

TUV Telecom Services, Inc.

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TEST REPORT NO.

TS016/081602/99

Date: August 26, 1999

Total Number of Pages: 95

Equipment: **PM4351 Comet**

Client: **PMC-Sierra**

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

ACA Technical Standard: **TS-016 (1997), Part 6**

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
Tel. +1 (651) 639-0775
Fax. +1 (651) 639-0873

UKAS accredited testing laboratory, no. 1845

This laboratory has been determined under the Australian Telecommunications Act 1997 as a Recognised Testing Authority for the tests reported herein. This determination has been made on the basis of accreditation by UKAS and the Mutual Recognition Agreement between UKAS and the National Association of Testing Authorities, Australia.

1.2 Limits and Reservations

This test report satisfies European Standard EN 45001 (1989), AUSTEL TAG 5 (1994), 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 15°C to 25°C	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Relative humidity	: In the range of 30% 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 VDC.

3 System Report Summary

3.1 Test Report Summary

Protocol Standard: *TS 016 (1997)*

Protocol Conformance Test Report: *See Section 6*

Abstract Test Suite (ATS) Standard: *TS 016 (1997)*

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

Real Test system:

Executable Test Suite (ETS) Identification:

Name : CTS Layer 1 Conformance Tests
Version : A.09.10

Test system Identification:

ISDN-S_{2M}-Test System IPATS:

Manufacturer : Hewlett Packard / Admit Design Systems

Conformance Status:

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

Test cases run: 12

Passed : 12
Failed : 0

4 Observations

Date: **August 16, 1999**

No observations have been made during the conformance assessment test.

5 Summary of Compliance

Date: **August 16, 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.

5.1 Statement of Compliance

The SUT referred to in this test report was found to comply with the requirements of:
ACA TS-016 (1997), Part 6.

Exclusions: *Par. 5.5 (Optional)*

6 Protocol Conformance Test Report

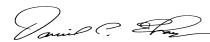
6.1 Dates

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

Date of Test: **August 16, 1999**

6.2 Operator

Dan Thayer



(Signature)

6.3 Test System

Name : CTS Layer 1 Conformance Tests

Version : A.09.10

Test system Identification:

ISDN-S_{2M}-Test System IPATS:

Manufacturer : Hewlett Packard / Admit Design Systems

6.4 Test Environment

Temperature : In the range of 15°C to 25°C Yes No
Relative humidity : In the range of 30% to 75% Yes No

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



6.5 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	Requirement	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) Reference to the requirement of the technical standard.
- d) Result of the test, test with subtests have this column split.
- e) Indicates the verdicts as assigned during the test campaign.

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.
- Noted (N): Clause/subclause/requirement/test case was not checked but noted.

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



6.6 Test Results

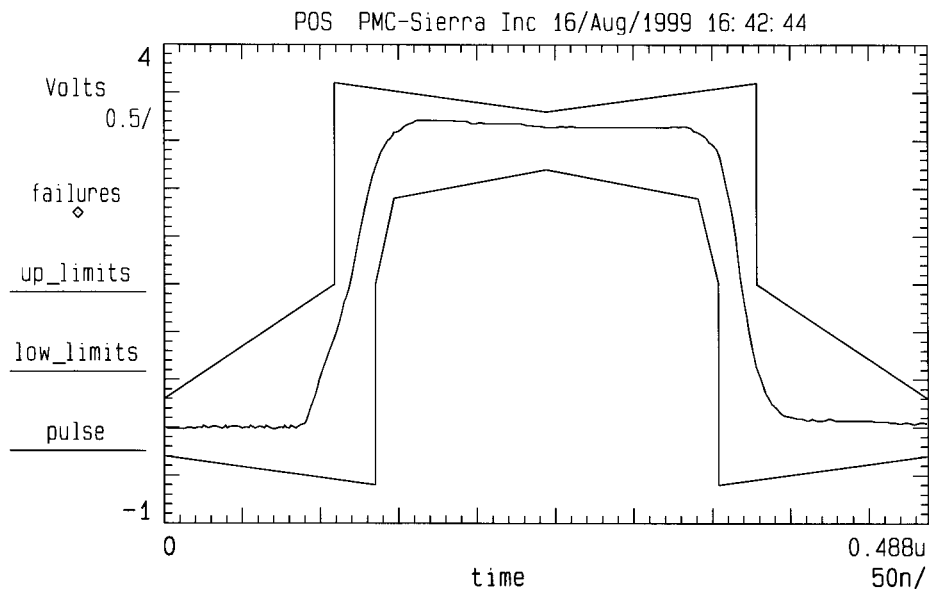
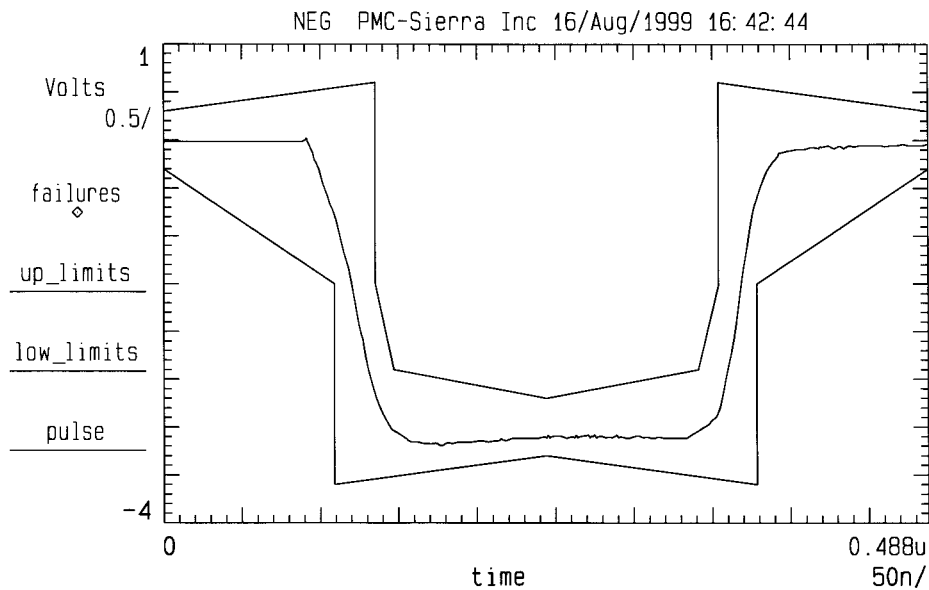
Test Case	Description	Requirement	Result	Verdict	Comment
6.1	General	N/A	N/A	N	
6.2	Test Conditions	N/A	N/A	N	
6.3	Fail-Safe Operation	5.1.2	N/A	C	

Test Case	Description	Requirement	Result	Verdict	Comment
6.4	Bit Rate	5.3.2	+29.31 ppm	C	
6.5	Line Coding	5.3.3	HDB3 code, no errors	C	
6.6	Intrinsic Jitter with 6dB cable	5.3.7	20 Hz 0 ppm 0.008 UI	C	
			+50 ppm 0.008 UI		
			-50 ppm 0.008 UI		
			2400 Hz 0 ppm 0.008 UI		
+50 ppm 0.008 UI	C				
-50 ppm 0.008 UI					
18 KHz 0 ppm 0.008 UI			C		
+50 ppm 0.008 UI					
-50 ppm 0.008 UI					
100 KHz 0 ppm 0.008 UI	C				
+50 ppm 0.008 UI					
-50 ppm 0.008 UI					
6.6			Intrinsic Jitter with 0dB	5.3.7	20 Hz 0 ppm 0.008 UI
	+50 ppm 0.008 UI				
	-50 ppm 0.008 UI				
	2400 Hz 0 ppm 0.008 UI	C			
+50 ppm 0.008 UI					
-50 ppm 0.008 UI					
18 KHz 0 ppm 0.008 UI	C				
+50 ppm 0.008 UI					
-50 ppm 0.008 UI					
100 KHz 0 ppm 0.008 UI		C			
+50 ppm 0.008 UI					
-50 ppm 0.008 UI					
6.7	Jitter and Wander		5.3.8/5.3.6		20 Hz
		2400 Hz			
		18 KHz			
		100 KHz			



Test Case		Requirement	Result	Verdict	Comment
6.8	AIS Received	5.10	RAI	C	
6.9	Loss of Signal	5.10	RAI	C	
6.10	Loss of FAS	5.10	RAI	C	
6.11	High Bit Error	5.10	N/A	NA	
6.12	Puls Shape	5.3.4	see graphs below	C	

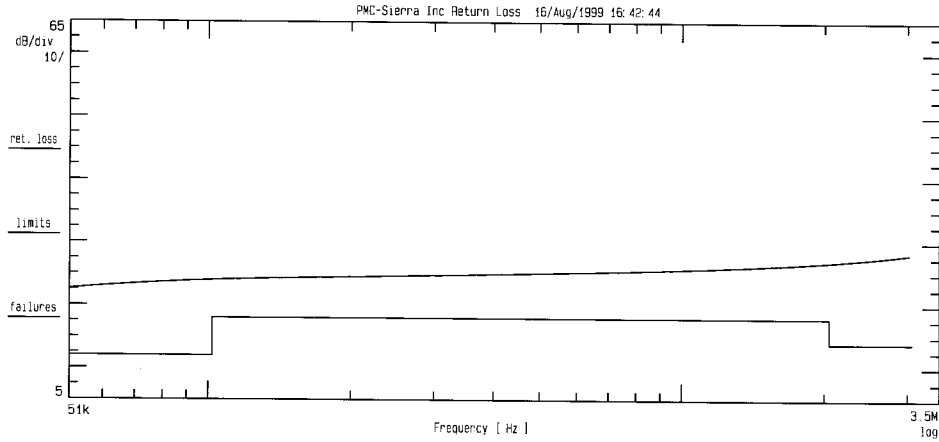
Puls Shape 120 Ohm





Test Case	Description	Requirement	Result	Verdict	Comment
6.13	Return Loss	5.3.5	see graphs below	C	

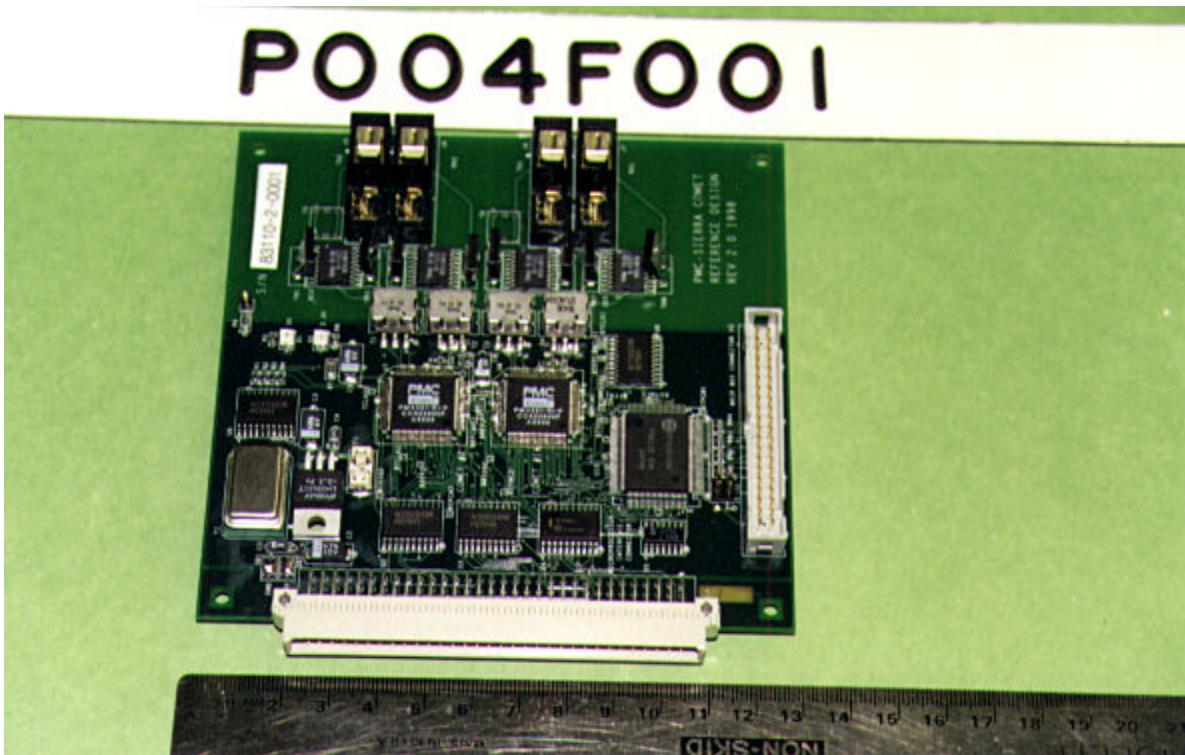
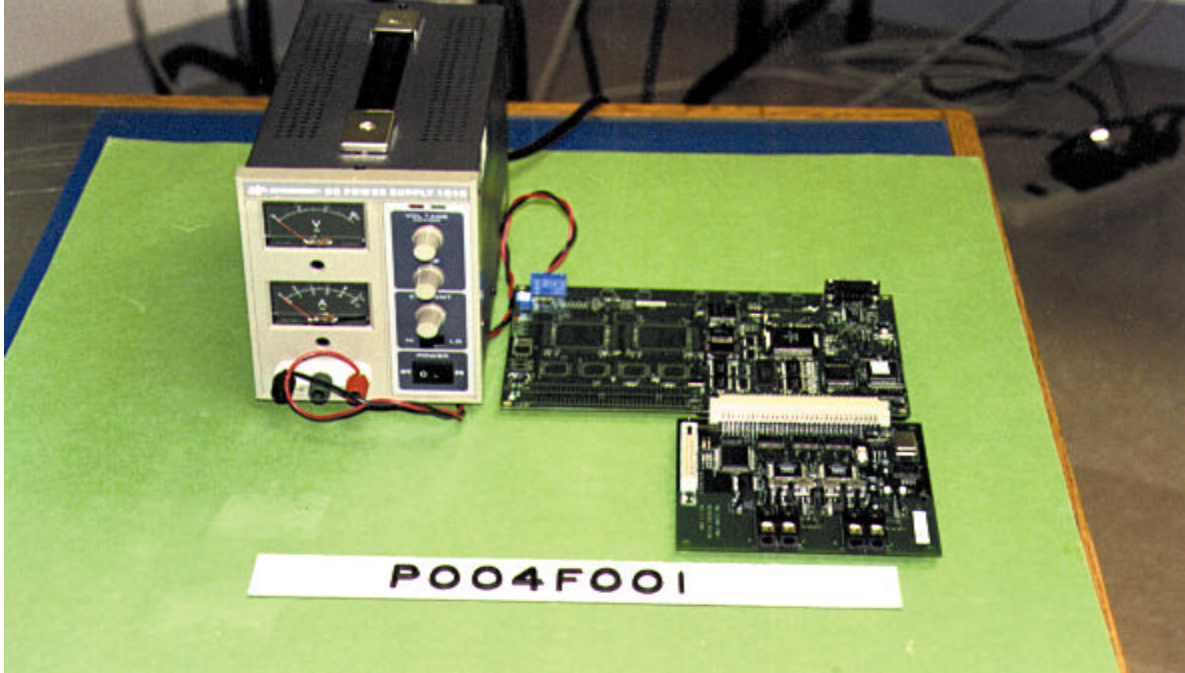
Return Loss 120 Ohm

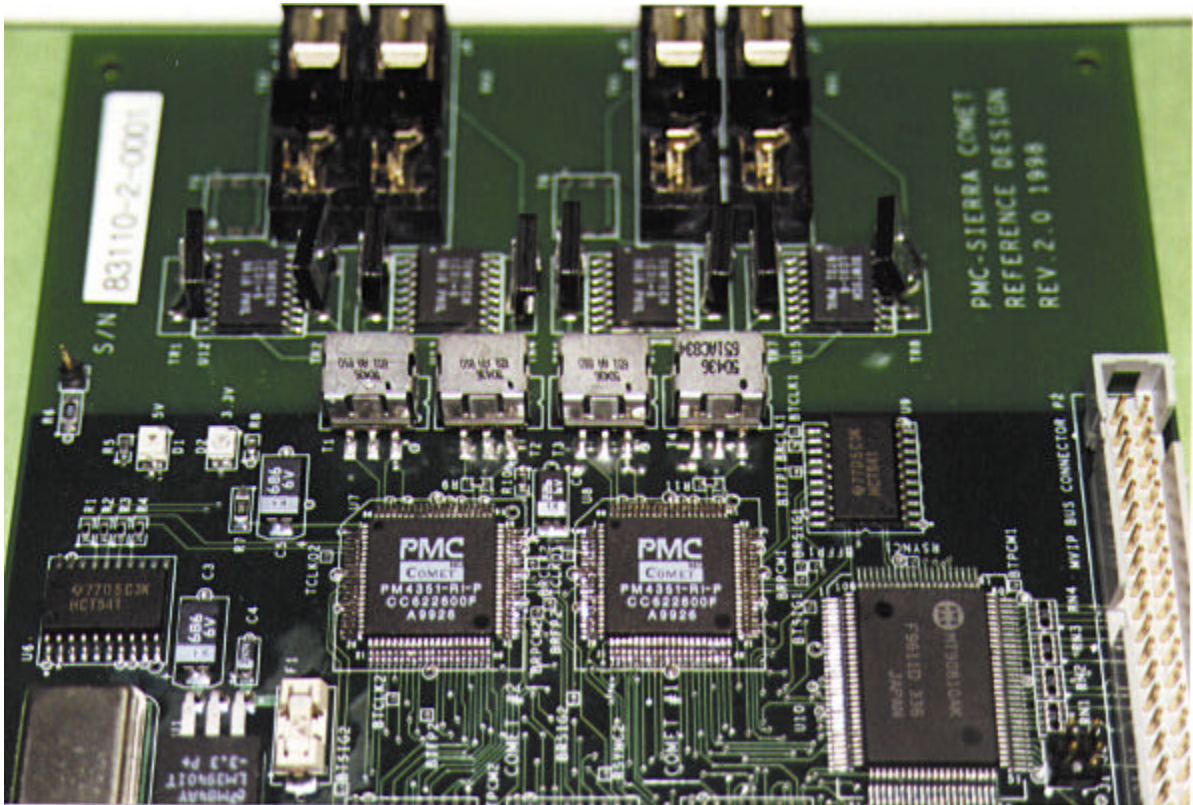




Test Case	Description	Requirement	Result	Verdict	Comment
6.14	Signal Reflection Immunity	5.3.5.3	No errors	C	

