5 kHz	P
	Time Interval t ₂ = 50.0 ms	{Δf} ≤ 6.25 kHz	P
	Time Interval t ₃ = 10.0 ms	{Δf} ≤ 12.5 kHz	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081014-P25-0010 (UHF-R1 380-470MHz) DTR-P25CAP081014-P25-0008 (UHF-R2 450-520MHz)	
PERFORMANCE - Conventional Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (UHF-R1 380-470MHz; UHF-R2 450-520MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter 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	$2544 \leq f_{dev} \leq 3111$ Hz	P
	Low Level Signal Deviation	$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	$\leq 5\%$	P
2.2.18	Transient Frequency Behavior Time Interval $t_1 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
	Time Interval $t_2 = 25.0$ ms	$\{\Delta f\} \leq 6.25$ kHz	P
	Time Interval $t_3 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.1 – Project 25 Phase 1 Common Air Interface Conventional Subscriber Unit Performance		DTR-P25CAP081014-P25-0009 (136-174MHz)	
PERFORMANCE – Conventional Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (VHF 136-174 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter 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	$2544 \leq f_{dev} \leq 3111$ Hz	P
	Low Level Signal Deviation	$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	$\leq 5\%$	P
2.2.18	Transient Frequency Behavior Time Interval $t_1 = 5.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
	Time Interval $t_2 = 20.0$ ms	$\{\Delta f\} \leq 6.25$ kHz	P
	Time Interval $t_3 = 5.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0009 (136-174MHz) DTR-P25CAP081014-P25-0010 (UHF-R1 380-470MHz) DTR-P25CAP081014-P25-0008 (UHF-R2 450-520MHz) DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Trunked Receiver Tests XTL 5000, XTL 2500, XTL 1500 (VHF 136-174, UHF-R1 380-470, UHF-R2 450-520, 700, 800)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -116 dBm	P1
2.1.5	Faded Reference Sensitivity	≤ -108 dBm	P2
2.1.6	Signal Delay Spread Capability	≥ 50 μ s	P3
2.1.7	Adjacent Channel Rejection	≥ 60 dB	P4
2.1.8	Co-Channel Rejection	≤ 9 dB	P
2.1.9	Spurious Response Rejection	≥ 80 dB	P
2.1.10	Intermodulation Rejection	≥ 75 dB	P
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Trunked Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (800MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter 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	$2544 \leq f_{dev} \leq 3111$ Hz	P
	Low Level Signal Deviation	$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	$\leq 5\%$	P
2.2.18	Transient Frequency Behavior		
	Time Interval $t_1 = 20.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
	Time Interval $t_2 = 50.0$ ms	$\{\Delta f\} \leq 6.25$ kHz	P
	Time Interval $t_3 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Trunked Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (700MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio		
	Offset From Center Frequency (kHz)	ACPR (dB)	
	9.375	40	P
	15.625, 21.875, 37.5	60	P
	62.5, 87.5, 150, 250, 350	65	P
	>400 kHz to 12 MHz	75	P
	12 MHz to paired RX Band	75	P
	In the Paired RX Band	100	P
2.2.12	Transmitter 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	$2544 \leq f_{dev} \leq 3111$ Hz	P
	Low Level Signal Deviation	$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5%	P
2.2.18	Transient Frequency Behavior		
	Time Interval $t_1 = 20.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
	Time Interval $t_2 = 50.0$ ms	$\{\Delta f\} \leq 6.25$ kHz	P
	Time Interval $t_3 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0010 (UHF-R1 380-470MHz) DTR-P25CAP081014-P25-0008 (UHF-R2 450-520MHz)	
PERFORMANCE – Trunked Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (UHF-R1 380-470MHz; UHF-R2 450-520MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter 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	$2544 \leq f_{dev} \leq 3111$ Hz	P
	Low Level Signal Deviation	$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	≤ 5%	P
2.2.18	Transient Frequency Behavior		
	Time Interval $t_1 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
	Time Interval $t_2 = 25.0$ ms	$\{\Delta f\} \leq 6.25$ kHz	P
	Time Interval $t_3 = 10.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0009 (136-174MHz)	
PERFORMANCE – Trunked Transmitter Tests XTL 5000, XTL 2500, XTL 1500 (VHF 136-174)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio	≥ 67 dB	P
2.2.12	Transmitter Power Attack Time	≤ 50 ms	P
		Encoder Attack Time	≤ 100 ms
2.2.14	Transmitter Throughput Delay	≤ 125 ms	P
2.2.15	Frequency Deviation for C4FM High Level signal Deviation Low Level Signal Deviation	$2544 \leq f_{dev} \leq 3111$ Hz	P
		$848 \leq f_{dev} \leq 1037$ Hz	P
2.2.16	Modulation Fidelity	$\leq 5\%$	P
2.2.18	Transient Frequency Behavior Time Interval $t_1 = 5.0$ ms Time Interval $t_2 = 20.0$ ms Time Interval $t_3 = 5.0$ ms	$\{\Delta f\} \leq 12.5$ kHz	P
		$\{\Delta f\} \leq 6.25$ kHz	P
		$\{\Delta f\} \leq 12.5$ kHz	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0007 (700/800MHz)	
PERFORMANCE – Trunked Subscriber Tests XTL 5000, XTL 2500, XTL 1500 (700/800MHz)			
Test Case	Description	Requirement	Results
2.3.1	Trunking Control Channel Slot Time (45 ms slot) Encode Attack Time RF Power Attack Time RF Power Turn Off Time	$2.00\text{ms} \leq t \leq 11.65\text{ms}$	P
		$0.00\text{ms} \leq t \leq 11.65\text{ms}$	P
		≤ 1.57 ms	P
2.3.2	Trunking Request Time	≤ 167.5 ms	P
2.3.3	Trunking Voice Access Time	≤ 590 ms	P5
2.3.5	Transmit Time to Key on Traffic Channel	≤ 150.0 ms	P

