

TUV Telecom Services, Inc.

1775 Old Highway 8 NW Suite 107

St. Paul, MN USA 55112

Tel. +1 (651) 639-0775

Fax. +1 (651) 639-0873



TEST REPORT NO.

046/081701/99

Date: August 26, 1999

Total Number of Pages: 13

Equipment: **PM4351 Comet**

Client: **PMC-Sierra**

Address: **105-8555 Baxter Place
Burnaby, B.C. V5A 4V7
Canada**

European Technical Standard: **ETS 300 046**

Authorised Signature:

August 26, 1999

David A. Freemore

Lead Engineer

Date

Name

Title

Signature

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1 IDENTIFICATION SUMMARY

1.1 Test Laboratory

TUV Telecom Services, Inc.
1775 Old Highway 8, Suite 107
St. Paul, MN USA 55112
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Fax. +1 (651) 639-0873

UKAS accredited testing laboratory, no. 1845

1.2 Limits and Reservations

This test report satisfies European Standard EN 45001 (1989), ISO Guide 25, NIST Handbook 150 and NAMAS accreditation standard M10. The test results in this test report apply only to the particular System under Test (SUT) and component Implementations under Test (IUTs) declared in this test report.

1.3 Client Information

Name : **PMC-Sierra**
Street : **105-8555 Baxter Place**
City : **Burnaby, B.C. V5A 4V7**
Country : **Canada**
Phone : **+1 (604) 415-6000**
Fax : **+1 (604) 415-6206**

Contact Person : **Fayaz Khaki**
Phone : **+1 (604) 415-6000**
Fax : **+1 (604) 415-6206**

1.4 Product

Supplier's name : **PMC-Sierra**
Street : **105-8555 Baxter Place**
City : **Burnaby, B.C. V5A 4V7**
Country : **Canada**
Phone : **+1 (604) 415-6000**
Fax : **+1 (604) 415-6206**

1.4.1 IUT Identification

Name	PM4351 Comet
Version/Model	Comet Reference Design Board Rev. 2
Serial No.	83110-2-0001
Interface board	--
Chip set	PM4351 Comet Rev. F
Transformer	Midcom 50436
Connector types	Bantam
Interfaces	2 at E1
Software and Version	--

1.4.2 System under Test (SUT)

(If applicable)

SUT Configuration for testing (PC, Bus System, Clock etc.)	Motherboard used for microprocessor interface
Operating System	--
Version No.	--
Miscellaneous	--

1.4.3 Type of Product

Monolithic device which integrates software selectable full featured T1 and E1 framers and T1 and E1 shorthand and longhand line interfaces

1.5 Nature of Conformance Testing

The purpose of Conformance Testing is to increase the probability that different implementations can interwork. However, the complexity of OSI protocols makes exhaustive testing impractical on both technical and economic grounds. Furthermore, there is no guarantee that an IUT which has passed all the relevant tests conforms to a specification. Neither is there any guarantee that such an IUT will interwork with other real open systems. Rather, the passing of the tests gives confidence that the IUT has the stated capabilities and that its behaviour conforms consistently in representative instances of communication.

2 Test Conditions

2.1 Environmental Conditions

Temperature	: In the range of 19°C to 25°C	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Relative humidity	: In the range of 5% to 75%	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

2.2 Power Supply Limitations

All tests were carried out within +/- 5% of the normal operating voltage of 5.0 VDC.

3 System Report Summary

3.1 Test Report Summary

Protocol Standard: *ETS 300 046 (08.92)*

Protocol Conformance Test Report: *See Section 6*

Abstract Test Suite (ATS) Standard: *ETS 300 046 (08.92)*

Abstract Test Method: *Remote Single Layer Embedded (RSE)*

Real Test system:

Executable Test Suite (ETS) Identification:

Oscilloscope HP 54502A
Multimeter HP 34401A
HV Power Supply Consort E 734
Schaffner NSG2050 Surge Generator
Schaffner PNW2051 Pulse Module

Custom build M & P

Test Generator B.1/B.2
Coupling Network C.1
Terminating Network D.1
Measuring Device for Touch Current E.1

Conformance Status:

Static Conformance Errors : **No**
Dynamic Conformance Errors : **No**

Test cases run: 40

Passed : 40
Failed : 0

4 Observations

Date: **August 17, 1999**

No observations have been made during the conformance assessment test.