Appendix A – Photographs



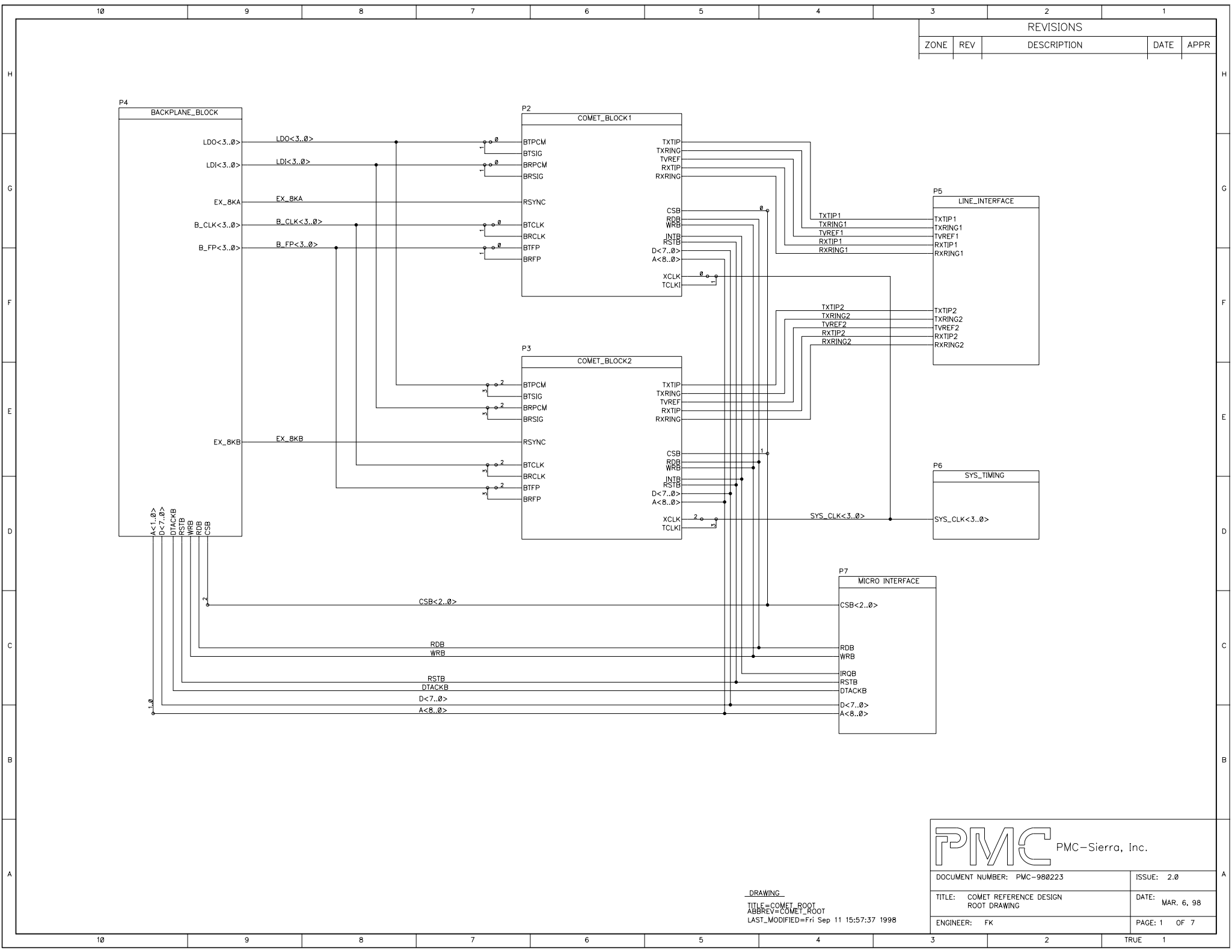


Appendix B - Circuit Diagrams

See attached circuit diagrams

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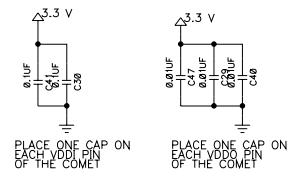
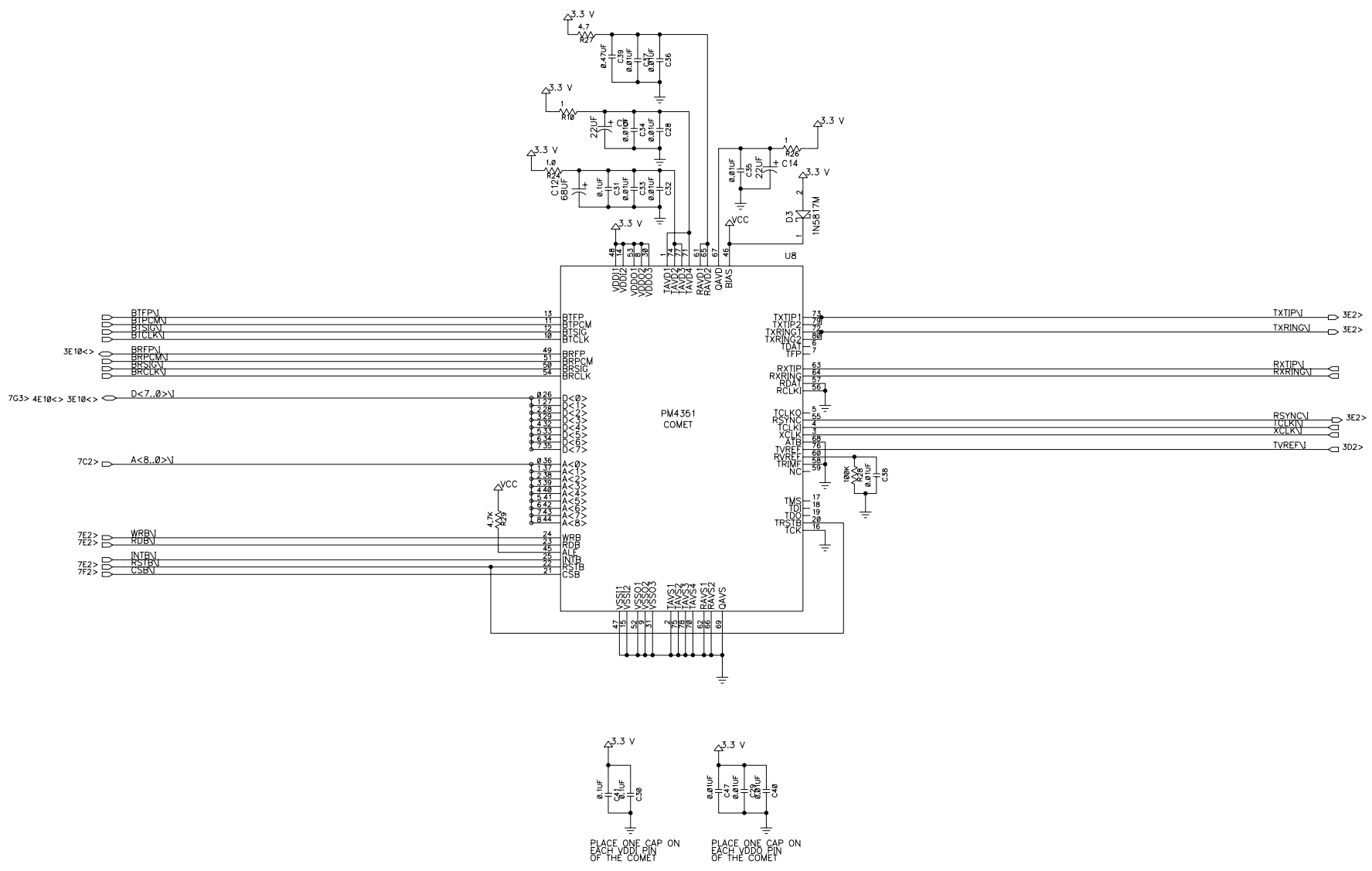
REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPR

PMC PMC-Sierra, Inc.

DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN ROOT DRAWING	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 1 OF 7

DRAWING
 TITLE=COMET_ROOT
 ABBREV=COMET_ROOT
 LAST_MODIFIED=Fri Sep 11 15:57:37 1998

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPR



PLACE ONE CAP ON EACH VDD ON THE COMET

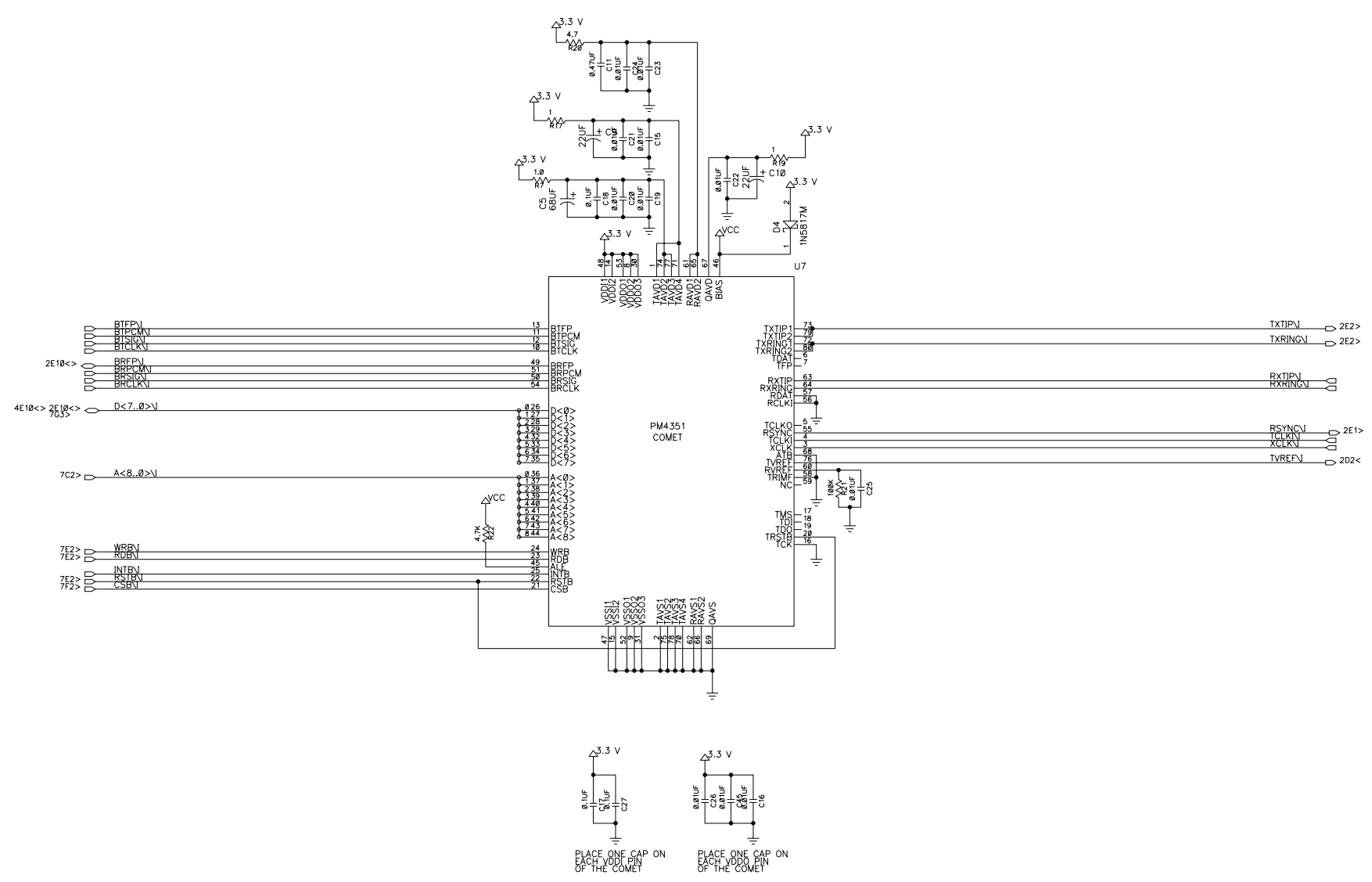
PLACE ONE CAP ON EACH VDD ON THE COMET

PMC PMC-Sierra, Inc.

DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN COMET BLOCK 1	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 2 OF 7

DRAWING
 TITLE=COMET_BLOCK1
 ABBREV=COMET_BLOCK1
 LAST_MODIFIED=Thu Sep 17 15:14:06 1998

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPR



PLACE ONE CAP ON EACH VDD PIN OF THE COMET

PLACE ONE CAP ON EACH VDDO PIN OF THE COMET

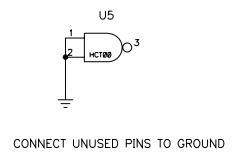
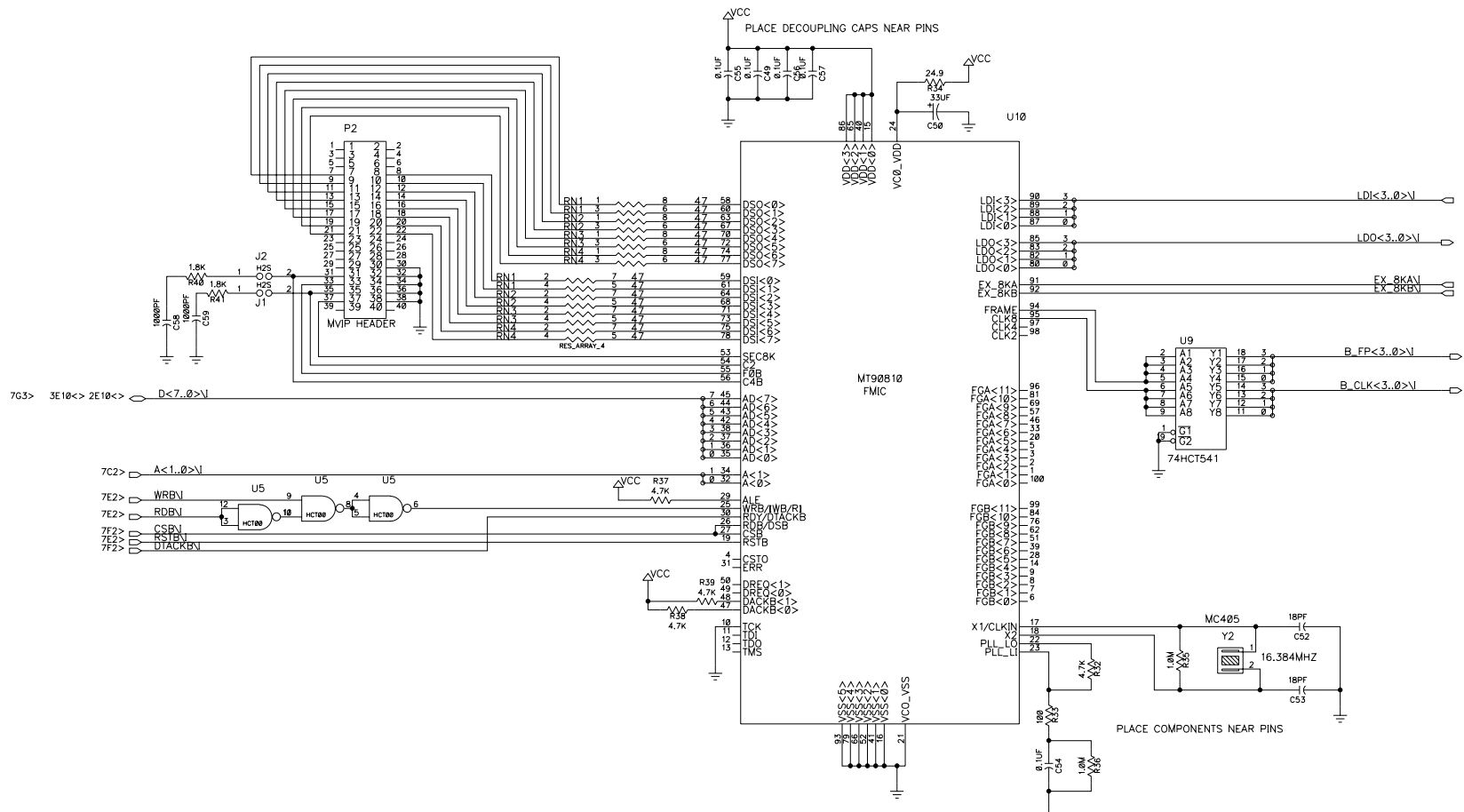
PMC PMC-Sierra, Inc.

DOCUMENT NUMBER: PMC-980223	ISSUE: 1.0
TITLE: COMET REFERENCE DESIGN COMET BLOCK 2	DATE: MAR. 6, 98
ENGINEER: EDWARD CHEN	PAGE: 3 OF 7

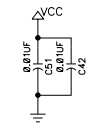
DRAWING
 TITLE=COMET_BLOCK2
 ABBREV=COMET_BLOCK2
 LAST_MODIFIED=Thu Sep 17 15:14:10 1998

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPR



PLACE DECOUPLING CAPS NEAR IC



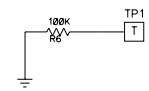
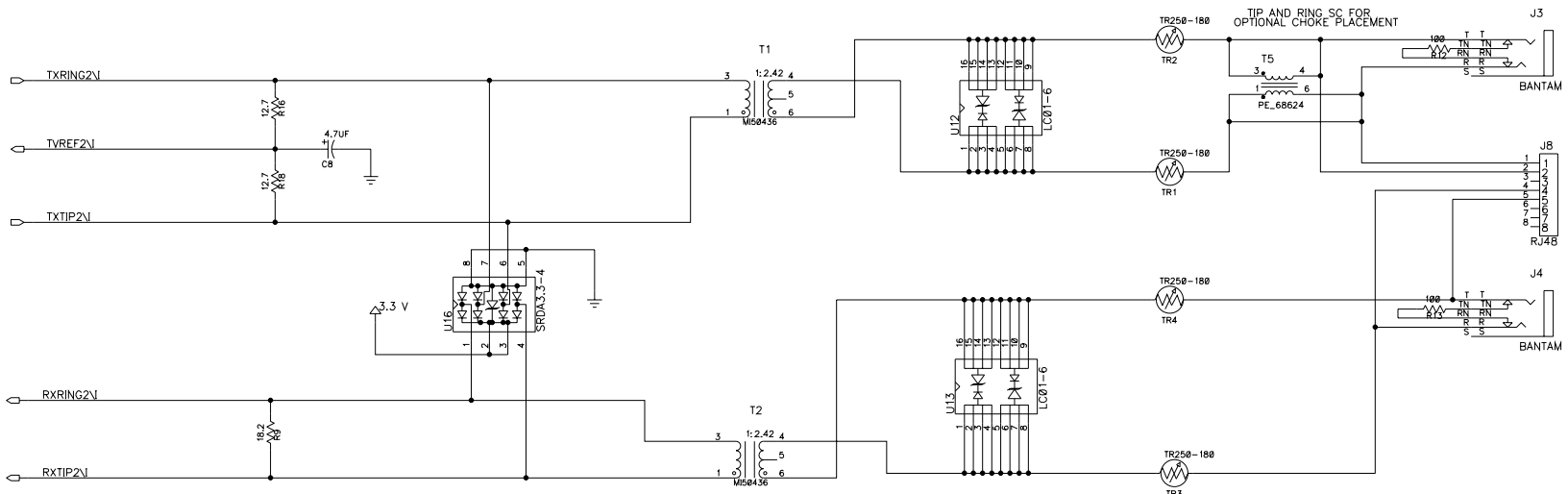
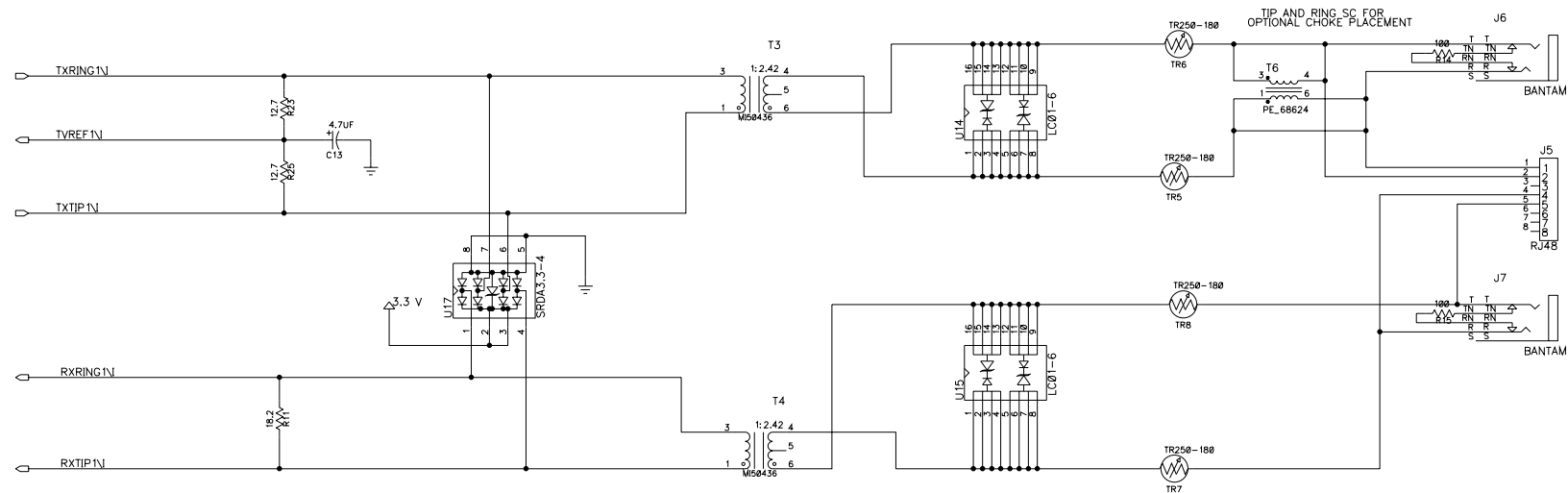
DRAWING
 TITLE=BACKPLANE_BLOCK
 ABBREV=BACKPLANE
 LAST_MODIFIED=Thu Sep 17 15:13:55 1998

PMC-Sierra, Inc.

DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN BACKPLANE BLOCK	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 4 OF 7

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPR

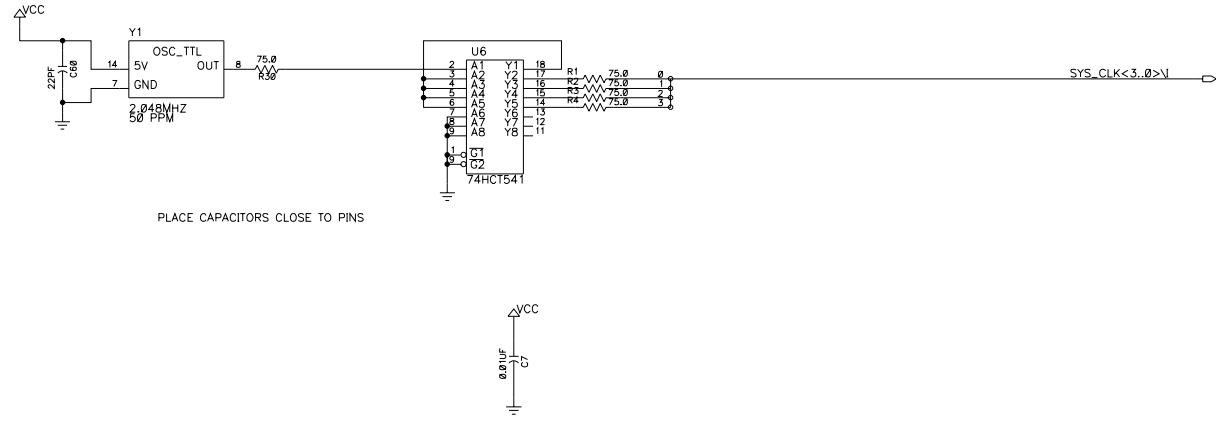


DRAWING
 TITLE=LINE_INTERFACE
 ABBREV=LINE
 LAST_MODIFIED=Thu Sep 17 15:13:59 1998

DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN LINE INTERFACE	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 5 OF 7

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPR

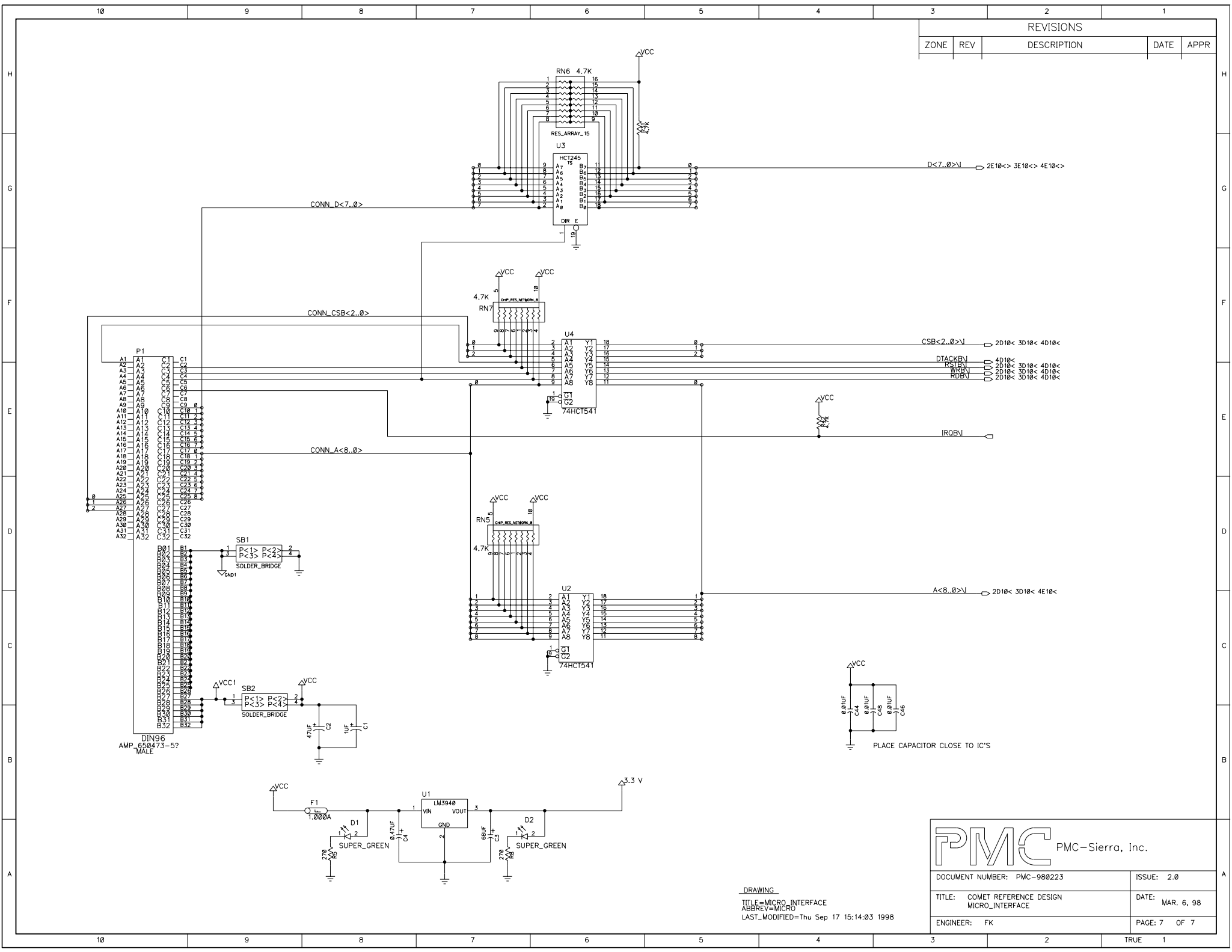


PLACE CAPACITORS CLOSE TO PINS



DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN SYS TIMING	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 6 OF 7

DRAWING
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 ABBREV=SYS_TIMING
 LAST_MODIFIED=Thu Sep 17 15:14:12 1998



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPR

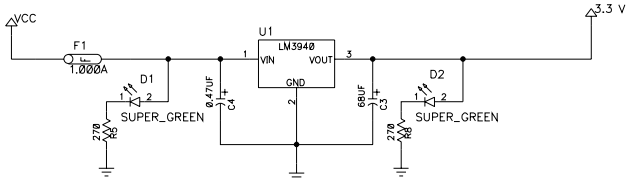
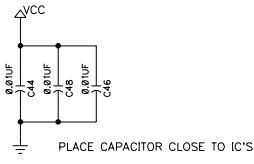
D<7..0>NI 2E10< 3E10< 4E10<

CSB<2..0>NI 2D10< 3D10< 4D10<

DTACKBN 4D10<
 RSTEN 2D10< 3D10< 4D10<
 WRN 2D10< 3D10< 4D10<
 RDBY 2D10< 3D10< 4D10<

IRQBN

A<8..0>NI 2D10< 3D10< 4E10<



DIN96 AMP_659473-5? MALE



DRAWING
 TITLE=MICRO_INTERFACE
 ABBREV=MICRO
 LAST_MODIFIED=Thu Sep 17 15:14:03 1998

DOCUMENT NUMBER: PMC-980223	ISSUE: 2.0
TITLE: COMET REFERENCE DESIGN MICRO_INTERFACE	DATE: MAR. 6, 98
ENGINEER: FK	PAGE: 7 OF 7



Appendix C - Test Data

TUV Telecom Services, Inc.
1775 Old Highway 8 NW Suite 107, St. Paul, MN 55112
Tel. +1 (651) 639-0775 Fax. +1 (651) 639-0873

ACA Technical Standard
TS-016



I.U.T. : PM4351 CONET PMC-Sierra Inc

Test Sequence created on : 16/Aug/1999 16:42:44

Data was stored into : ./TB/AUS16_120/dir13

S C S SUMMARY

Client : PMC-Sierra Inc.

Contact person : Fayaz Khaki Telephone : (604) 415-6000

Terminal Equipment : Reference Design Board

TUV Telecom Services, Inc.
 1775 Old Highway 8 NW Suite 107, St. Paul, MN 55112
 Tel. +1 (651) 639-0775 Fax. +1 (651) 639-0873

ACA Technical Standard
 TS-016



I.U.T. : PM4351 COMET PMC-Sierra Inc

Test Sequence created on : 16/Aug/1999 16:42:44

Data was stored into : ./TE/AUS16_120/dir13

SYSTEM CONFORMANCE STATEMENT (SCS) AND CLIENT CHECKLIST

EQUIPMENT

EQUIPMENT IDENTIFICATION

Type : PM4351 COMET
 Name : . Model : .
 Version : F Serial No. : 83110-2-0001

SUPPLIER

Company Name : . Telephone : .
 Street No. : . Telefax : .
 City : . Telex : .
 Country : . Teletex : .

MANUFACTURER

Company Name : PMC-Sierra Inc. Telephone : (604) 415-6000
 Street No. : 105 -8555 Baxter Place Telefax : (604) 415-6206
 City : Burnaby, BC V5A 4V7 Telex : .
 Country : Canada Teletex : .



I.U.T. : PM4351 COMET PWC-Sierra Inc

Test Sequence created on : 16/Aug/1999 16:42:44

Data was stored into : ./TE/AUS16_120/dir13

PHYSICAL LAYER PICS

OPTIONAL CAPABILITIES

TE/NT2 has only one user-network interface : YES

TE/NT2 has more than one user-network interface : NO

PTNX INTERCONNECTIONS

Does the IUT act as a master : NO

Does the IUT act as a slave : YES

MULTI ACCESSES IUT TIMING METHOD

Only one input used at a point in time to extract synchronization : YES

More than one input used at a point in time to extract synchronization : NO

*

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ACA Technical Standard
TS-016



I.U.T. : PM4351 COMET PMC-Sierra Inc

Test Sequence created on : 16/Aug/1999 16:42:44

Data was stored into : ./TE/AUS16_120/dir13

PHYSICAL LAYER PIXIT

Does the TE support PTNX interconnection : N

Is the TE user/network interface at the S ref. point : YES

Does the TE transmit a PRBS 2¹¹-1 in a time slot : NO

How many accesses has the TE : 1

Which of the accesses has the synchronization : 1

Clock synchronization time sec [PULL RANGE] : 10

Internal clock frequency accuracy better than 1ppm ? : NO

Client's additional informations : Order No.:P004F001 TS016

TUV Telecom Services, Inc.
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ACA Technical Standard
TS-016



Data retrieved from : ./TR/AUS16_120/dir13/C32

I.U.T. PM4351 COMET PMC-Sierra Inc

Test : 5.3.2 Bit Rate & Tolerance

Test Sequence created on : 16/Aug/1999 16:42:44

TEST RESULT : PASSED

Measured bit rate	deviation	Limits
[Hz]	[ppm]	[ppm]
2048060.018	+29.31	+/- 50

6



Data retrieved from : ./TS/AUS16_120/dir13/C33

I.U.T. PM4351 COMET PMC-Sierra Inc
Test : HDB3 5.3.3 Line Coding (payload loopback req)
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED

Network Bm.	I.U.T. rec.	ALARMS						ERRORS count				I.U.T.
Freq. CLOCK	Freq. CLOCK	SGL	AIS	RAI	FML	CRC	CODE	FRAMB	CRC	Ebit	sync	
[Hz]	[Hz]											
2048000.000	2047999.996	no	no	no	no	no	0	0	0	0	YES	

I.U.T. PM4351 COMET PMC-Sierra Inc
Test : AMI 5.3.3 Line Coding (payload loopback req)
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED

Network Bm.	I.U.T. rec.	ALARMS						ERRORS count				I.U.T.
Freq. CLOCK	Freq. CLOCK	SGL	AIS	RAI	FML	CRC	CODE	FRAMB	CRC	Ebit	sync	
[Hz]	[Hz]											
2048000.000	2048000.004	no	no	no	YES	no	797129	784	940	0	YES	

@



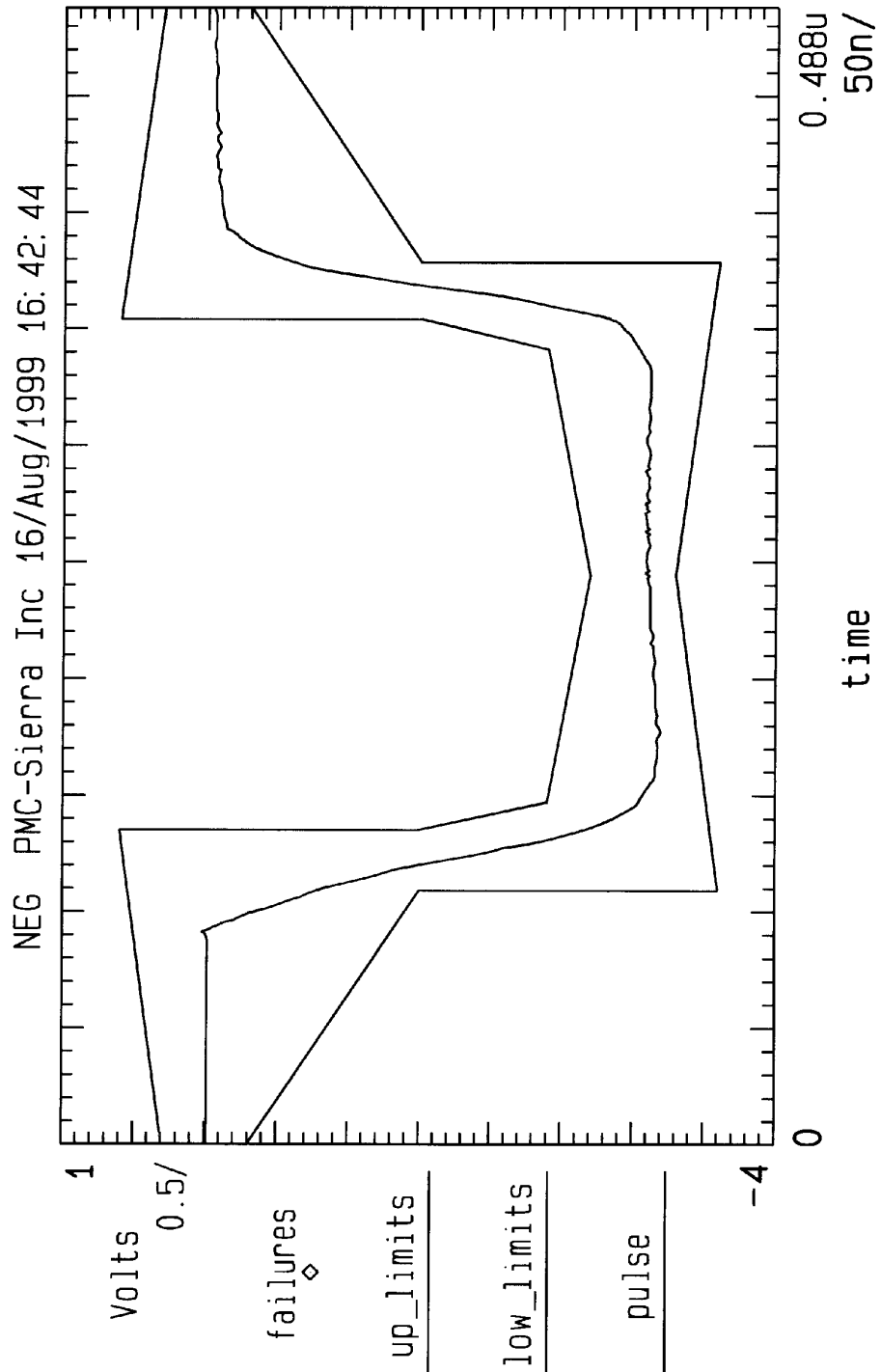
Data retrieved from : ./TE/AUS16_120/dir13/C34a

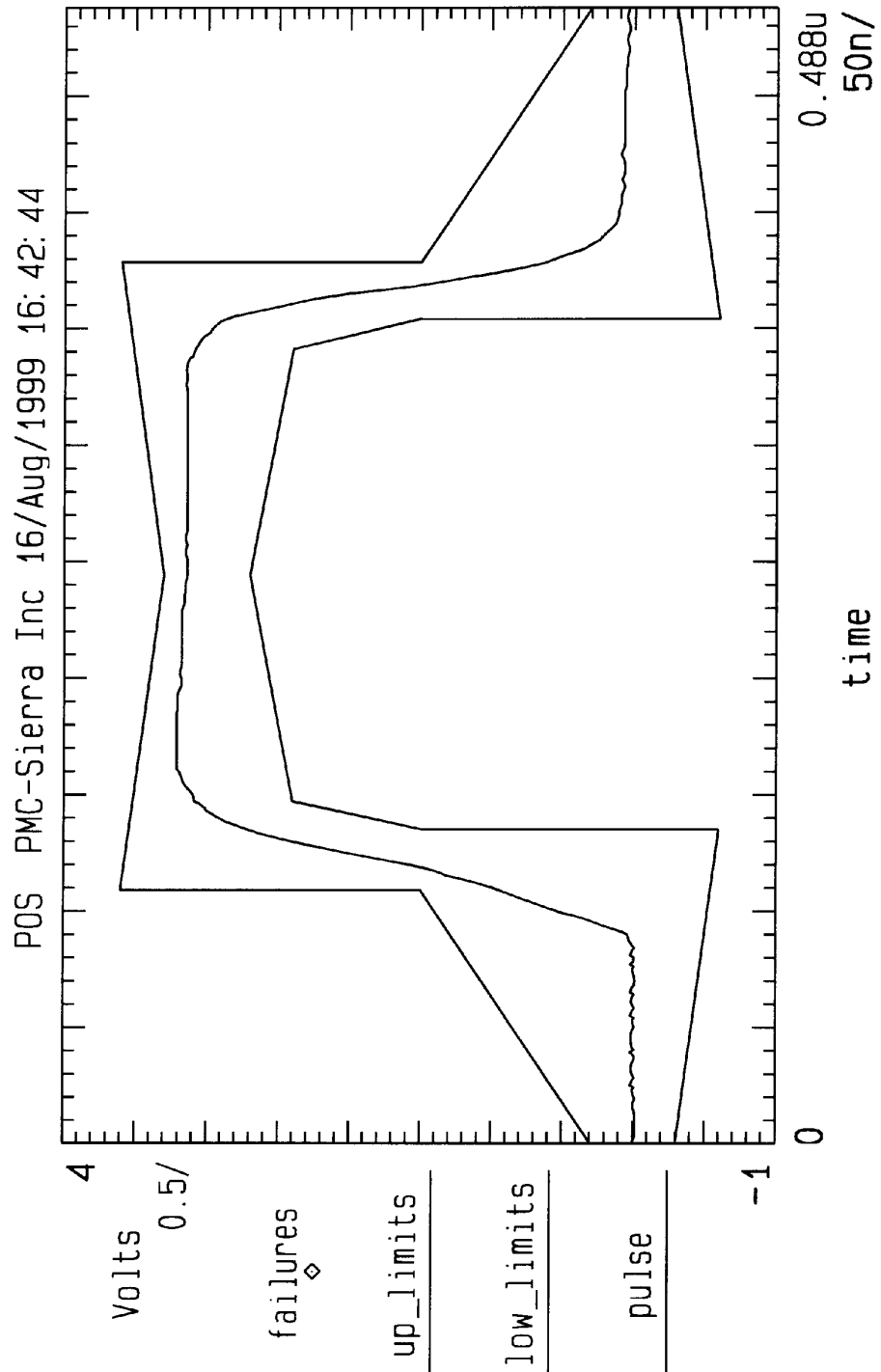
I.U.T. PM4351 COMET PMC-Sierra Inc
Test : 5.3.4A Pulse shape and amplitude of a mark (pulse)
Test Sequence created on : 16/Aug/1999 16:42:44
TBST RESULT : PASSED

Details of test results

----- -----			
I.U.T. PULSES			
state	sample	positive	negative
----- ----- ----- -----			
F 1	one	passed	passed
----- ----- ----- -----			

®







Data retrieved from : ./TE/AUS16_120/dir13/C34b

I.U.T. PM4351 COMBT PMC-Sierra Inc
Test : 5.3.4B Peak voltage of a space (no pulse)
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED

Trace of test execution case space after pulses

PARTIAL TEST RESULT : PASSED

Trace of test execution

```

|=====|=====|
| I.U.T. | partial test results | | |
|---|---|---|---|
| state | sample | pos pulse | neg pulse |
|=====|=====|=====|=====|
| F 1 | one | passed | passed |
|-----|-----|-----|-----|

