

Project 25 Compliance Assessment Program
Summary Test Report
Conventional SU TETRA P25 PORTABLE RADIO HTT-500-2
STR-POWERTRUNK_TETRA P25-HTT-500-2-12142016
Date 12/14/2016

Test Item Description

Manufacturer	POWERTRUNK
Manufacturer Contact	LORENA MARTIN
Product Name	TETRA P25 PORTABLE RADIO HTT-500-2
Installed Options	NONE
Firmware Version	HTT-500-2 = 9999 996 95481
Vocoder Identification	AMBE+2 CODEC V1.9.0

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

Laboratory Information

Laboratory	Details
P25 CAP Laboratory Code	81016
Date(s) of Test	12/5/2016 to 12/09/2016
Date of Issue	12/14/2016

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Informative References

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

Other Devices Tested with TETRA P25 PORTABLE RADIO HTT-500-2 Unit

Manufacturer	Product Name, Definition, and Unique ID	Installed Options
NA		

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Receiver Performance Tests 700MHz Band – Conventional SU

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: P25CAP081016-2371UT16

Receiver Performance Tests 700MHz			
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
2.1.6	Signal Delay Spread Capability	≥ 50 μs	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	≥ 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 Unsilence Delay		P
	No Talk Group or Encryption	≤ 125 ms	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	NS
	Both Talk Group and Encryption	≤ 460 ms	NS
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

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Receiver Performance Tests 800MHz Band – Conventional SU

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Receiver Performance Tests 800MHz			
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
2.1.6	Signal Delay Spread Capability	≥ 50 μs	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	≥ 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 Unsquench Delay		P
	No Talk Group or Encryption	≤ 125 ms	P
	Talk Group Only	≤ 370 ms	P
	Encryption Only	≤ 370 ms	NS
	Both Talk Group and Encryption	≤ 460 ms	NS
2.1.18	Receiver Throughput Delay	≤ 125 ms	P

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Transmitter Performance Tests (800 MHz) – Conventional SU

Test Identification	Detailed Test Report Identification
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Transmitter Performance 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		P
	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		P
	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		P
	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 Performance Tests 700 MHz – Conventional SU

Test Identification	Detailed Test Report Identification
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Transmitter Performance Tests (700 MHz)			
Test Case	Description	Requirement	Results
2.2.8	Unwanted Emissions: Adjacent Channel Power Ratio		P
	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
	12 MHz to paired RX Band	≥ 75 dB	P
	In the paired RX Band	≥ 100 dB	P
2.2.12	Transmitter Power and Encoder Attack Time		P
	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		P
	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		P
	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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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
HTT-500-2	TETRA P25 PORTABLE RADIO HTT-500-2	NONE

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:	(enter as required, add more rows as needed)
P1:	

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EXPIRATION DATE: 06/30/2019

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