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0010 (UHF-R1 380-470MHz) DTR-P25CAP081014-P25-0008 (UHF-R2 450-520MHz)	
PERFORMANCE – Trunked Subscriber Tests XTL 5000, XTL 2500, XTL 1500 (UHF-R1 380-470MHz; UHF-R2 450-520MHz)			
Test Case	Description	Requirement	Results
2.3.1	Trunking Control Channel Slot Time (45 ms slot) Encode Attack Time RF Power Attack Time RF Power Turn Off Time	$2.00\text{ms} \leq t \leq 11.65\text{ms}$	P
		$0.00\text{ms} \leq t \leq 11.65\text{ms}$	P
		≤ 1.57 ms	P
2.3.2	Trunking Request Time	≤ 167.5 ms	P
2.3.3	Trunking Voice Access Time	≤ 490 ms	P5
2.3.5	Transmit Time to Key on Traffic Channel	≤ 150.0 ms	P

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.1.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Performance		DTR-P25CAP081014-P25-0009 (136-174MHz)	
PERFORMANCE – Trunked Subscriber Tests XTL 5000, XTL 2500, XTL 1500 (VHF 136-174 MHz)			
Test Case	Description	Requirement	Results
2.3.1	Trunking Control Channel Slot Time (45 ms slot)		
	Encode Attack Time	2.00ms ≤ t ≤ 11.65ms	P
	RF Power Attack Time	0.00ms ≤ t ≤ 11.65ms	P
	RF Power Turn Off Time	≤ 1.57 ms	P
2.3.2	Trunking Request Time	≤ 167.5 ms	P
2.3.3	Trunking Voice Access Time	≤ 577 ms	P5
2.3.5	Transmit Time to Key on Traffic Channel	≤ 150.0 ms	P

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Interoperability Test Cases and Results