```

Trace of test execution case space before pulses

PARTIAL TEST RESULT : PASSED

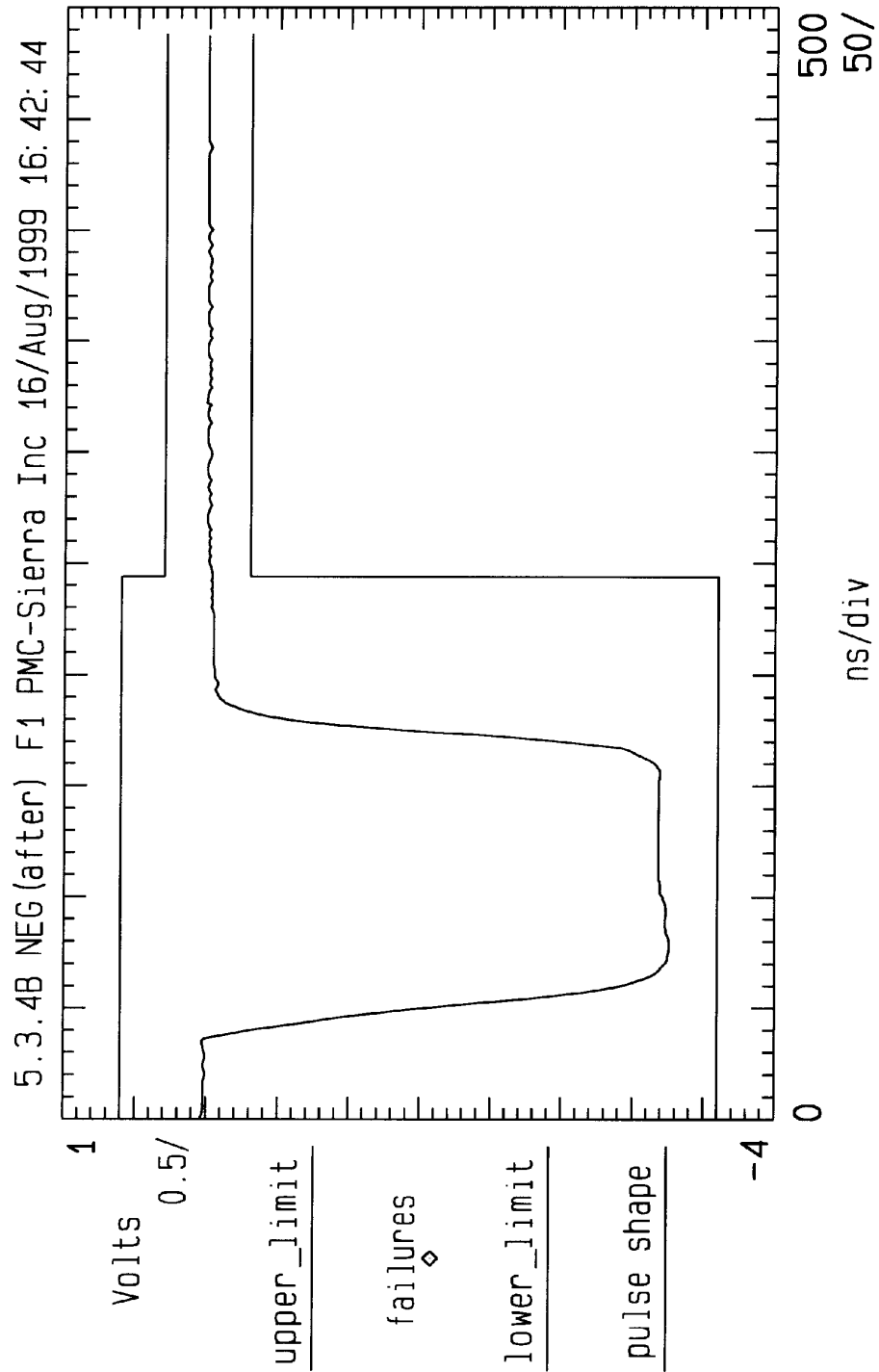
Trace of test execution

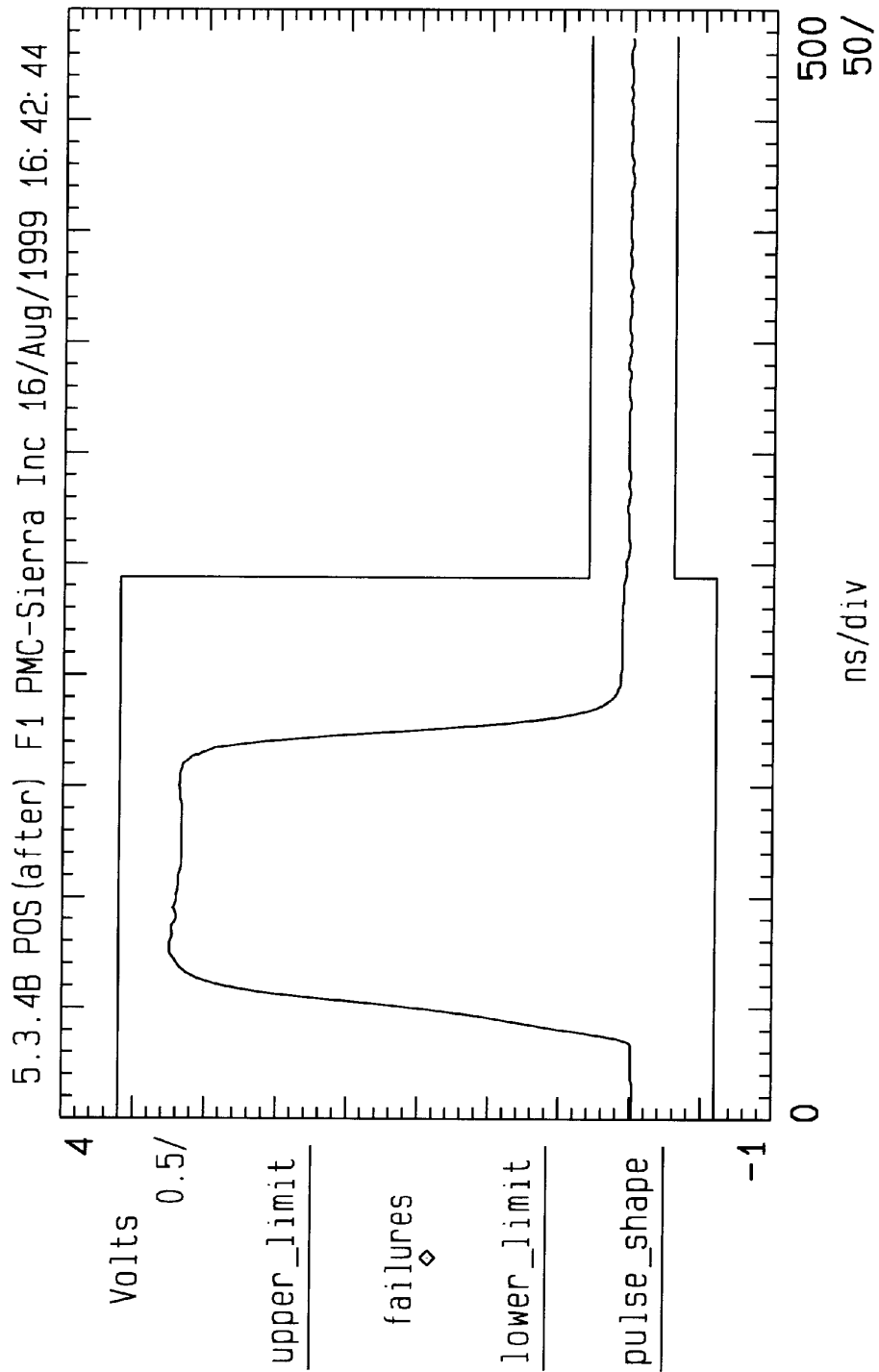
```

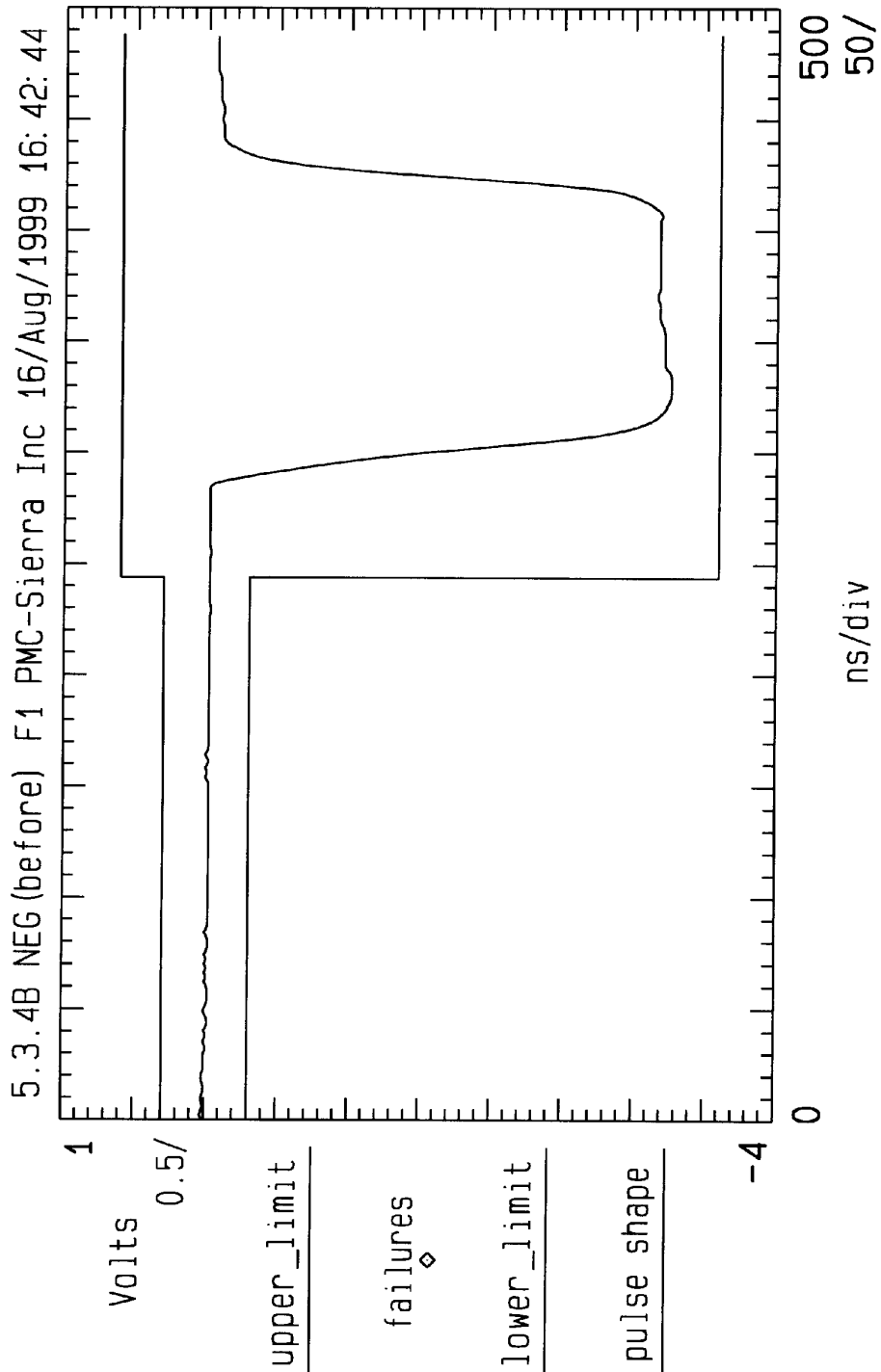
|=====|=====|
| I.U.T. | partial test results | | |
|---|---|---|---|
| state | sample | pos pulse | neg pulse |
|=====|=====|=====|=====|
| F 1 | one | passed | passed |
|-----|-----|-----|-----|

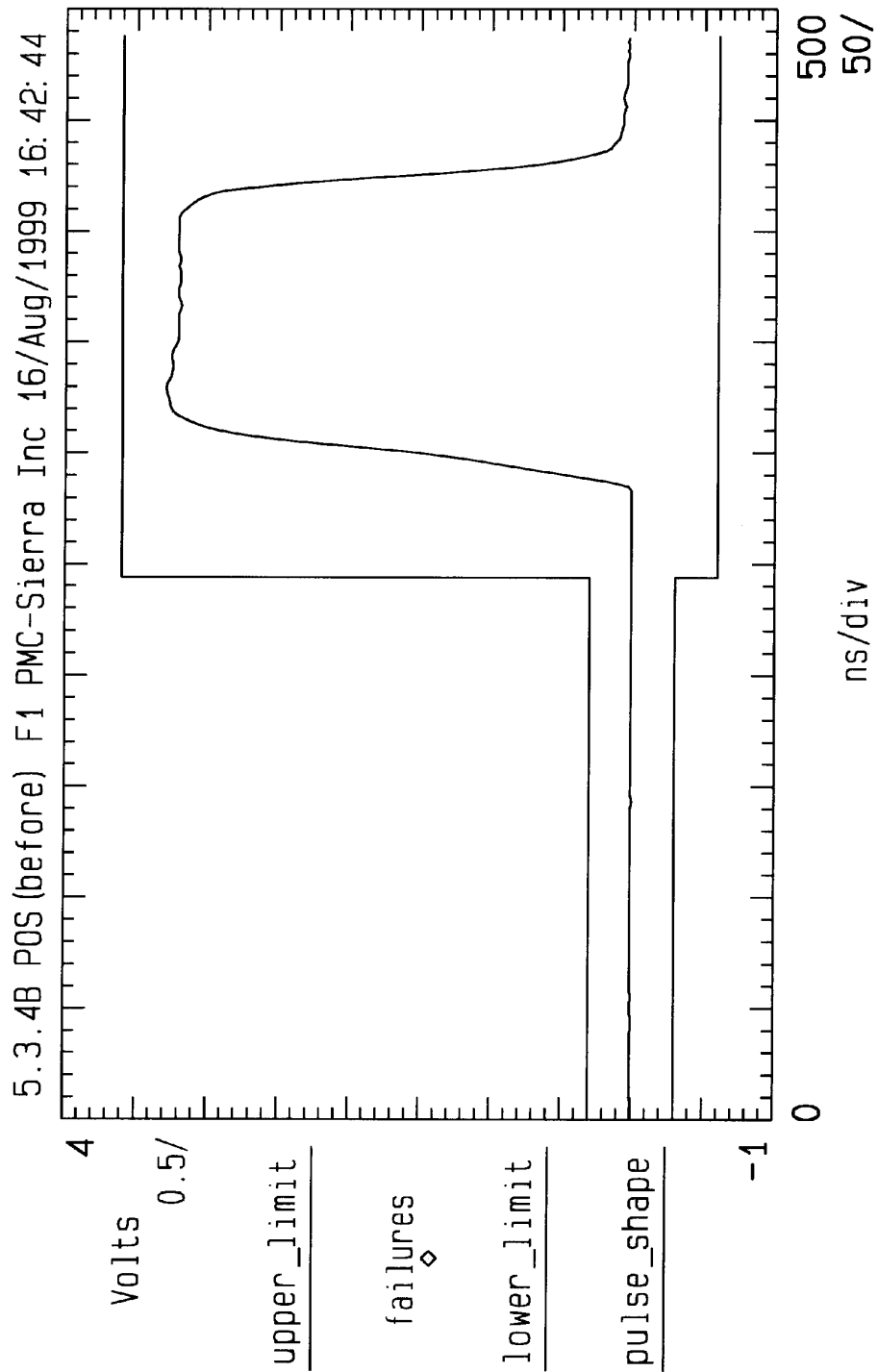
```

@











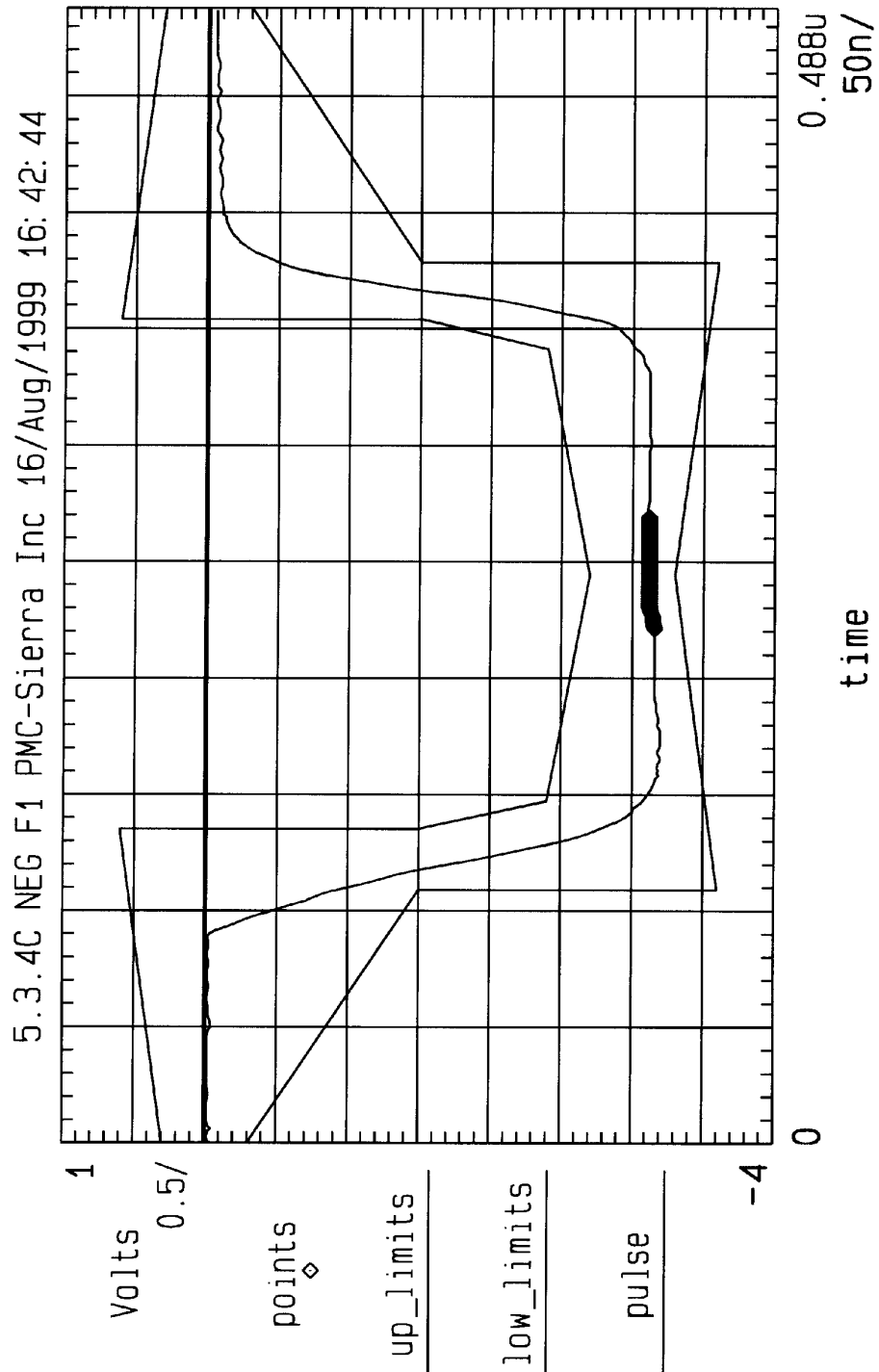
Data retrieved from : ./TS/AUS16_120/dir13/C34c

