

Project 25 Compliance Assessment Program

Summary Test Report

Codan Radio Communications UT-4E450-00-800

STR-Codan-100002

Test Item Description	
Manufacturer	Codan Radio Communications
Manufacturer Contact	Mike Cyr
Product Name	MT-4E Transmitter UT-4E450-00-800 (406 – 470 MHz)
Installed Options	Hardware 50149.3 50153.4 50154.3 50156.3
	Firmware 2.1.0.D.S65.14
Installed Vocoder	Enhanced Full Rate

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

Laboratory Information	
P25 CAP Laboratory Code	P25CAP081016
Date(s) of Test	May 6, 2009 to May 16, 2009
Date(s) of Issue	May 17, 2009

Informative References	
Date	Title
March 2010	P25-CAB-CAI_TEST_REQ

P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 – Project 25 Phase 1 Common Air Interface Performance Conventional Mode Operation Base Station/Repeaters		DTR-P25CAP81016-3008UT8	
RECEIVER TESTS (N/A)			
Test Case	Description	Requirement	Results
2.1.4	Reference Sensitivity	≤ -113 dBm (Class B)	N/A1
2.1.5	Faded Reference Sensitivity	≤ -105 dBm (Class B)	N/A1
2.1.7	Adjacent Channel Rejection	≥ 60 dB (Class B)	N/A1
2.1.8	Co-Channel Rejection	≤ 9 dB	N/A1
2.1.9	Spurious Response Rejection	≥ 70 dB (Class B)	N/A1
2.1.10	Intermodulation Rejection	≥ 70 dB (Class B)	N/A1
2.1.11	Signal Displacement Bandwidth	≥ 1000 Hz	N/A1
2.1.17	Late Entry Unsilence Delay		N/A1
	No Talk Group or Encryption	≤ 125 ms	
	Talk Group Only	≤ 370 ms	
	Encryption Only	≤ 370 ms	
	Both (on clear or encrypted channel)	≤ 460 ms	
2.1.18	Receiver Throughput Delay	≤ 125 ms	N/A1
TX TESTS (406 – 470 MHz)			
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	P
2.2.15	Frequency Deviation for C4FM		P
	High Level signal Deviation	2544 Hz < f _{dev} ≤ 3111 Hz	
	Low Level Signal Deviation	848 Hz < f _{dev} ≤ 1037 Hz	
2.2.16	Modulation Fidelity	≤ 10 % (Class B)	P
2.2.18	Transient Frequency Behavior		P
	Time Interval t1 = 10.0 ms	Δf ≤ 12.5 kHz	
	Time Interval t2 = 25.0 ms	Δf ≤ 6.25 kHz	
	Time Interval t3 = 10.0 ms	Δf ≤ 12.5 kHz	

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 Inconclusive	I (Inconclusive)

Comments
N/A1: UT-4E450 is a modular transmitter and therefore P25-CAB-CAI P25-CAB-CAI_TEST_REQ – March 2010, Section 2.2.1.1 Receiver tests are not applicable and not supported by this module.

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NOTE: This unit was tested to the Feb 2009 version of the P25-CAB-CAI_TEST_REQ which has the same transmitter requirements as the Mar 2010 version. This product has not changed since its original testing in May 2009 therefore it also meets the requirements of the Mar 2010 CAB.

OMB NO: 1640-0015

EXPIRATION DATE: 07/31/2015

Burden Statement

An agency may not conduct 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 an 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 for 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.

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