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-TIMCO0810 16 XTS	DTR-P25CAP08 1017 - 1110120 M01	DTR-P25CAP081 015 -3206	DTR-P25CAP08 1015 - 3212	DTR-TIMCO08 1016 XTS5000	DTR-P25CAP081 010 - 09111601
Motorola Solutions Model Class XTL 5000, XTL 2500, XTL 1500 Subscribers		Motorola Astro 25 System	Harris System	Tait/EADS COR P25 Network	Cassidian COR P25 TB5000i	Power Trunk25 System	EFJ System
Test Case	Description	Results					
2.2.1	Full Registration						
2.2.1.4.1	Test Case 1 - Valid Registration						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.1.4.2	Test Case 2 – Denied or Refused Registration						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.1.4.3	Test Case 3 – Unverified Registration						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.2	Group Voice Call						
2.2.2.4.1	Test Case 1 - Group Call Granted						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.2.4.2	Test Case 2 - Group Call Denied						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.2.4.3	Test Case 3 - Group Call Request Queued						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
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 Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.3.4.2	Test Case 2 - Unit-to-Unit Call with Target Availability Check Denied by Target						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-TIMCO0810 16 XTS	DTR-P25CAP08 1017 - 1110120 M01	DTR-P25CAP081 015 -3206	DTR-P25CAP08 1015 - 3212	DTR-TIMCO08 1016 XTS5000	DTR-P25CAP081 010 - 09111601
Motorola Solutions Model Class XTL 5000, XTL 2500, XTL 1500 Subscribers		Motorola Astro 25 System	Harris System	Tait/EADS COR P25 Network	Cassidian COR P25 TB5000i	Power Trunk25 System	EFJ System
Test Case	Description	Results					
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 Configuration	P	P	N/A2	N/A2	N4	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
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 Configuration	N/A1	N/A1	P	P	P	N/A1
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.3.4.5	Test Case 5 - Unit-to-Unit Call without Target Availability Check						
	Home Configuration	N1	N1	N1	N1	N5	N1
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.3.4.6	Test Case 6 - Unit-to-Unit Call Queued without Target Availability Check						
	Home Configuration	N1	N1	N1	N1	N5	N1
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.3.4.7	Test Case 7 - Unit-to-Unit Call Denied						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.4	Broadcast Voice Call						
2.2.4.4.1	Test Case 1 - Broadcast Voice Call						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.5	Affiliation						
2.2.5.4.1	Test Case 1 - Radio Permitted to Affiliate with New Group						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.5.4.2	Test Case 2 - Radio Denied Affiliation to New Group						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3

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P25-CAB-CAI_TEST_REQ – March 2010, Section 2.1.3.2 – Project 25 Phase 1 Common Air Interface Trunked Subscriber Unit Interoperability		DTR-TIMCO0810 16 XTS	DTR-P25CAP08 1017 - 1110120 M01	DTR-P25CAP081 015 -3206	DTR-P25CAP08 1015 - 3212	DTR-TIMCO08 1016 XTS5000	DTR-P25CAP081 010 - 09111601
Motorola Solutions Model Class XTL 5000, XTL 2500, XTL 1500 Subscribers		Motorola Astro 25 System	Harris System	Tait/EADS COR P25 Network	Cassidian COR P25 TB5000i	Power Trunk25 System	EFJ System
Test Case	Description	Results					
2.2.6	Announcement Group Call						
2.2.6.4.1	Test Case 1 - Collection of Talk Groups Receive Call						
	Home Configuration	P	P	P	P	N6	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.7	Emergency Alarm						
2.2.7.4.1	Test Case 1 - Emergency Alarm						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.8	Emergency Group Call						
2.2.8.4.1	Test Case 1 - Emergency Call						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.10	Encryption						
2.2.10.4.1	Test Case 1 - Call Privacy for Encrypted Call						
	Home Configuration	P6	P6	P6	P	P6	P6
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3
2.2.11	Intra-Location Registration Area Roaming						
2.2.11.4.1	Test Case 1 - Idle Radio						
	Home Configuration	P	P	P	P	P	P
	Inter-System Roaming Configuration	N2	N2	N2	N2	N2	N2
	Inter-WACN Roaming Configuration	N3	N3	N3	N3	N3	N3