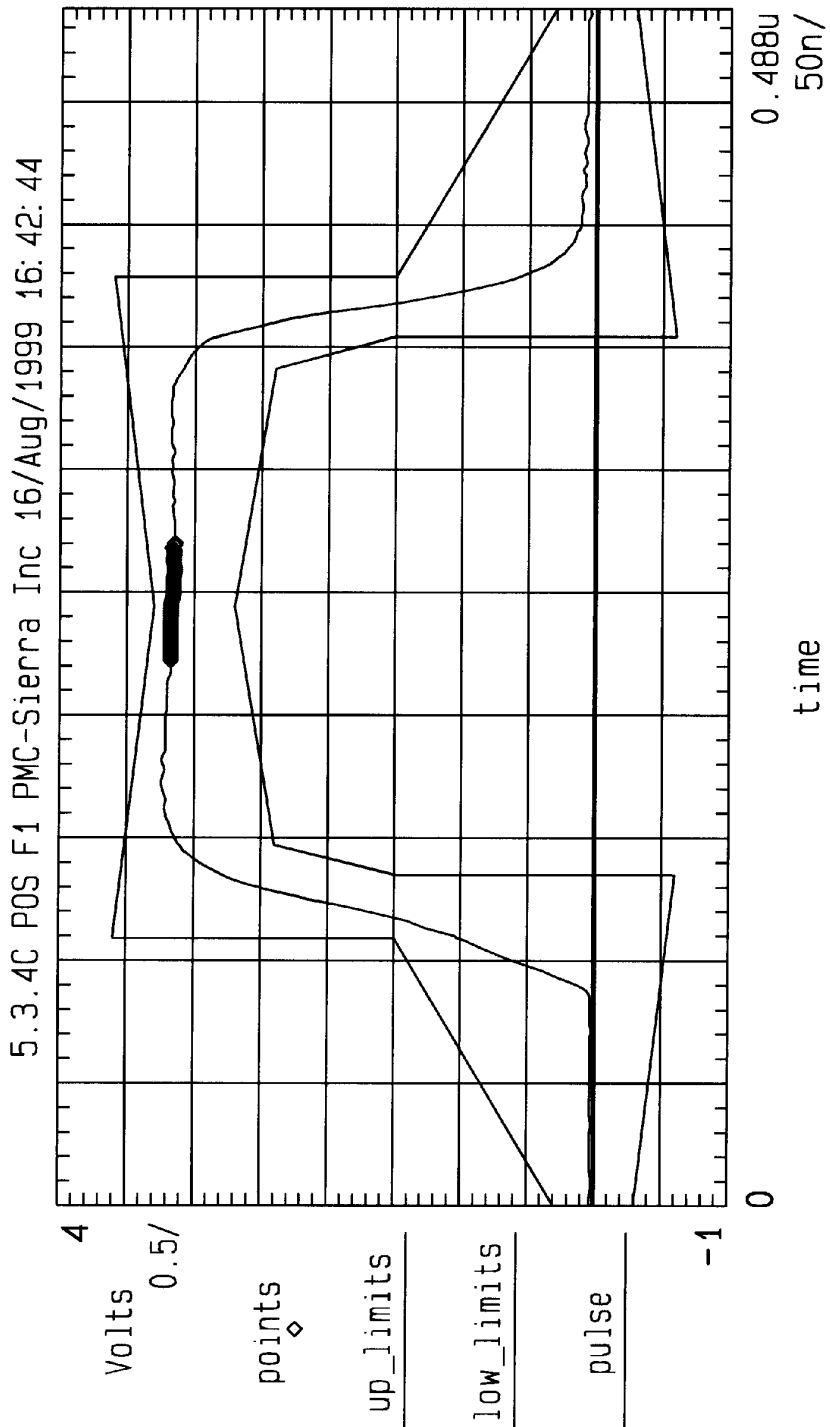
I.U.T. PM4351 COMST PMC-Sierra Inc
Test : 5.3.4C Ratio of the amplitude of pos & neg pulses at the centre
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED

Trace of test execution

I.U.T	Sample	Ampl.	Pass
state		Ratio	Fail
F 1	one	1.014	pass

@





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Data retrieved from : ./TR/AUS16_120/dir13/C34d

I.U.T. PM4351 COMET PMC-Sierra Inc

Test : 5.3.4D Ratio of pos & neg pulse widths at 1/2 amplitude

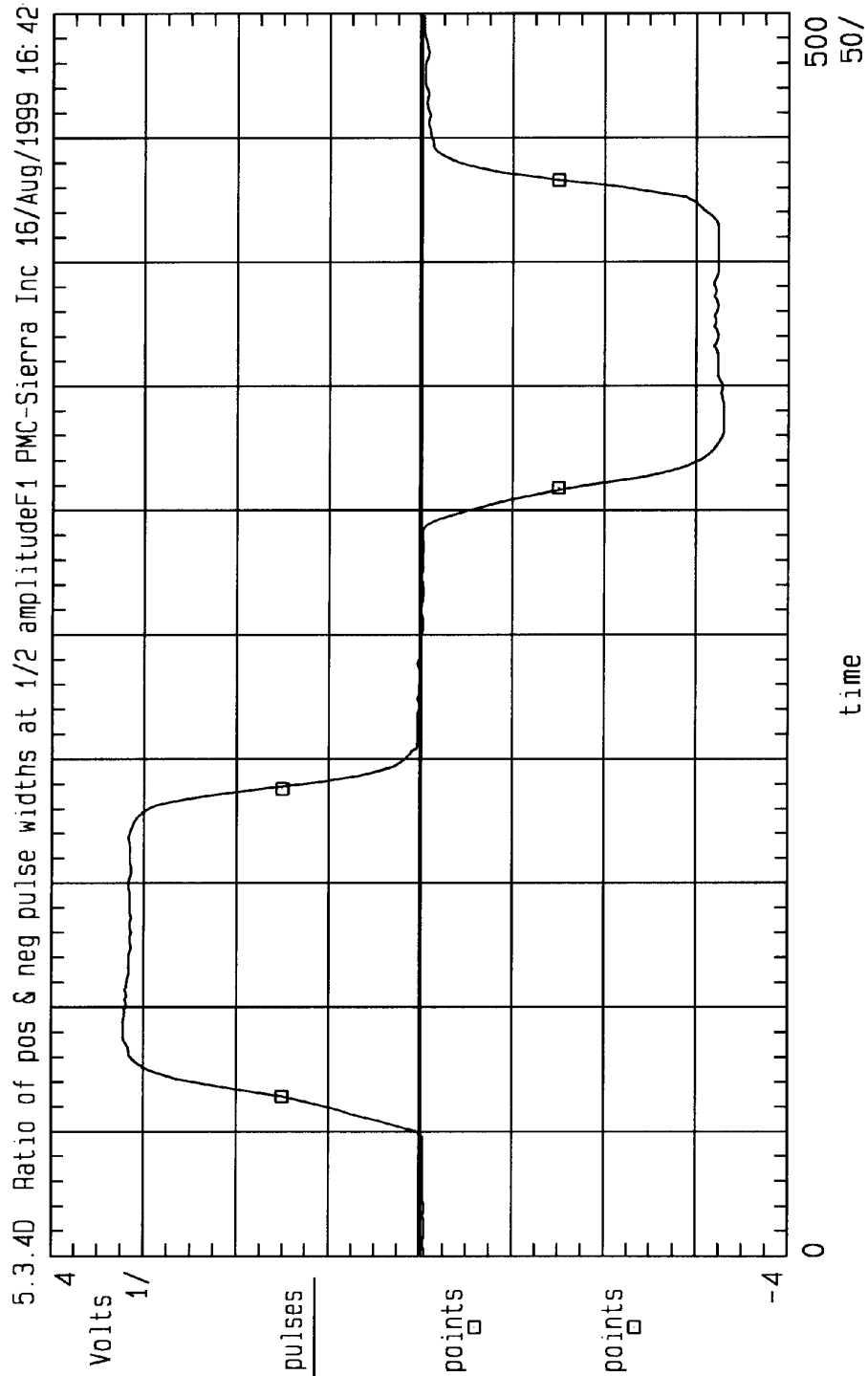
Test Sequence created on : 16/Aug/1999 16:42:44

TEST RESULT : PASSED

Trace of test execution

I.U.T	Sample	Width	Width	Widths	Pass
state		pos ns	neg ns	RATIO	Fail
P 1	one	250	250	1.000	pass

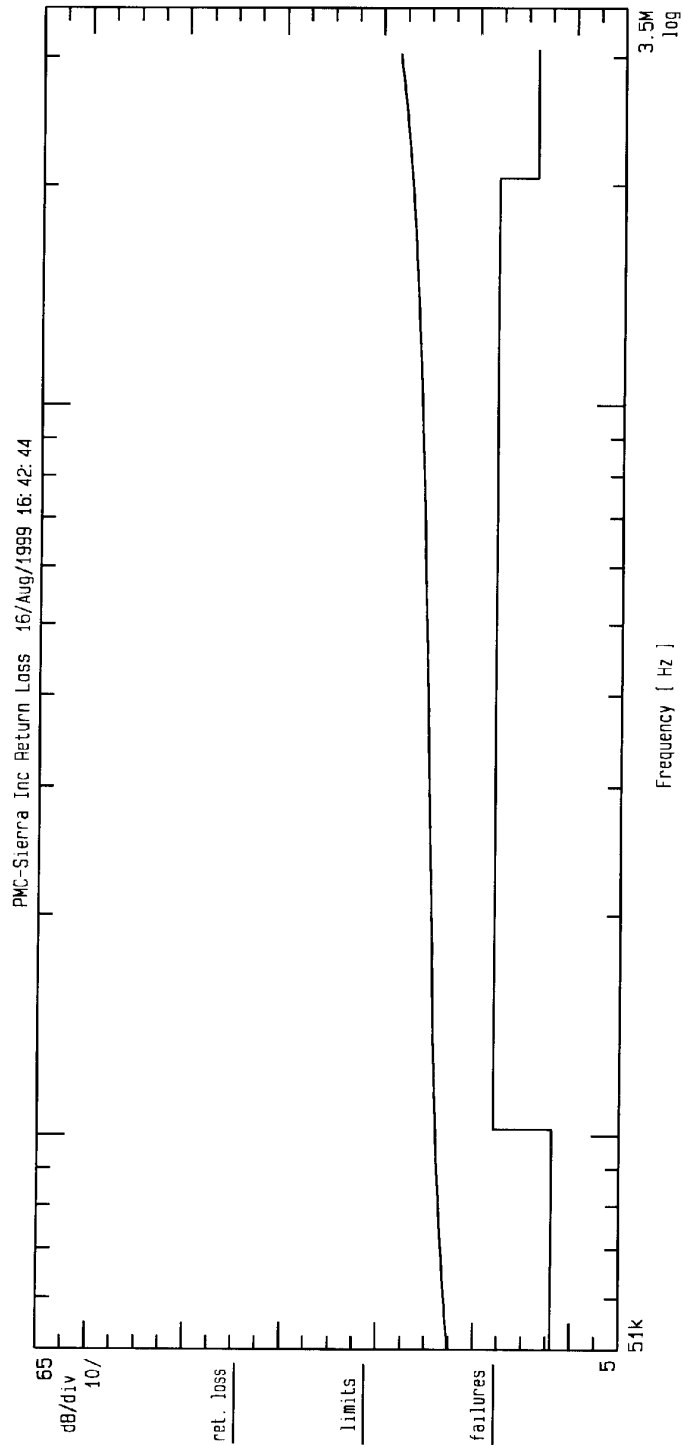
@





Data retrieved from : ../TE/AUS16_120/dir13/C35

I.U.T. PM4351 COMBT PMC-Sierra Inc
Test : 5.3.5.1 Return loss at the input port
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED
*



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Data retrieved from : ./TB/AUS16_120/dir13/C5353

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test Sequence created on : 16/Aug/1999 16:42:44
 Test 5.3.5.3 Signal Reflection Immunity (payload loopback req)
 TEST RESULT : PASSED

TEST RESULTS SUMMARY

STEP	Partial	Result	Error count	Error free	NT clock freq.	IUT
					[Hz]	SYNC
			seconds			
1.a	passed		0	60	2048000	yes
2.a	passed		0	60	2048000	yes
3.a	passed		0	60	2048000	yes
4.a	passed		0	60	2048000	yes
1.b	passed		0	60	2048102.4	yes
2.b	passed		0	60	2048102.4	yes
3.b	passed		0	60	2048102.4	yes
4.b	passed		0	60	2048102.4	yes
1.c	passed		0	60	2047897.6	yes
2.c	passed		0	60	2047897.6	yes
3.c	passed		0	60	2047897.6	yes
4.c	passed		0	60	2047897.6	yes

step 1.a
 PARTIAL TEST RESULT : passed
 TEST CONDITIONS step 1.a
 Network Emulator frequency CLOCK : 2048000 MHz
 With cable a/b -10% output level NT
 Time start : 16/Aug/1999 17:00:57

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 60 s

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 FRAME 0
 CRC MULTI FRAME LOSS 0
 PATTERN 0
 REMOTE ALARM 0

ERRORS COUNT

BIT 0
 CODE 0
 FRAME 0
 CRC 0
 E_BIT 0

ERROR FREE SECONDS

BIT 60
 CODE 60
 FRAME 60



```
CRC                60
E_BIT              60
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop          : 16/Aug/1999 17:01:58
-----
```

```
step 2.a
PARTIAL TEST RESULT : passed
TEST CONDITIONS step 2.a
Network Emulator frequency CLOCK : 2048000 MHz
With cable b/a -10% output level NT
Time start         : 16/Aug/1999 17:02:09
```

```
I.U.T. SIGNAL ANALYSIS
TEST PERIOD        60 s
=====
ALARM SECONDS
POWER LOSS         0
SIGNAL LOSS        0
AIS                0
FRAME              0
CRC MULTI FRAME LOSS 0
PATTERN            0
REMOTE ALARM       0
=====
```

```
ERRORS COUNT
BIT                0
CODE               0
FRAME              0
CRC                0
E_BIT              0
=====
```

```
ERROR FREE SECONDS
BIT                60
CODE               60
FRAME              60
CRC                60
E_BIT              60
=====
```

```
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
x Time stop        : 16/Aug/1999 17:03:10
-----
```

```
step 3.a
PARTIAL TEST RESULT : passed
TEST CONDITIONS step 3.a
Network Emulator frequency CLOCK : 2048000 MHz
Without cable a/b +10% output level NT
Time start         : 16/Aug/1999 17:03:21
```

```
I.U.T. SIGNAL ANALYSIS
TEST PERIOD        60 s
=====
ALARM SECONDS
POWER LOSS         0
SIGNAL LOSS        0
AIS                0
```


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```

FRAME                0
CRC MULTI FRAME LOSS 0
PATTERN              0
REMOTE ALARM         0
=====
ERRORS COUNT
BIT                  0
CODE                 0
FRAME                0
CRC                  0
E_BIT                0
=====
ERROR FREE SECONDS
BIT                  60
CODE                 60
FRAME                60
CRC                  60
E_BIT                60
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop            : 16/Aug/1999 17:04:22
-----

step 4.a
PARTIAL TEST RESULT : passed
TEST CONDITIONS step 4.a
Network Emulator frequency CLOCK : 2048000 MHz
Without cable b/a +10% output level NT
Time start           : 16/Aug/1999 17:04:33
I.U.T. SIGNAL ANALYSIS
TEST PERIOD          60 s
=====
ALARM SECONDS
POWER LOSS           0
SIGNAL LOSS          0
AIS                  0
FRAME                0
CRC MULTI FRAME LOSS 0
PATTERN              0
REMOTE ALARM         0
=====
ERRORS COUNT
* BIT                0
CODE                 0
FRAME                0
CRC                  0
E_BIT                0
=====
ERROR FREE SECONDS
BIT                  60
CODE                 60
FRAME                60
CRC                  60
E_BIT                60
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====

```



Time stop : 16/Aug/1999 17:05:34

step 1.b

PARTIAL TEST RESULT : passed
 TEST CONDITIONS step 1.b
 Network Emulator frequency CLOCK : 2048102.4 MHz
 With cable a/b -10% output level NT
 Time start : 16/Aug/1999 17:06:05

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 60 s

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 FRAME 0
 CRC MULTI FRAME LOSS 0
 PATTERN 0
 REMOTE ALARM 0

ERRORS COUNT

BIT 0
 CODE 0
 FRAME 0
 CRC 0
 E_BIT 0

ERROR FREE SECONDS

BIT 60
 CODE 60
 FRAME 60
 CRC 60
 E_BIT 60

I.U.T. final STATUS ALARM

Normal Operational Frames

Time stop : 16/Aug/1999 17:07:05

step 2.b

PARTIAL TEST RESULT : passed
 TEST CONDITIONS step 2.b
 Network Emulator frequency CLOCK : 2048102.4 MHz
 With cable b/a -10% output level NT
 Time start : 16/Aug/1999 17:07:17

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 60 s

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 FRAME 0
 CRC MULTI FRAME LOSS 0
 PATTERN 0
 REMOTE ALARM 0

ERRORS COUNT



BIT 0
 CODE 0
 FRAME 0
 CRC 0
 E_BIT 0

=====

ERROR FREE SECONDS

BIT 60
 CODE 60
 FRAME 60
 CRC 60
 E_BIT 60

=====

I.U.T. final STATUS ALARM
 Normal Operational Frames

=====

Time stop : 16/Aug/1999 17:08:17

step 3.b

PARTIAL TEST RESULT : passed

TEST CONDITIONS step 3.b

Network Emulator frequency CLOCK : 2048102.4 MHz

Without cable a/b +10% output level NT

Time start : 16/Aug/1999 17:08:29

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 60 s

=====

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 FRAME 0
 CRC MULTI FRAME LOSS 0
 PATTERN 0
 REMOTE ALARM 0

=====

ERRORS COUNT

BIT 0
 CODE 0
 FRAME 0
 CRC 0
 E_BIT 0

=====

* ERROR FREE SECONDS

BIT 60
 CODE 60
 FRAME 60
 CRC 60
 E_BIT 60

=====

I.U.T. final STATUS ALARM
 Normal Operational Frames

=====

Time stop : 16/Aug/1999 17:09:29

step 4.b

PARTIAL TEST RESULT : passed

TEST CONDITIONS step 4.b

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Network Emulator frequency CLOCK : 2048102.4 MHz
Without cable b/a +10% output level NT
Time start : 16/Aug/1999 17:09:41

I.U.T. SIGNAL ANALYSIS
TEST PERIOD 60 s

ALARM SECONDS
POWER LOSS 0
SIGNAL LOSS 0
AIS 0
FRAME 0
CRC MULTI FRAME LOSS 0
PATTERN 0
REMOTE ALARM 0

ERRORS COUNT
BIT 0
CODE 0
FRAME 0
CRC 0
E_BIT 0

ERROR FREE SECONDS
BIT 60
CODE 60
FRAME 60
CRC 60
E_BIT 60

I.U.T. final STATUS ALARM
Normal Operational Frames

Time stop : 16/Aug/1999 17:10:41

step 1.c

PARTIAL TEST RESULT : passed
TEST CONDITIONS step 1.c

Network Emulator frequency CLOCK : 2047897.6 MHz
With cable a/b -10% output level NT
Time start : 16/Aug/1999 17:11:12

I.U.T. SIGNAL ANALYSIS
TEST PERIOD 60 s

ALARM SECONDS
POWER LOSS 0
SIGNAL LOSS 0
AIS 0
FRAME 0
CRC MULTI FRAME LOSS 0
PATTERN 0
REMOTE ALARM 0

ERRORS COUNT
BIT 0
CODE 0
FRAME 0
CRC 0
E_BIT 0



```

ERROR FREE SECONDS
BIT                60
CODE               60
FRAME              60
CRC                60
E_BIT              60
    
```

```

=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop          : 16/Aug/1999 17:12:13
    
```

```

-----
step 2.c
PARTIAL TEST RESULT : passed
TEST CONDITIONS     step 2.c
Network Emulator frequency CLOCK : 2047897.6 MHz
With cable b/a -10% output level NT
Time start         : 16/Aug/1999 17:12:24
    
```

```

I.U.T. SIGNAL ANALYSIS
TEST PERIOD        60 s
    
```

```

=====
ALARM SECONDS
POWER LOSS         0
SIGNAL LOSS        0
AIS                0
FRAME              0
CRC MULTI FRAME LOSS 0
PATTERN            0
REMOTE ALARM       0
    
```

```

=====
ERRORS COUNT
BIT                0
CODE               0
FRAME              0
CRC                0
E_BIT              0
    
```

```

=====
ERROR FREE SECONDS
BIT                60
CODE               60
FRAME              60
CRC                60
E_BIT              60
    
```

```

=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop          : 16/Aug/1999 17:13:25
    
```

```

-----
step 3.c
PARTIAL TEST RESULT : passed
TEST CONDITIONS     step 3.c
Network Emulator frequency CLOCK : 2047897.6 MHz
Without cable a/b +10% output level NT
Time start         : 16/Aug/1999 17:13:36
    
```

```

I.U.T. SIGNAL ANALYSIS
TEST PERIOD        60 s
    
```

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```

ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS         0
AIS                 0
FRAME               0
CRC MULTI FRAME LOSS 0
PATTERN             0
REMOTE ALARM        0
=====
ERRORS COUNT
BIT                 0
CODE                0
FRAME               0
CRC                 0
E_BIT               0
=====
ERROR FREE SECONDS
BIT                 60
CODE                60
FRAME               60
CRC                 60
E_BIT               60
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 16/Aug/1999 17:14:37
-----
-----
step 4.c
PARTIAL TEST RESULT : passed
TEST CONDITIONS     step 4.c
Network Emulator frequency CLOCK : 2047897.6 MHz
Without cable b/a +10% output level NT
Time start          : 16/Aug/1999 17:14:48
I.U.T. SIGNAL ANALYSIS
TEST PERIOD        60 a
=====
ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS         0
AIS                 0
FRAME               0
CRC MULTI FRAME LOSS 0
PATTERN             0
REMOTE ALARM        0
=====
ERRORS COUNT
BIT                 0
CODE                0
FRAME               0
CRC                 0
E_BIT               0
=====
ERROR FREE SECONDS
BIT                 60
CODE                60
FRAME               60
CRC                 60
E_BIT               60
    
```



=====

I.U.T. final STATUS ALARM

Normal Operational Frames

=====

Time stop : 16/Aug/1999 17:15:49

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Data retrieved from : ./TE/AUS16_120/dir13/C2821_6dB_Cable

I.U.T. PM4351 COMET PMC-Sierra Inc

Test : 5.3.7 Intrinsic Jitter (with and without 6dB cable) (payld lpbk?)