5 Summary of Compliance

Date: **August 17, 1999**

The test results in this test report apply only to the particular System under Test (SUT) and component Implementations under Test (IUTs) declared in this test report.

The SUT/IUT has not been shown by the conformance assessment to be non-conforming to the specified protocol standard. The test campaign did not reveal errors in the SUT/IUT.

6 Protocol Conformance Test Report

6.1 Protocol Conformance Test Report

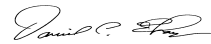
6.1.1 Dates

Receipt of SUT/IUT: **August 16, 1999**

Date of Test: **August 17, 1999**

6.1.2 Operator

Dan Thayer



(Signature)

6.1.3 Test System

Oscilloscope HP 54502A

Multimeter HP 34401A

HV Power Supply Consort E 734

Schaffner NSG2050 Surge Generator

Schaffner PNW2051 Pulse Module

Custom build M & P

Test Generator B.1/B.2

Coupling Network C.1

Terminating Network D.1

Measuring Device for Touch Current E.1

6.1.4 Test Environment

Temperature : In the range of 19°C to 25°C Yes No

Relative humidity : In the range of 5% to 75% Yes No

All tests are carried out within +/- 5% of the normal operating voltage of 5.0 VDC.

6.1.5 Test Campaign Report

The tables in this section indicate for each test both the test case selection that was performed by the test laboratory and the results of testing. The tables are set up as followed below. Notes on the information that the test laboratory shall complete in the columns are profited below, and referenced as *n*).

Test Case	Description	Limit	Result	Verdict	Comment
a)	b)	c)	d)	e)	f)

a) Reference to the abstract test case of the ATS standard.

b) Brief description of the test case.

c) Requirement Limits.

d) Result of Measurement

e) Verdict.

Possible verdicts:

Complies (C): The test purpose according to the ATS is achieved, test did run as defined in ETS to completion.

Does not comply (NC): The test purpose according to the ATS is not achieved, test did not run as defined in ETS to completion.

Not tested (NT): Test case was not tested.

Not applicable (NA): Test case was not applicable for the SUT configuration considering the possible options.

f) Indicates a reference to any observations made in section 4 of this test report.



6.5 Test Results

- Connection point 1) (ETS 300 046-2, 5.3) is connected to the protective earth conductor
- Connection point 1) (ETS 300 046-2, 5.3) is not connected to the protective earth conductor

300 046-2	Description	Limit	Result	Verdict	Comment
5.1a	Double Insulation			NA	
5.1b	Protective Earth			NA	
5.3.1	w/o Auxiliary Interfaces	≤ 0.25 mA		NA	
5.3.2	w/ Auxiliary Interfaces	≤ 0.25 mA		NA	