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Model Class: XTL 5000, XTL 2500, XTL 1500 Mobile Subscribers	
Product Name, Definition and Unique ID	Model Number and Installed Options
700/800 MHz	
XTL5000 700/800MHz Mobile; Firmware/DSP: R12 thru R19	M20URS9PW1-N Options: Trunking and Encryption
XTL5000 700/800MHz Consollette; Firmware/DSP: R12 thru R19	L20URS9PW1-N Options: Trunking and Encryption
XTL2500 700/800MHz Mobile; Firmware/DSP: R12 thru R19	M21URM9PW1-N Options: Trunking and Encryption
XTL1500 700/800MHz Mobile Firmware/DSP: R12 thru R19	M28URS9PW1-N Options: Trunking
VHF	
XTL5000 VHF Mid Power Mobile; Firmware/DSP: R12 thru R19	M20KSS9PW1-N Options: Trunking and Encryption
XTL5000 VHF Consollette; Firmware/DSP: R12 thru R19	L20KSS9PW1-N Options: Trunking and Encryption
XTL 5000 VHF High Power Mobile; Firmware/DSP: R12 thru R19	M20KTS9PW1-N Options: Trunking and Encryption
XTL2500 VHF Mid Power Mobile; Firmware/DSP: R12 thru R19	M21KSM9PW1-N Options: Trunking and Encryption
XTL 2500 VHF High Power Mobile; Firmware/DSP: R12 thru R19	M21KTM9PW1-N Options: Trunking and Encryption
XTL1500 VHF Mid Power Mobile Firmware/DSP: R12 thru R19	M28KSS9PW1-N Options: Trunking
UHF-R1	
XTL5000 UHF R1 Mid Power Mobile; Firmware/DSP: R12 thru R19	M20QSS9PW1-N Options: Trunking and Encryption
XTL5000 UHF R1 Mid Power Consolelette; Firmware/DSP: R12 thru R19	L20QSS9PW1-N Options: Trunking and Encryption
XTL 5000 UHF R1 High Power Mobile; Firmware/DSP: R12 thru R19	M20QTS9PW1-N Options: Trunking and Encryption
XTL 2500 UHF R1 Mid Power Mobile; Firmware/DSP: R12 thru R19	M21QSM9PW1-N Options: Trunking and Encryption
XTL 2500 UHF R1 High Power Mobile; Firmware/DSP: R12 thru R19	M21QTM9PW1-N Options: Trunking and Encryption
XTL 1500 UHF R1 Mid Power Mobile; Firmware/DSP: R12 thru R19	M28QSS9PW1-N Options: Trunking and Encryption
UHF-R2	
XTL 5000 UHF R2 Mid Power Mobile; Firmware/DSP: R12 thru R19	M20SSS9PW1-N Options: Trunking and Encryption
XTL 5000 UHF R2 Mid Power Consolelette; Firmware/DSP: R12 thru R19	L20SSS9PW1-N Options: Trunking and Encryption
XTL 2500 UHF R2 Mid Power Mobile; Firmware/DSP: R12 thru R19	M21SSM9PW1-N Options: Trunking and Encryption
XTL 1500 UHF R2 Mid Power Mobile Firmware/DSP: R12 thru R19	M28SSS9PW1-N Options: Trunking

Model Class: ASTRO 25 System	
Product Name, Definition and Unique ID	Model Number and Installed Options
Motorola ASTRO 25 Trunked System	Release 7.7
	Release 7.8
	Release 7.9
	Release 7.11
	Release 7.13

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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	
P1: Motorola subscriber passes Reference Sensitivity (≤ -116 dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.	
P2: Motorola subscriber passes Faded Reference Sensitivity (≤ -108 dBm) specification for C4FM (Non-Simulcast) and Simulcast modulations.	
P3: Motorola subscriber passes Signal Delay Spread Capability specification for C4FM (Non-Simulcast) (≥ 50 μ s) and Simulcast (≥ 80 μ s) modulations.	
P4: Motorola subscriber passes Adjacent Channel Rejection (≥ 60 dB) specification for C4FM (Non-Simulcast) and Simulcast modulations.	
P5: Trunking Voice Access Time will vary dependent on actual system design and implementation.	
P6: The XTL 5000 mobile, XTL consolette, and XTL 2500 mobiles support encryption. The XTL 1500 mobile does not support encryption. Please see XTL Model Class table to identify the XTL 1500 models that do not support encryption.	
N1: Motorola Subscribers do not support unit-to-unit call without target availability check.	
N2: Motorola, Harris, Tait/EADS, Cassidian, PowerTrunk, EFJ Infrastructures and Motorola Subscribers do not support the Inter-System Roaming Configuration.	
N3: Motorola, Harris, Tait/EADS, Cassidian, PowerTrunk, EFJ Infrastructures and Motorola Subscribers do not support Inter-WACN Roaming Configurations.	
N4: PowerTrunk25 FNE does not support checking for destination availability if no channel traffic resources are available.	
N5: PowerTrunk25 FNE does not support unit to unit call without target availability check.	
N6: PowerTrunk25 FNE does not support announcement group call.	
N/A1: Test Case 2.2.3.4.4 is not applicable for Motorola subscribers on Motorola, Harris and EFJ infrastructures; see results of test case 2.2.3.4.3.	
N/A2: Test Case 2.2.3.4.3 is not applicable for Motorola subscribers on Tait/EADS, Cassidian, PowerTrunk infrastructures; see results of test case 2.2.3.4.4.	

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EXPIRATION DATE: 07/31/2015

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