TEST EXECUTION CONDITIONS : 6db cable inserted Test Sequence created on : 16/Aug/1999 16:42:44

TEST RESULT : PASSED

Table with 18 columns: [Hz], [UI], and three pairs of (NOF, SYN), (Jitt, V), (Jitt, V). Rows represent different jitter measurement frequencies from 1 to 100000 Hz.

IUT's SIGNAL : SIGNAL Received from I.U.T. Jitt : Measured Jitter R : Measure range 10 UI
NOP : NORMAL OPERATION FRAMES V : Partial Verdict r : Measure range 1 UI
SYNC : I.U.T. synchronized to the Network X : Result Overage

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Data retrieved from : ./TB/AUS16_120/dir13/C2821_no_6dB_Cable

I.U.T. PM4351 COMET PMC-Sierra Inc

Test : 5.3.7 Intrinsic Jitter (with and without 6dB cable) (payload lpbk?)

TEST EXECUTION CONDITIONS : 6db cable not inserted Test Sequence created on : 16/Aug/1999 16:42:44

TEST RESULT : PASSED

		NT clock freq 2.048 MHz				NT clock freq 2.048 MHz				NT clock freq 2.048 MHz									
		nominal				plus 50 ppm				minus 50 ppm									
NT JITTER		IUT's		Measurement. filters		IUT's		Measurement. filters		IUT's		Measurement. Filters							
		measurement. limits		measurement. limits		measurement. limits		measurement. limits		measurement. limits		measurement. limits							
		signal		signal		signal		signal		signal		signal							
		20 Hz 18000 Hz		20 Hz 18000 Hz		20 Hz 18000 Hz		20 Hz 18000 Hz		20 Hz 18000 Hz		20 Hz 18000 Hz							
		1.5 UI 0.2 UI		1.5 UI 0.2 UI		1.5 UI 0.2 UI		1.5 UI 0.2 UI		1.5 UI 0.2 UI		1.5 UI 0.2 UI							
[Hz]	[UI]	NOF	SYN	Jitt	V	Jitt	V	NOF	SYN	Jitt	V	Jitt	V	NOF	SYN	Jitt	V	Jitt	V
1	0	yes	yes	0.015r	p	0.008r	p	yes	yes	0.016r	p	0.008r	p	yes	yes	0.018r	p	0.008r	p
2	0																		
3	0																		
6	0																		
10	0																		
20	0	yes	yes	0.014r	p	0.008r	p	yes	yes	0.015r	p	0.008r	p	yes	yes	0.017r	p	0.008r	p
30	0																		
100	0																		
300	0																		
1000	0																		
2000	0																		
2400	0	yes	yes	0.014r	p	0.008r	p	yes	yes	0.015r	p	0.008r	p	yes	yes	0.018r	p	0.008r	p
3600	0																		
6000	0																		
10000	0																		
18000	0	yes	yes	0.014r	p	0.008r	p	yes	yes	0.015r	p	0.008r	p	yes	yes	0.018r	p	0.008r	p
36000	0																		
60000	0																		
100000	0	yes	yes	0.014r	p	0.008r	p	yes	yes	0.015r	p	0.008r	p	yes	yes	0.018r	p	0.008r	p

IUT's SIGNAL : SIGNAL Received from I.U.T. Jitt : Measured Jitter R : Measure range 10 U
NOF : NORMAL OPERATION FRAMES V : Partial Verdict r : Measure range 1 UI
SYNC : I.U.T. synchronized to the Network X : Result Overrange

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Data retrieved from : ./TE/AUS16_120/dir13/C281_6dB_Cable

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test : 5.3.8 Tolerance to Jitter (with and without 6dB cable) (payld lpbk?)
 TEST EXECUTION CONDITIONS : 6db cable inserted
 Test Sequence created on : 16/Aug/1999 16:42:44
 TEST RESULT : PASSED

JITTER of the		I.U.T. OUTPUT SIGNAL							
NT EMULATOR		NT clock freq.		NT clock freq.		NT clock freq.			
		2.048 MHz		2.048 MHz		2.048 MHz			
		nominal		plus 50 ppm		minus 50 ppm			
Freq.	Amplit.								
[Hz]	[UI]	NOF	SYNC	NOF	SYNC	NOF	SYNC	NOF	SYNC
1	2.6	yes	yes	yes	yes	yes	yes	yes	yes
2	2.3								
3	2.1								
6	1.87								
10	1.7								
20	1.5	yes	yes	yes	yes	yes	yes	yes	yes
30	1.5								
100	1.5								
300	1.5								
1000	1.5								
2000	1.5								
2400	1.5	yes	yes	yes	yes	yes	yes	yes	yes
3600	1								
6000	0.6								
10000	0.36								
18000	0.2	yes	yes	yes	yes	yes	yes	yes	yes
36000	0.2								
60000	0.2								
100000	0.2	yes	yes	yes	yes	yes	yes	yes	yes

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Data retrieved from : ./TE/AUS16_120/dir13/C281_no_6dB_Cable

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test : 5.3.8 Tolerance to Jitter (with and without 6dB cable) (payld lpbk?)
 TEST EXECUTION CONDITIONS : 6db cable not inserted
 Test Sequence created on : 16/Aug/1999 16:42:44
 TEST RESULT : PASSED

JITTER of the		I.U.T. OUTPUT SIGNAL					
NT EMULATOR		NT clock freq.		NT clock freq.		NT clock freq.	
		2.048 MHz		2.048 MHz		2.048 MHz	
		nominal		plus 50 ppm		minus 50 ppm	
Freq.	Amplit.						
[Hz]	[UI]	NOF	SYNC	NOF	SYNC	NOF	SYNC
1	2.6	yes	yes	yes	yes	yes	yes
2	2.3						
3	2.1						
6	1.87						
10	1.7						
20	1.5	yes	yes	yes	yes	yes	yes
30	1.5						
100	1.5						
300	1.5						
1000	1.5						
2000	1.5						
2400	1.5	yes	yes	yes	yes	yes	yes
3600	1						
6000	0.6						
10000	0.36						
18000	0.2	yes	yes	yes	yes	yes	yes
36000	0.2						
60000	0.2						
100000	0.2	yes	yes	yes	yes	yes	yes

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Data retrieved from : ./TE/AUS16_120/dir13/C10

I.U.T. PM4351 COMBT PNC-Sierra Inc
 Test 5.10.4 Frame alignmentstep : 1
 PRA/E1 SEQUENCE GENERATOR A.04.00
 Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994

READY
 Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:22:32
 P.R.A.S.G. sequences :

A-1.1
 LOOP
 I.U.T. SIGNAL ANALYSIS
 TEST PERIOD 10 s
 =====

ALARM SECONDS
 POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 0
 =====

ERRORS COUNT
 CODE 0
 FRAME 0
 CRC 0
 E_bit 0
 =====

ERROR FREE SECONDS
 CODE 10
 FRAME 10
 CRC 10
 E_bit 10
 =====

I.U.T. final STATUS ALARM
 Normal Operational Frames
 =====
 Time stop : 16/Aug/1999 18:22:42

I.U.T. PM4351 COMBT PNC-Sierra Inc
 Test 5.10.4 Frame alignmentstep : 2
 PRA/E1 SEQUENCE GENERATOR A.04.00
 Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994

* READY
 Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:22:48
 P.R.A.S.G. sequences :

A-2.1
 A-2.2
 LOOP
 I.U.T. SIGNAL ANALYSIS
 TEST PERIOD 10 s
 =====

ALARM SECONDS
 POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 0

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```

=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               0
=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               10
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 16/Aug/1999 18:22:58
    
```

```

-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 3
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994
READY
Test Sequence created on : 16/Aug/1999 16:42:44
Time start              : 16/Aug/1999 18:23:05
P.R.A.S.G. sequences :
A-3.1
A-3.2
LOOP
    
```

```

I.U.T.  SIGNAL ANALYSIS
TEST PERIOD          10 s
    
```

```

=====
ALARM SECONDS
POWER LOSS           0
SIGNAL LOSS          0
AIS                  0
CRC MULTI FRAME LOSS 0
REMOTE ALARM         0
    
```

```

=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               0
    
```

```

* =====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               10
    
```

```

=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 16/Aug/1999 18:23:15
    
```

```

-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 4
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994
    
```



READY
 Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:23:23
 F.R.A.S.G. sequences :

A-4.1

A-4.2

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

=====

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 1

=====

ERRORS COUNT

CODE 0
 FRAME 0
 CRC 0
 E_bit 0

=====

ERROR FREE SECONDS

CODE 10
 FRAME 10
 CRC 10
 E_bit 10

=====

I.U.T. final STATUS ALARM

Normal Operational Frames

Time stop : 16/Aug/1999 18:23:33

I.U.T. PM4351 COMBT PMC-Sierra Inc

Test 5.10.4 Frame alignmentstep : 5

PRA/B1 SEQUENCE GENERATOR A.04.00

Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSBLT Italy 1994

READY

Test Sequence created on : 16/Aug/1999 16:42:44

Time start : 16/Aug/1999 18:23:40

F.R.A.S.G. sequences :

A-5.1

A-5.2

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

=====

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 10

=====

ERRORS COUNT

CODE 0
 FRAME 0
 CRC 0
 E_bit 0

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```

=====
ERROR FREE SECONDS
CODE                10
FRAME              10
CRC                10
E_bit              10
=====
    
```

```

I.U.T. final STATUS ALARM
REMOTE ALARM
=====
Time stop           : 16/Aug/1999 18:23:51
=====
    
```

```

-----
I.U.T.  PM4351 COMET      PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 6
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994
READY
    
```

```

Test Sequence created on : 16/Aug/1999 16:42:44
Time start               : 16/Aug/1999 18:23:58
P.R.A.S.G. sequences :
    
```

```

A-6.1
A-6.2
    
```

LOOP

```

I.U.T.  SIGNAL ANALYSIS
TEST PERIOD          10 s
=====
    
```

```

ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS        0
AIS                0
CRC MULTI FRAME LOSS 0
REMOTE ALARM       10
=====
    
```

```

ERRORS COUNT
CODE                0
FRAME              0
CRC                0
E_bit              0
=====
    
```

```

ERROR FREE SECONDS
CODE                10
FRAME              10
CRC                10
E_bit              10
=====
    
```

```

*
I.U.T. final STATUS ALARM
REMOTE ALARM
=====
Time stop           : 16/Aug/1999 18:24:08
=====
    
```

```

-----
I.U.T.  PM4351 COMET      PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 7
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSBLT Italy 1994
READY
    
```

```

Test Sequence created on : 16/Aug/1999 16:42:44
Time start               : 16/Aug/1999 18:24:16
P.R.A.S.G. sequences :
    
```

```

A-7.1
LOOP
    
```

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I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s
 =====

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 1

=====

ERRORS COUNT

CODE 0
 FRAME 0
 CRC 0
 E_bit 0

=====

ERROR FREE SECONDS

CODE 10
 FRAME 10
 CRC 10
 E_bit 10

=====

I.U.T. final STATUS ALARM

Normal Operational Frames

=====

Time stop : 16/Aug/1999 18:24:26

I.U.T. PW4351 COMET PMC-Sierra Inc

Test 5.10.4 Frame alignmentstep : 8

PRA/B1 SEQUENCE GENERATOR A.04.00

Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994

READY

Test Sequence created on : 16/Aug/1999 16:42:44

Time start : 16/Aug/1999 18:24:33

P.R.A.S.G. sequences :

A-8.1

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s
 =====

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 * CRC MULTI FRAME LOSS 0
 REMOTE ALARM 0

=====

ERRORS COUNT

CODE 0
 FRAME 0
 CRC 0
 E_bit 0

=====

ERROR FREE SECONDS

CODE 10
 FRAME 10
 CRC 10
 E_bit 10

=====

I.U.T. final STATUS ALARM



Normal Operational Frames

Time stop : 16/Aug/1999 18:24:43

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test 5.10.4 Frame alignmentstep : 9
 PRA/E1 SEQUENCE GENERATOR A.04.00
 Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994

READY
 Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:24:51

P.R.A.S.G. sequences :

A-9.1

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 0

ERRORS COUNT

CODE 0
 FRAME 0
 CRC 0
 E_bit 0

ERROR FREE SECONDS

CODE 10
 FRAME 10
 CRC 10
 E_bit 10

I.U.T. final STATUS ALARM

Normal Operational Frames

Time stop : 16/Aug/1999 18:25:01

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test 5.10.4 Frame alignmentstep : 10
 PRA/E1 SEQUENCE GENERATOR A.04.00
 Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994

READY

Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:25:08

P.R.A.S.G. sequences :

A-10.1

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0
 SIGNAL LOSS 0
 AIS 0
 CRC MULTI FRAME LOSS 0
 REMOTE ALARM 10



```

=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               0
=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               10
=====
I.U.T. final STATUS ALARM
REMOTE ALARM
=====
Time stop           : 16/Aug/1999 18:25:19
    
```

```

-----
I.U.T.  PM4351 COMET      PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 11
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994
READY
Test Sequence created on : 16/Aug/1999 16:42:44
Time start                : 16/Aug/1999 18:25:26
    
```

```

P.R.A.S.G. sequences :
A-11.1
LOOP
I.U.T.  SIGNAL ANALYSIS
TEST PERIOD           10 s
    
```

```

=====
ALARM SECONDS
POWER LOSS            0
SIGNAL LOSS           0
AIS                   0
CRC MULTI FRAME LOSS 0
REMOTE ALARM          1
    
```

```

=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               0
    
```

```

*
=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               10
    
```

```

=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 16/Aug/1999 18:25:36
    
```

```

-----
I.U.T.  PM4351 COMET      PMC-Sierra Inc
Test 5.10.4 Frame alignmentstep : 12
PRA/E1 SEQUENCE GENERATOR A.04.00
Copyright Hewlett-Packard Canada Ltd. 1992-95 & CSELT Italy 1994
READY
    
```



Test Sequence created on : 16/Aug/1999 16:42:44
 Time start : 16/Aug/1999 18:25:44

P.R.A.S.G. sequences :

A-12.1

A-12.2

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AIS 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 0

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 0

ERROR FREE SECONDS

CODE 10

FRAME 10

CRC 10

E_bit 10

I.U.T. final STATUS ALARM

Normal Operational Frames

Time stop : 16/Aug/1999 18:25:54

I.U.T. PM4351 COMBT PMC-Sierra Inc

Test 5.10.4 Frame alignmentstep : 13

PRA/E1 SEQUENCE GENERATOR A.04.00

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READY

Test Sequence created on : 16/Aug/1999 16:42:44

Time start : 16/Aug/1999 18:26:01

P.R.A.S.G. sequences :

A-13.1

A-13.2

BND

* I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AIS 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 1