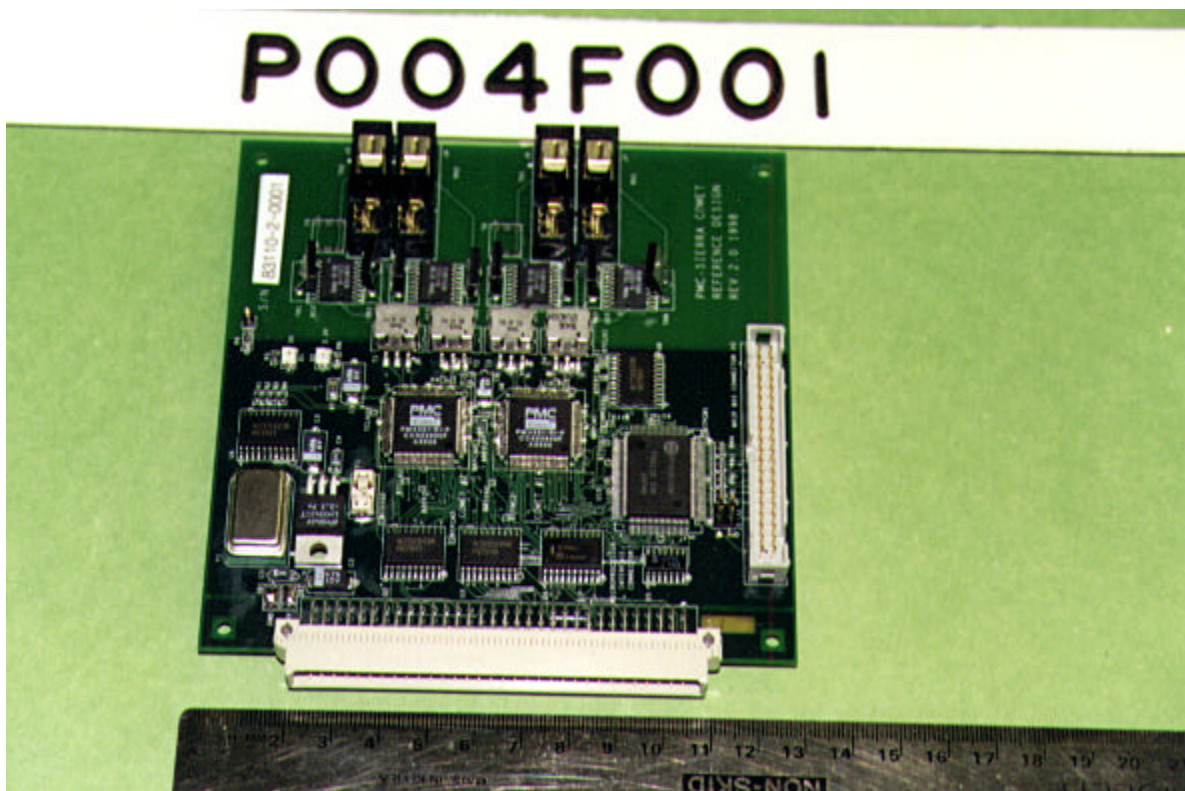
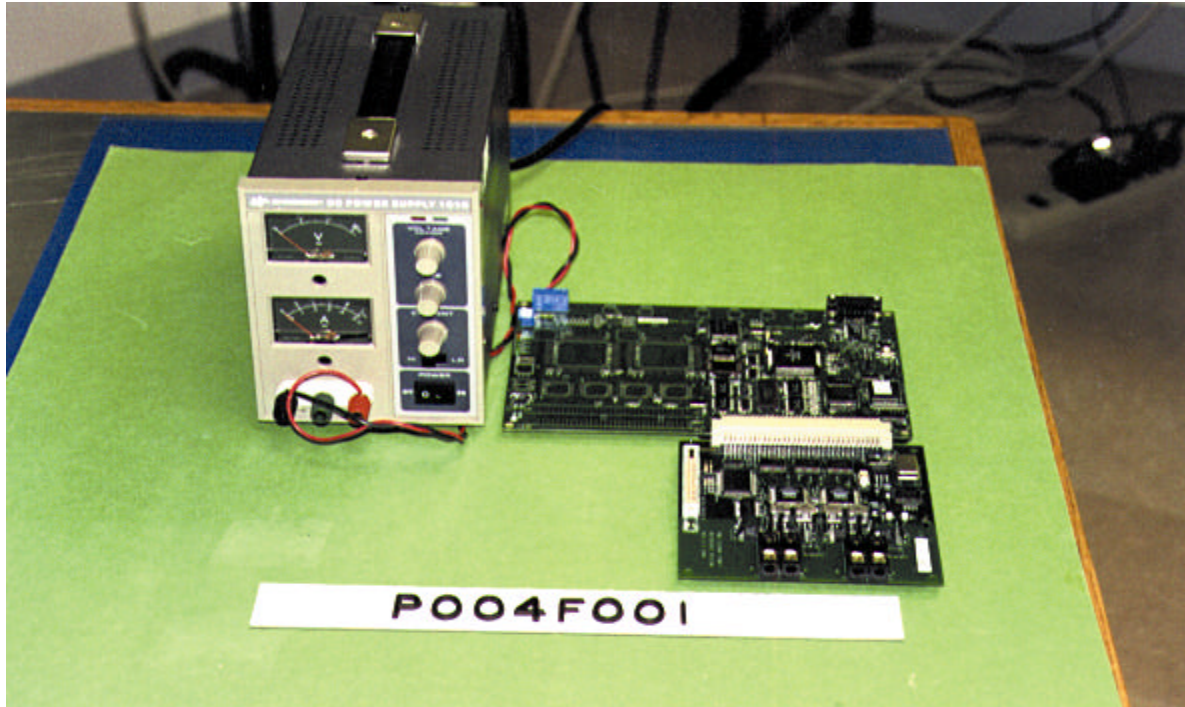
300 046-3	Description	Limit	Result	Verdict	Comment	
5.7.1 Point 2) Connected	<i>Impuls Transfer Common</i>					
	E - G	positive	≤ 1KV peak	3.1 V	C	
		negative		2.5 V	C	
	F - G	positive	≤ 1KV peak	8.9 V	C	
		negative		14.7 V	C	
	E - F	positive	≤ 250V peak	5.8 V	C	
		negative		13.9 V	C	
	<i>Impuls Transfer Transv. x - y</i>					
	E - G	positive	≤ 1KV peak	1.3 V	C	
		negative		6.9 V	C	
	F - G	positive	≤ 1KV peak	5.8 V	C	
		negative		10.2 V	C	
	E - F	positive	≤ 250V peak	8.3 V	C	
		negative		5.8 V	C	
	<i>Impuls Transfer Transv. y - x</i>					
	E - G	positive	≤ 1KV peak	17.8 V	C	
negative		11.4 V		C		
F - G	positive	≤ 1KV peak	20.6 V	C		
	negative		11.6 V	C		
E - F	positive	≤ 250V peak	28.4 V	C		
	negative		11.6 V	C		