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 0



ERROR FREE SECONDS

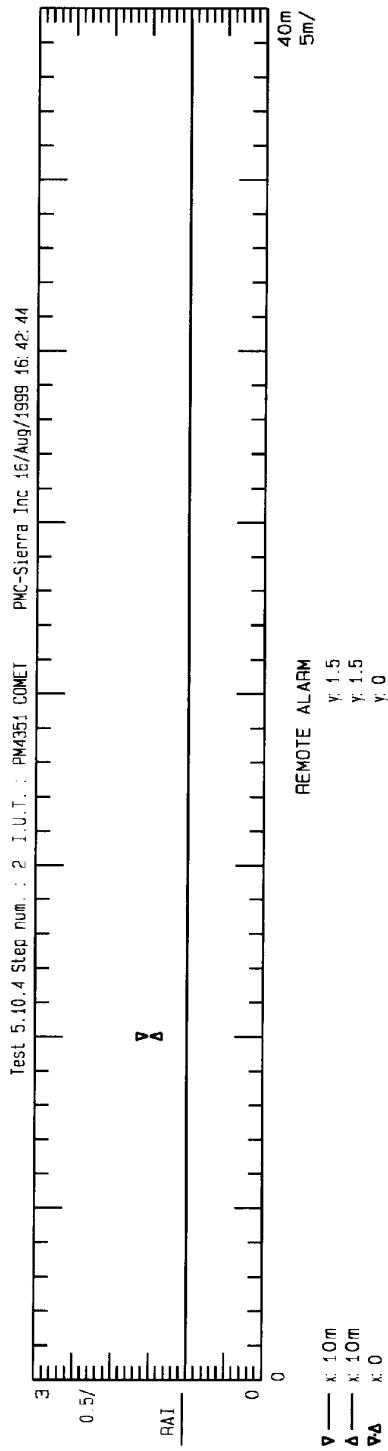
CODE	10
FRAME	10
CRC	10
E_bit	10

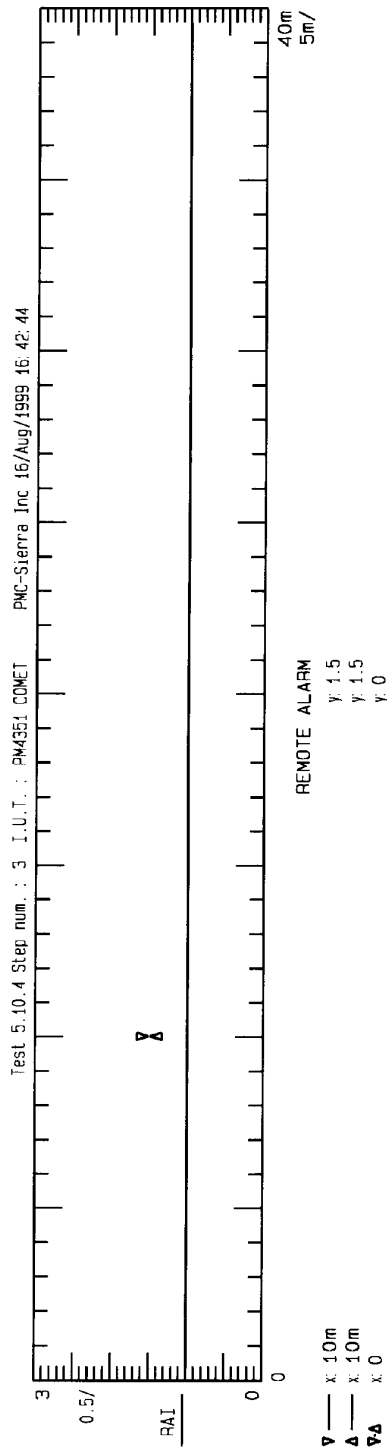
=====
I.U.T. final STATUS ALARM

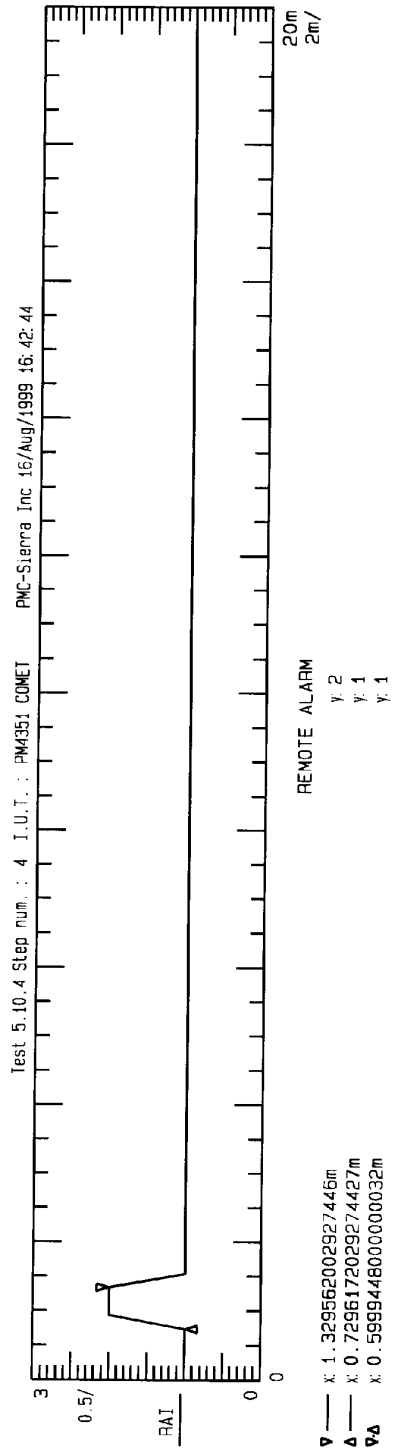
Normal Operational Frames

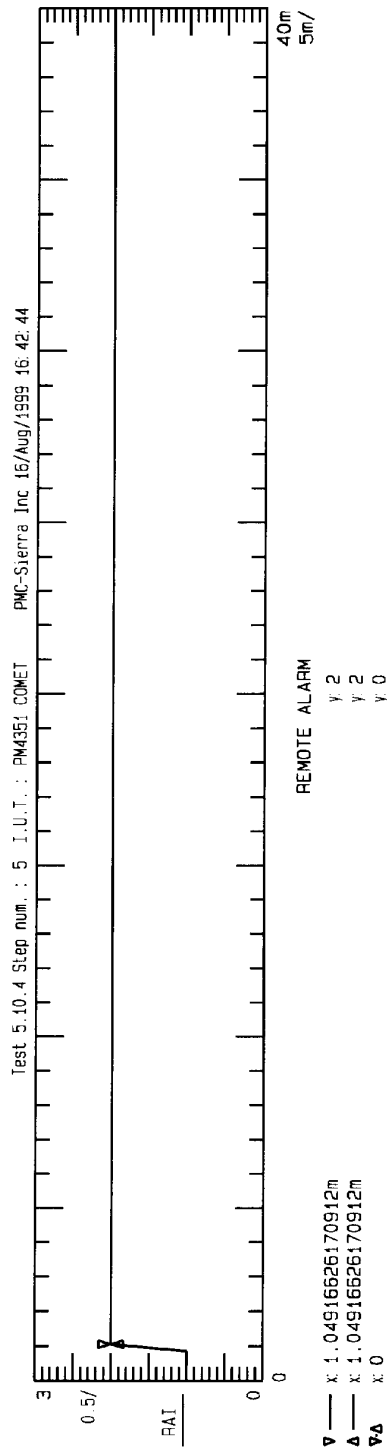
=====
Time stop : 16/Aug/1999 18:26:12

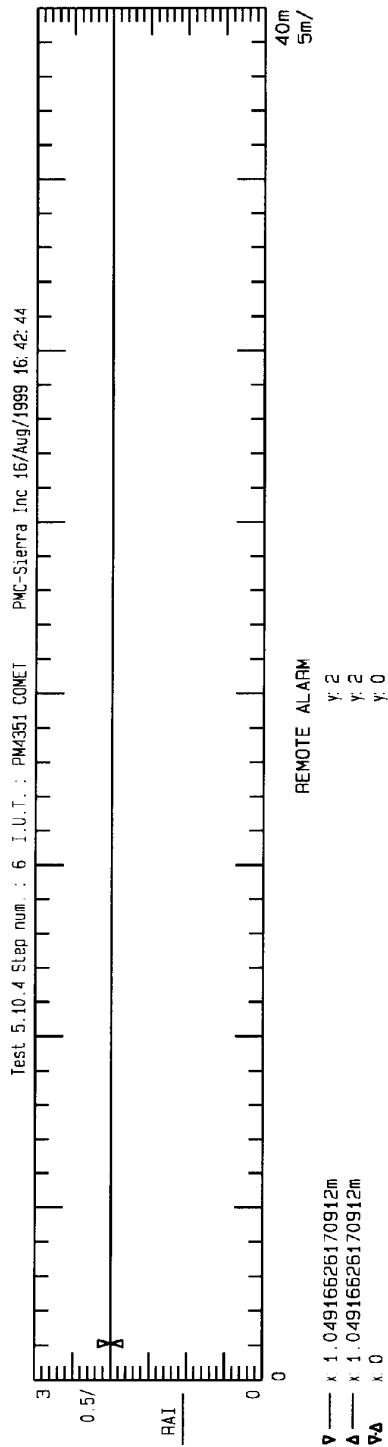
⊙

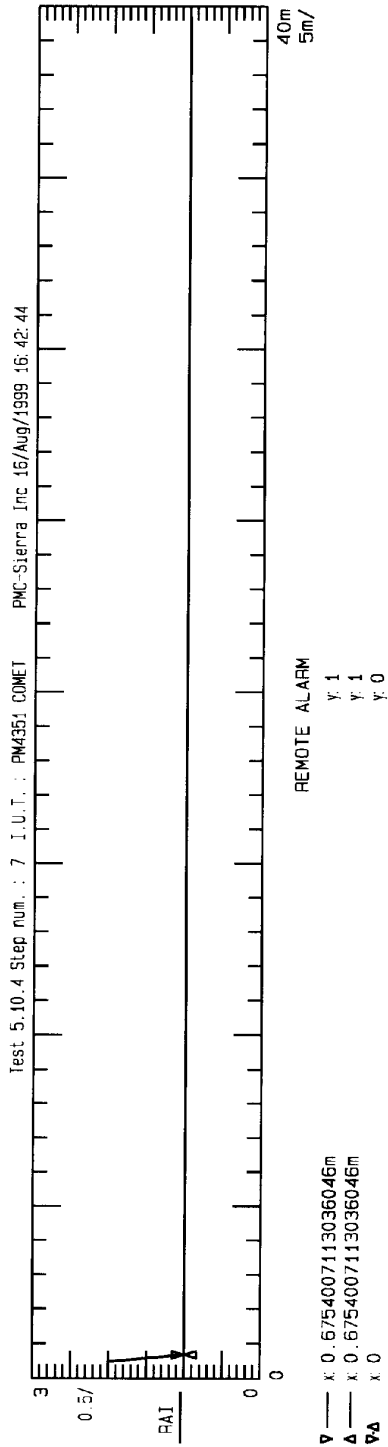






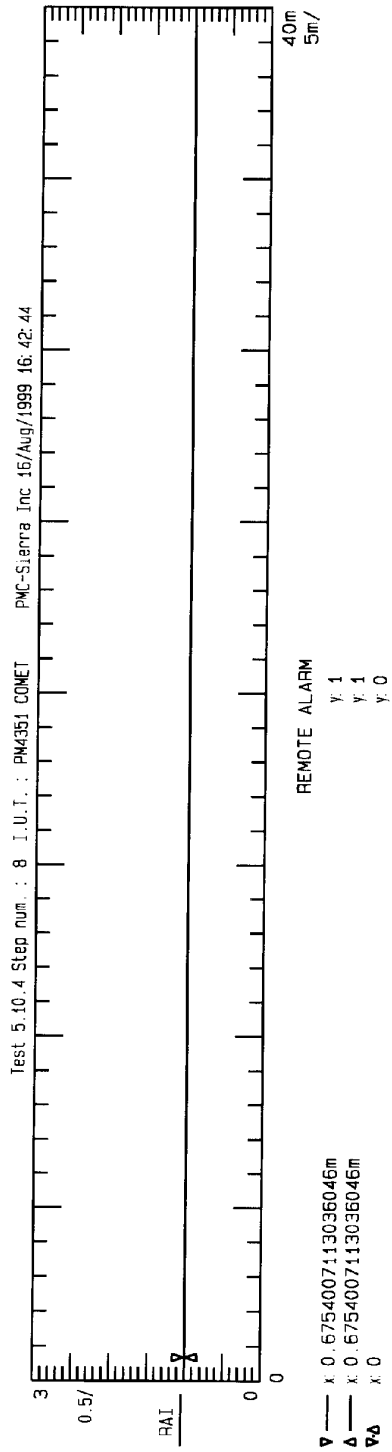


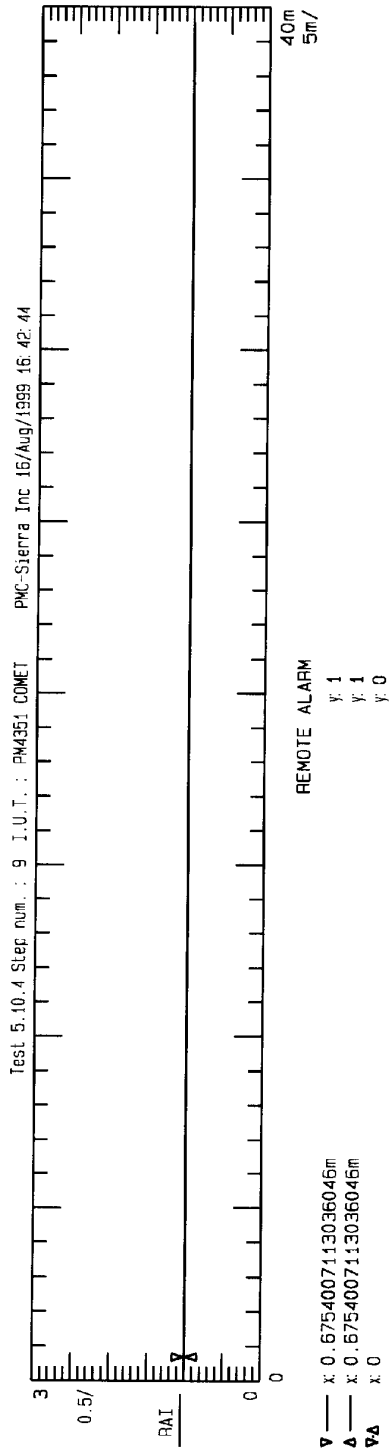


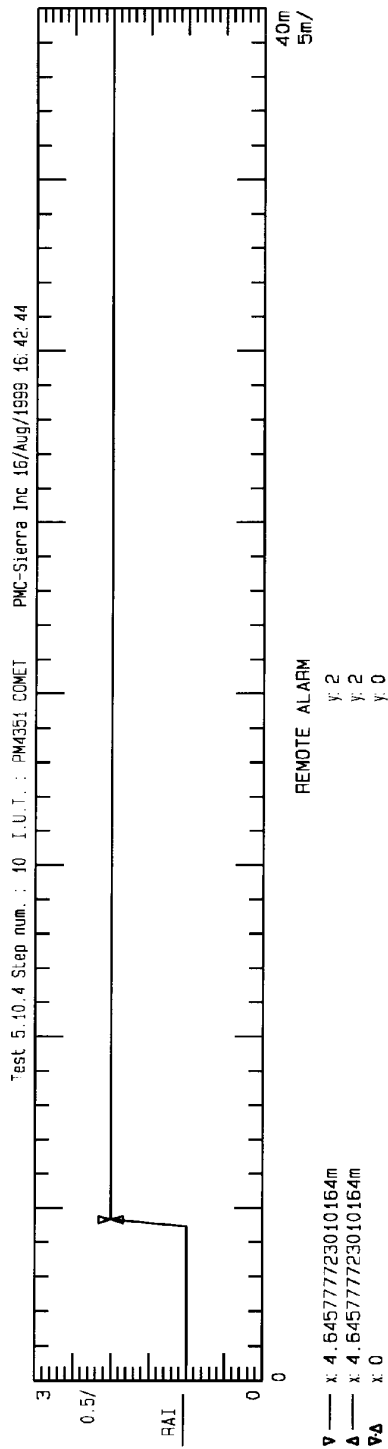


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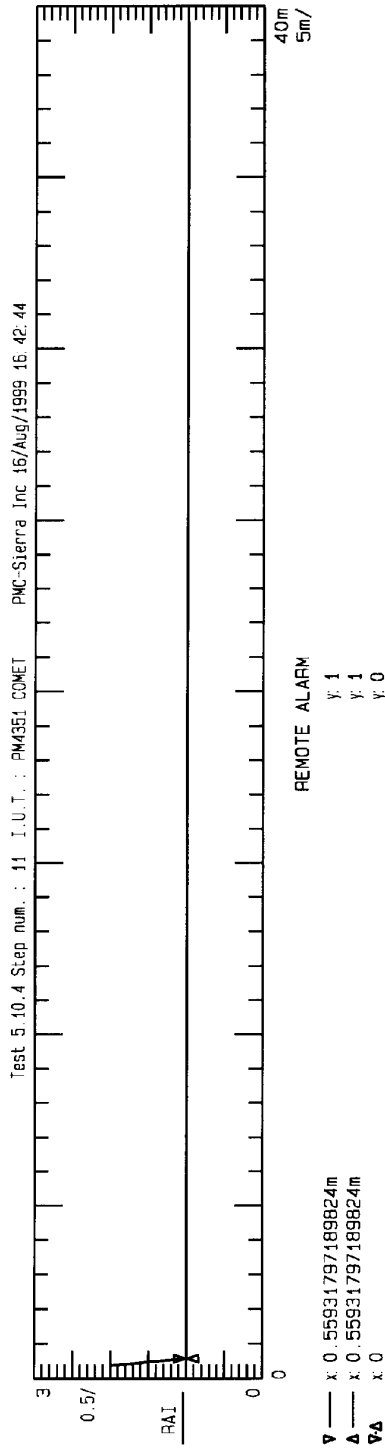


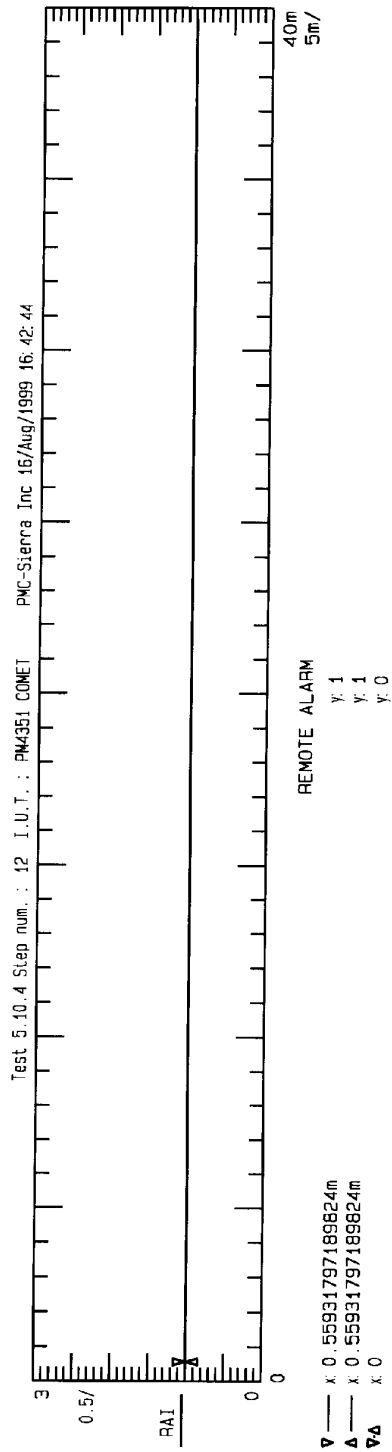


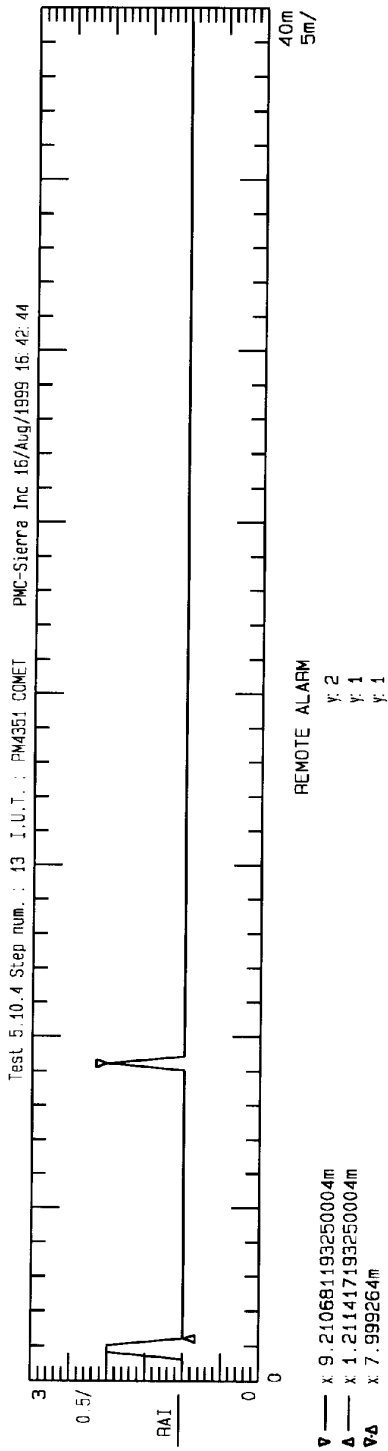


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Data retrieved from : ./TE/AUS16_120/dir18/C109

I.U.T. PM4351 COMET PMC-Sierra Inc

Test : 5.10.5 CE to Network Alarm Bit

Test Sequence created on : 17/Aug/1999 13:54:46

TEST RESULT : PASSED

Signal	ALARMS					ERRORS count					ERROR FREE SECONDS				
from	SIG	AIS	RAI	FML	CRC	BIT	CODE	FRAME	CRC	E_bit	BIT	CODE	FRAME	CRC	E_bit
LOS	no	no	YBS	no	no	0	0	0	0	0	0	5	5	5	5
AIS	no	no	YBS	no	no	0	0	0	0	0	0	5	5	5	5
OOF	no	no	YBS	no	no	0	0	0	0	0	0	5	5	5	5
CRC	no	no	YBS	no	no	0	0	0	0	9984	0	12	12	12	0
NOF	no	no	no	no	no	0	0	0	0	0	0	12	12	12	12

⊛



Data retrieved from : ./TE/AUS16_120/dir13/C101

I.U.T. PM4351 COMET PMC-Sierra Inc
Test : 5.10.6 National Information Bits (SA4-8)
Test Sequence created on : 16/Aug/1999 16:42:44
TEST RESULT : PASSED
NFAS1=01011111
NFAS3=01011111
NFAS5=11011111
NFAS7=01011111
NFAS9=11011111
NFAS11=11011111
NFAS13=11011111
NFAS15=11011111
®



Data retrieved from : ./TB/AUS16_120/dir18/C105

I.U.T. PM4351 COMBT PMC-Sierra Inc
 Test : 5.10.7 CRC processing step n. : 1
 Test Sequence created on : 17/Aug/1999 13:54:46
 Time start : 17/Aug/1999 13:59:16
 P.R.A.S.G. sequences :

C-1.1

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AI5 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 0

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 0

ERROR FREE SECONDS

CODE 10

FRAME 10

CRC 10

E_bit 10

I.U.T. final STATUS ALARM

Normal Operational Frames

Time stop : 17/Aug/1999 13:59:27

I.U.T. PM4351 COMBT PMC-Sierra Inc

Test : 5.10.7 CRC processing step n. : 2

Test Sequence created on : 17/Aug/1999 13:54:46

Time start : 17/Aug/1999 13:59:32

P.R.A.S.G. sequences :

C.2.1

C.2.2

* LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AI5 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 0

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 1



```

=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               9
=====
    
```

```

I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 17/Aug/1999 13:59:43
=====
    
```

```

-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test   : 5.10.7  CRC processing step n. : 3
Test Sequence created on : 17/Aug/1999 13:54:46
Time start           : 17/Aug/1999 14:00:17
P.R.A.S.G. sequences :
C-3.0
C-3.1
C-3.2
    
```

```

LOOP
I.U.T.  SIGNAL ANALYSIS
TEST PERIOD           10 s
=====
    
```

```

ALARM SECONDS
POWER LOSS            0
SIGNAL LOSS           0
AIS                   0
CRC MULTI FRAME LOSS 0
REMOTE ALARM          0
=====
    
```

```

ERRORS COUNT
CODE                  0
FRAME                 0
CRC                   0
E_bit                 2
=====
    
```

```

=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               9
=====
    
```

```

I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 17/Aug/1999 14:00:28
=====
    
```

```

-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test   : 5.10.7  CRC processing step n. : 4
Test Sequence created on : 17/Aug/1999 13:54:46
Time start           : 17/Aug/1999 14:00:54
P.R.A.S.G. sequences :
    
```

```

C-4.1
C-4.2
C-4.3
C-4.4
LOOP
I.U.T.  SIGNAL ANALYSIS
TEST PERIOD           10 s
    
```



```

=====
ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS         0
AIS                 0
CRC MULTI FRAME LOSS 0
REMOTE ALARM        0
=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               1828
=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               7
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop           : 17/Aug/1999 14:01:05
-----
I.U.T.  PW4351 COMET   PMC-Sierra Inc
Test   : 5.10.7  CRC processing step n. : 5
Test Sequence created on : 17/Aug/1999 13:54:46
Time start           : 17/Aug/1999 14:01:24
P.R.A.S.G. sequences :
C-5.0
C-5.1.1
C-5.1.2
C-5.2
C-5.3.2
C-5.4
LOOP
I.U.T.  SIGNAL ANALYSIS
TEST PERIOD         10 s
=====
ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS         0
AIS                 0
* CRC MULTI FRAME LOSS 0
REMOTE ALARM        1
=====
ERRORS COUNT
CODE                0
FRAME               0
CRC                 0
E_bit               1825
=====
ERROR FREE SECONDS
CODE                10
FRAME               10
CRC                 10
E_bit               7
=====
I.U.T. final STATUS ALARM
    
```



Normal Operational Frames

Time stop : 17/Aug/1999 14:01:35

I.U.T. PM4351 COMBT PNC-Sierra Inc

Test : 5.10.7 CRC processing step n. : 6

Test Sequence created on : 17/Aug/1999 13:54:46

Time start : 17/Aug/1999 14:01:54

P.R.A.S.G. sequences :

C-6.1

BND

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AIS 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 10

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 0

ERROR FREE SECONDS

CODE 10

FRAME 10

CRC 10

E_bit 10

I.U.T. final STATUS ALARM

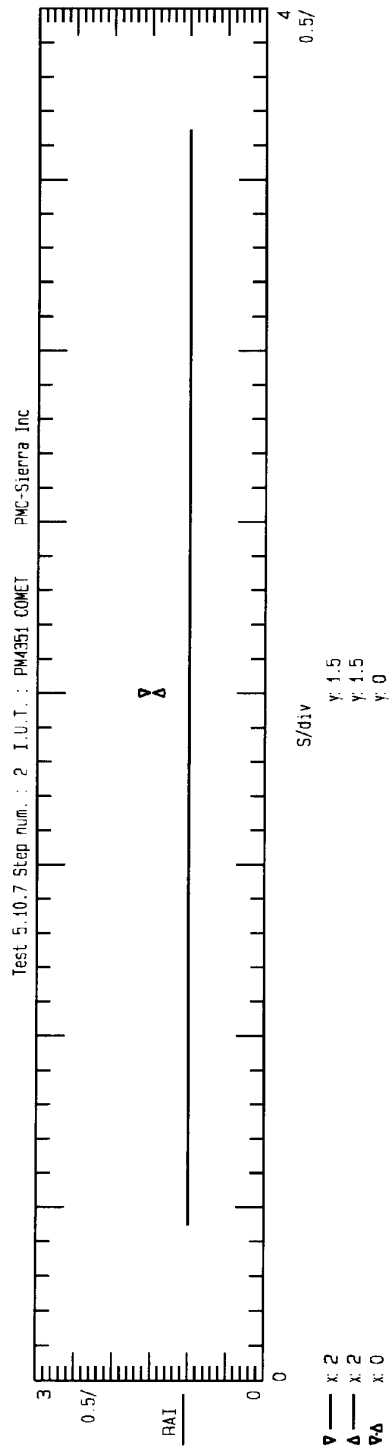
REMOTE ALARM

Time stop : 17/Aug/1999 14:02:05

@

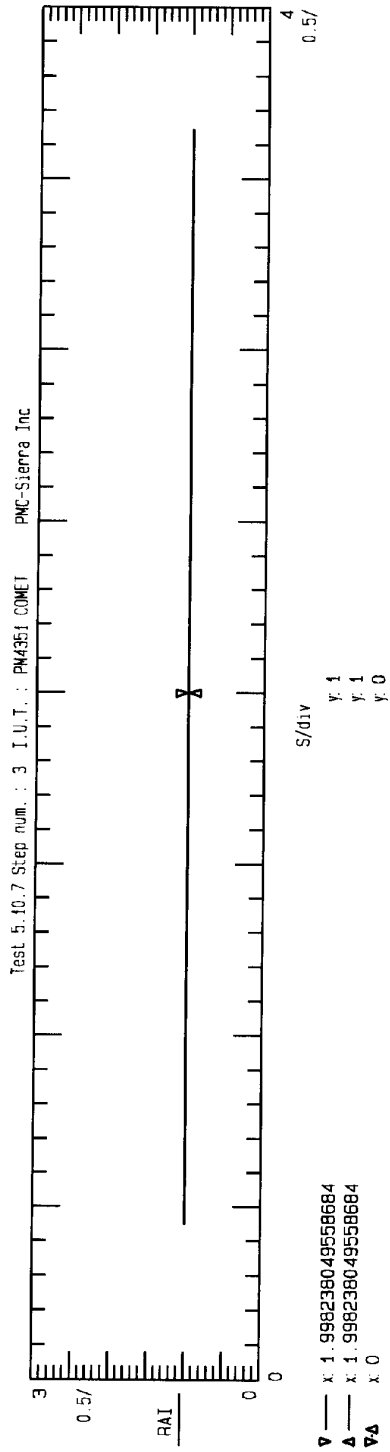
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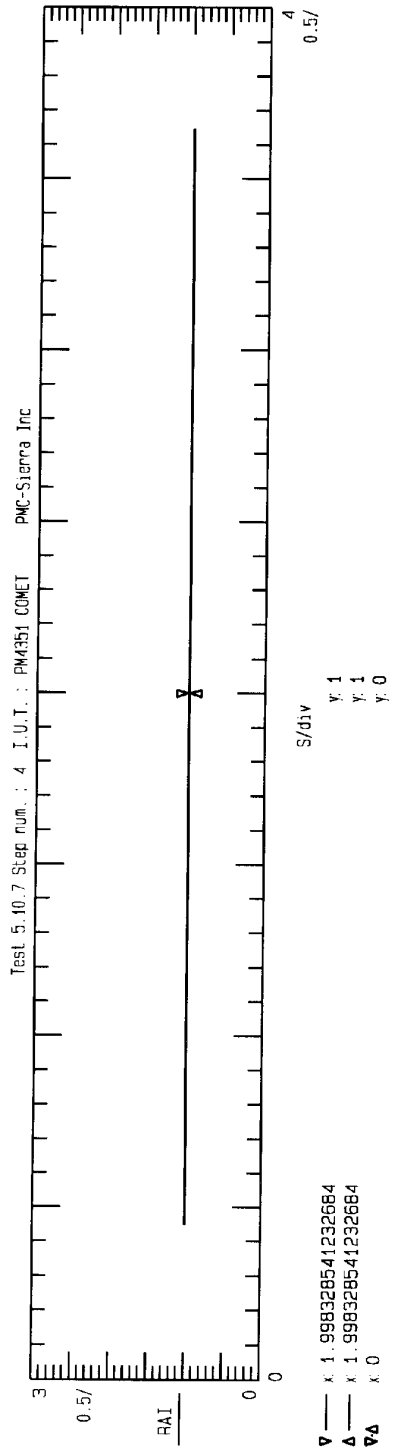
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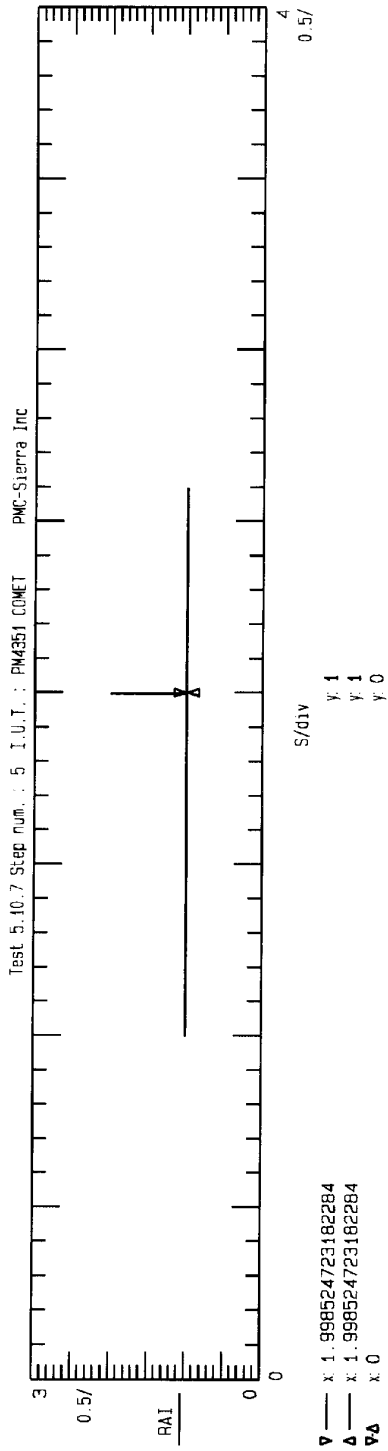
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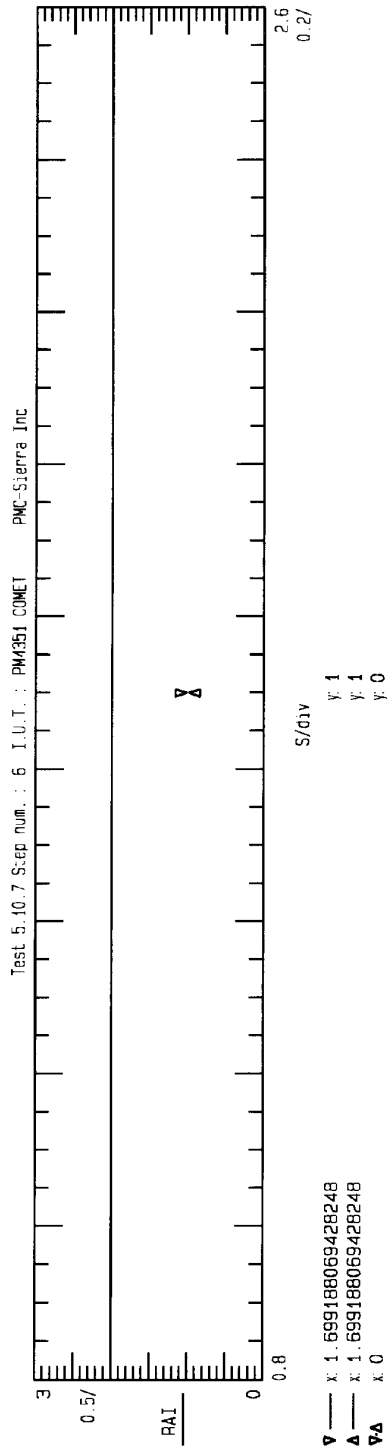


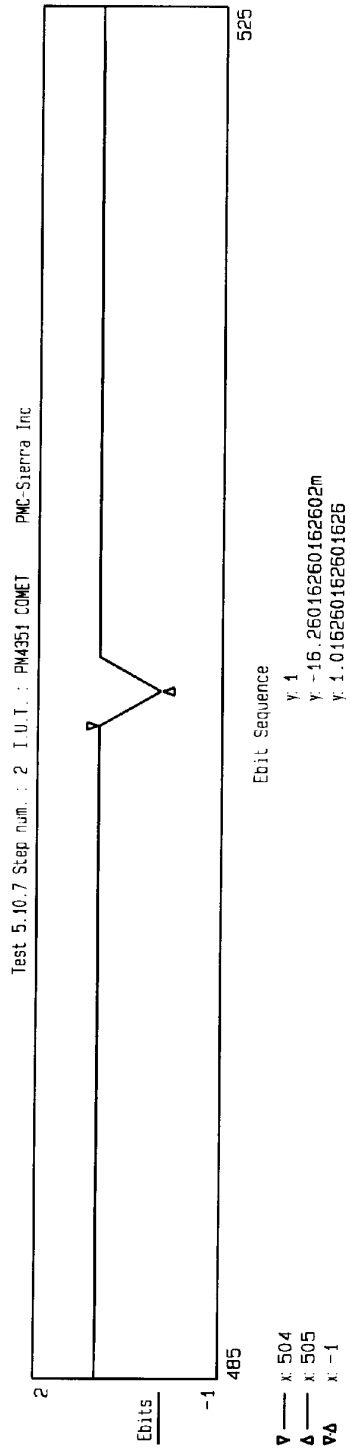


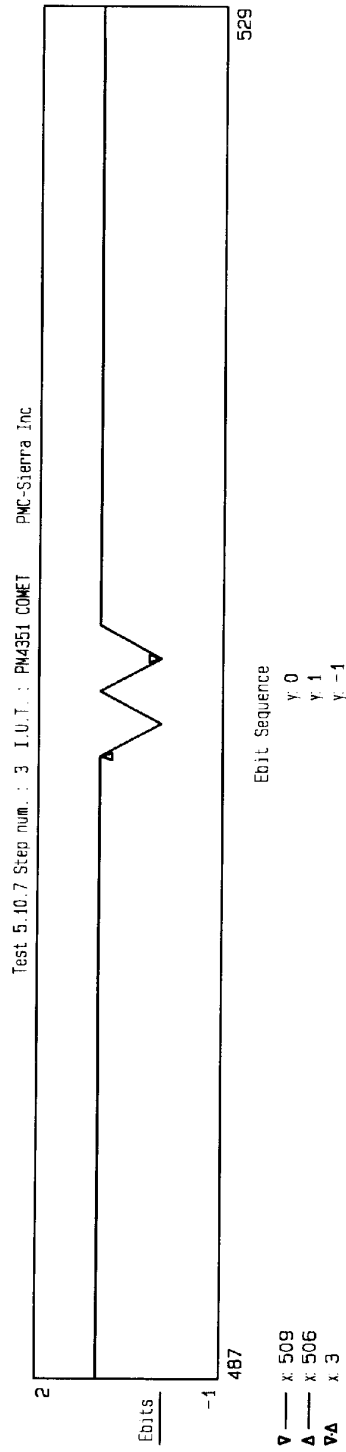
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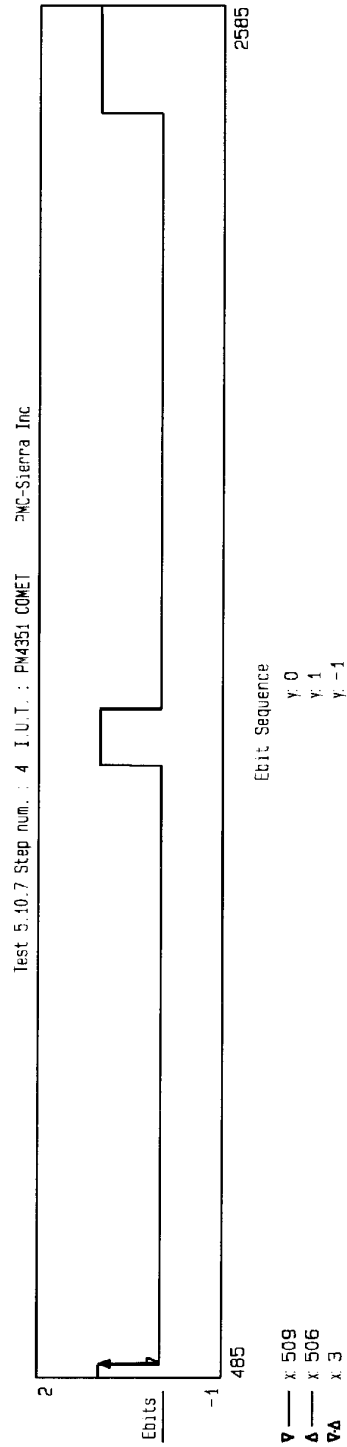
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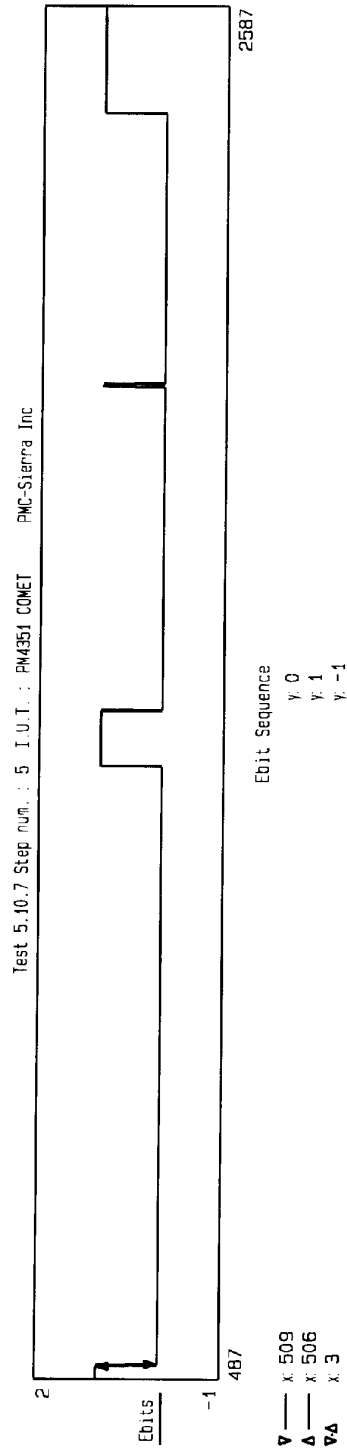












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Test 5.10.7 Step num.: 6 I.U.T.: PM4351 COMET PMC-Sierra Inc

2	v	587
-1	v	487

Ebit Sequence

v — x: 509
 A — x: 506
 VA — x: 3

Ebit Sequence
 y: 0
 y: 1
 y: -1



Data retrieved from : ./TB/AUS16_120/dir18/C107d

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test : 5.10.9 CRC multiframe alignment (D sequence) step n. : 1
 Test Sequence created on : 17/Aug/1999 13:54:46
 Time start : 17/Aug/1999 14:03:04
 P.R.A.S.G. sequences :

D-1.1

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

=====

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AMS 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 0

=====

ERRORS COUNT

CODE 0

FRAME 0

CRC 0

E_bit 0

=====

ERROR FREE SECONDS

CODE 10

FRAME 10

CRC 10

E_bit 10

=====

I.U.T. final STATUS ALARM

Normal Operational Frames

=====

Time stop : 17/Aug/1999 14:03:15

I.U.T. PM4351 COMET PMC-Sierra Inc
 Test : 5.10.9 CRC multiframe alignment (D sequence) step n. : 2
 Test Sequence created on : 17/Aug/1999 13:54:46
 Time start : 17/Aug/1999 14:03:20
 P.R.A.S.G. sequences :

D-2.1

D-2.2

* D-2.3

D-2.4

D-2.5

D-2.6

D-2.7

LOOP

I.U.T. SIGNAL ANALYSIS

TEST PERIOD 10 s

=====

ALARM SECONDS

POWER LOSS 0

SIGNAL LOSS 0

AMS 0

CRC MULTI FRAME LOSS 0

REMOTE ALARM 1

=====

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 Tel. +1 (651) 639-0775 Fax. +1 (651) 639-0873

ACA Technical Standard
 TS-016



```

ERRORS COUNT
CODE          0
FRAME         0
CRC           0
E_bit        0
=====
ERROR FREE SECONDS
CODE          10
FRAME         10
CRC           10
E_bit        10
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop          : 17/Aug/1999 14:03:31
-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test   : 5.10.9 CRC multiframe alignment (D sequence) step n. : 3
Test Sequence created on : 17/Aug/1999 13:54:46
Time start          : 17/Aug/1999 14:03:38
P.R.A.S.G. sequences :
D-3.1
D-3.2
LOOP
I.U.T.  SIGNAL ANALYSIS
TEST PERIOD          10 s
=====
ALARM SECONDS
POWER LOSS          0
SIGNAL LOSS         0
AIS                 0
CRC MULTI FRAME LOSS 0
REMOTE ALARM        10
=====
ERRORS COUNT
CODE          0
FRAME         0
CRC           0
E_bit        0
=====
ERROR FREE SECONDS
CODE          10
FRAME         10
* CRC         10
E_bit        10
=====
I.U.T. final STATUS ALARM
REMOTE ALARM
=====
Time stop          : 17/Aug/1999 14:03:49
-----
I.U.T.  PM4351 COMET   PMC-Sierra Inc
Test   : 5.10.9 CRC multiframe alignment (D sequence) step n. : 4
Test Sequence created on : 17/Aug/1999 13:54:46
Time start          : 17/Aug/1999 14:03:56
P.R.A.S.G. sequences :
D-4.1
D-4.2
D-4.3
    
```



```

D-4.4
D-4.5
END
I.U.T. SIGNAL ANALYSIS
TEST PERIOD          10 s
=====
ALARM SECONDS
POWER LOSS           0
SIGNAL LOSS          0
AIS                  0
CRC MULTI FRAME LOSS 0
REMOTE ALARM         1
=====
ERRORS COUNT
CODE                 0
FRAME                0
CRC                  0
E_bit                0
=====
ERROR FREE SECONDS
CODE                 10
FRAME                10
CRC                  10
E_bit                10
=====
I.U.T. final STATUS ALARM
Normal Operational Frames
=====
Time stop            : 17/Aug/1999 14:04:07
-----
@
    
```