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300 046-3	Description	Limit	Result	Verdict	Comment	
5.7.1 Point 2) Disconnected	<i>Impuls Transfer Common</i>					
	E - G	positive	≤ 1KV peak	2.5 V	C	
		negative		2.5 V	C	
	F - G	positive	≤ 1KV peak	3.8 V	C	
		negative		6.3 V	C	
	E - F	positive	≤ 250V peak	10.3 V	C	
		negative		9.1 V	C	
	<i>Impuls Transfer Transv. x - y</i>					
	E - G	positive	≤ 1KV peak	5.3 V	C	
		negative		3.6 V	C	
	F - G	positive	≤ 1KV peak	9.1 V	C	
		negative		7.5 V	C	
	E - F	positive	≤ 250V peak	7.5 V	C	
		negative		14.1 V	C	
	<i>Impuls Transfer Transv. y - x</i>					
	E - G	positive	≤ 1KV peak	5.0 V	C	
		negative		3.8 V	C	
	F - G	positive	≤ 1KV peak	3.8 V	C	
negative		3.7 V		C		
E - F	positive	≤ 250V peak	7.5 V	C		
	negative		15.3 V	C		
5.7.3 Point 2) Connected	<i>Conversion Common - Transv.</i>					
	C - D1	positive	≤ 250V peak	165.6 V	C	
negative		235.0 V		C		
Point 2) Disconnected	C - D1	positive	≤ 250V peak	146.9 V	C	
				negative	82.8 V	C
5.10	Single Fault Condition	<i>Checked by Examination</i>		NA		

7 Photographs



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