

S11 FORWARD REFLECTION
CHN1

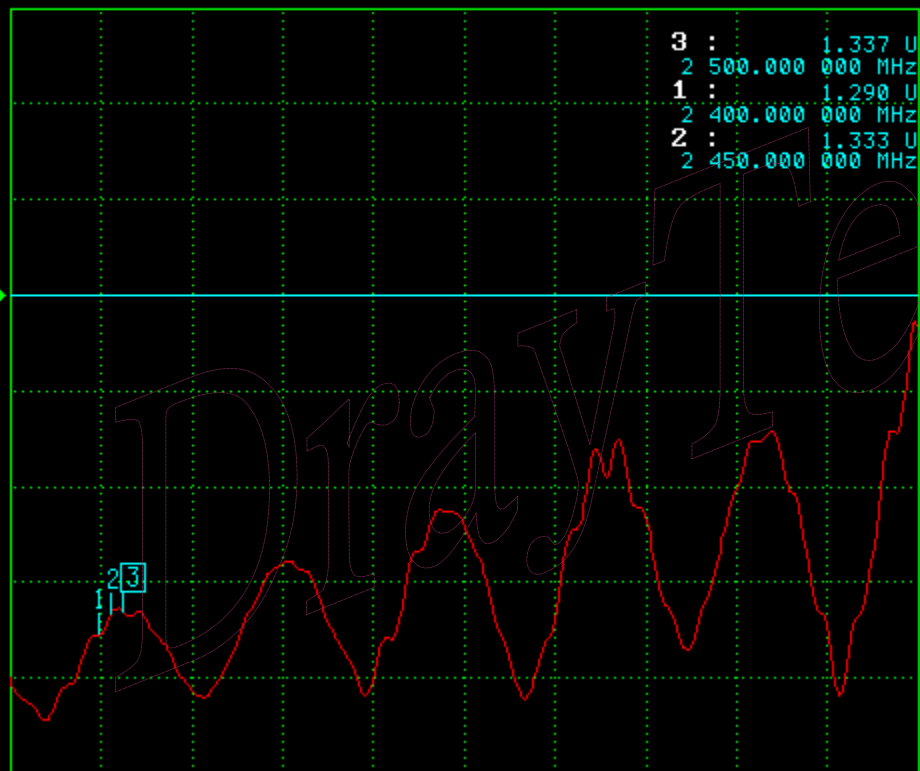
TRANSMISSION/REFLECTION

CH 1 - S11
REFERENCE PLANE
0.0000 mm

SWR

REF=2.000 U

200.000 mU/DIV



3 : 1.337 U
2 500.000 000 MHz
1 : 1.290 U
2 400.000 000 MHz
2 : 1.333 U
2 450.000 000 MHz

1: 2.400000000 GHz
1.290 U

2: 2.450000000 GHz
1.333 U

3: 2.500000000 GHz
1.337 U

4: OFF

MARKER TO PEAK

MORE

2 000.000 000 MHz

6 000.000 000 MHz

亞驪企業股份有限公司

Salt-Spray Test Report

測試日期: 2004/9/20

Module number: 120700001400E

Test equipment: TMJ 9701- 755305

Test ambience: 23±5

Humidity: 60±15%

EUT's Model and quantity:

1. Part number:
2. Quantity: 10 pcs

Test condition: Non-operation

Test Method: Refer MIL-STD-810E Method 509.3

Test chamber temperature: 35± 1

Salt concentration: 5%± 1%

Salt solution Ph value: 6.5 to 7.2

Salt solution gravity: 1.035

Salt deposit rate: 0.5~3mls/80cm²/hrs

Duration of exposure: total 72 hrs

Salt-Spray Test Report

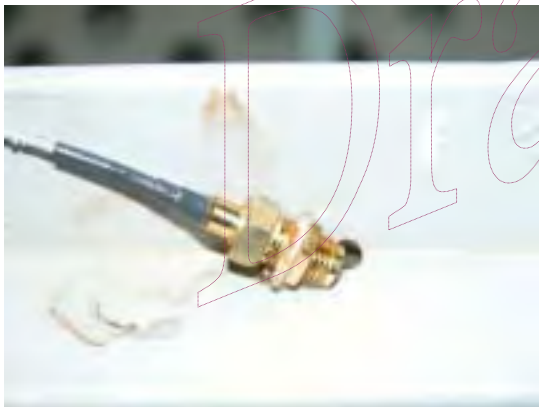
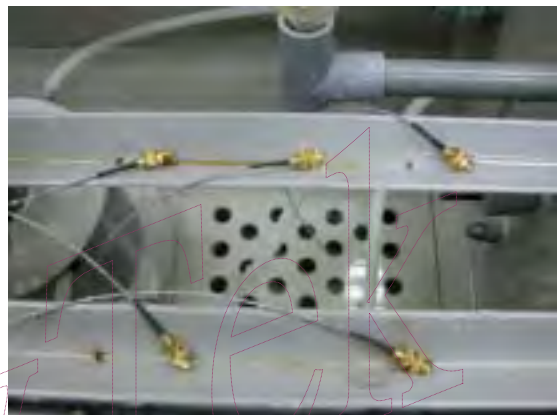
Test Results:

1. Visual inspection as normal.
2. Function test as normal during the test

Salt Spray Tester



Test Before Appearance



亞驪電子零件禁用物質化驗總表

零件類別：Cable

料號： 120700001400E

單位：ppm

	Pb	Cd	Hg	Cr6+	PBB	PBDE	PCB	PCN	PCP	氯化 石蠟	鹵素	石棉	偶氮	ODS	甲醛	PVC	有機 錫	CFC
CABLE (KURABE)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.		N.D.		N.D.	N.D.		N.D.	N.D.	N.D.	
CABLE (SW)	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.												
IPEX	N.D.	N.D.	N.D.	N.D.														
RF CONNECTOR	24245.9	54																

TEST REPORT

APPLICANT

Kurabe Industrial Co., Ltd.
4830 Takatsuka-Cho Hamamatsu-Shi
Shizuoka-Ken, Japan

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :

Item name : FWS5005 / FWS5022 - Dielectric Core, Jacket

Date sample received : Jul. 21, 2004

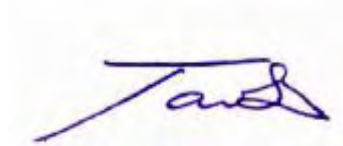
Date test started : Jul. 22, 2004

TEST CONDUCTED

As requested by the applicant, for details please refer to attached pages.

Remark : Results were transferred from report No. C411133 dated Jul. 28, 2004.

Prepared and checked by :
For Intertek Testing Services
Taiwan Limited



Jacob Lin
General Manager



This report shall not be
reproduced except in full,
without the written approval
of the laboratory.

Intertek Testing Services Taiwan Ltd.

14F, 27, Chung Shan North Road, Sec. 3, Taipei, Taiwan, R.O.C.

全國公證檢驗股份有限公司

台北市中山北路三段 27 號 14 樓

Tel : (+886-2) 2592-6033 · 2597-9955 Fax : (+886-2) 2593-6566

TEST CONDUCTED

(A) Test result summary :

<u>Testing item</u>	<u>Result (ppm)</u>
	<u>Submitted samples</u>
Cadmium (Cd) content / 鎘含量	ND
Lead (Pb) content / 鉛含量	ND
Mercury (Hg) content / 汞含量	ND
Chromium VI (Cr ⁶⁺) content / 六價鉻含量	ND
PBBs/PBDEs / 多溴聯苯/溴聯苯醚	ND
Polychlorinated biphenyls (PCBs) / 多氯聯苯	ND
Polychlorinated naphthalenes (PCNs) / 多氯化萘	ND
Chlorinated paraffins / 氯化石蠟 (C10~C13)	ND
Formaldehyde / 甲醛	ND
Polyvinyl chloride (PVC) / 聚氯乙烯和聚氯乙烯混合物	ND
Organic tin compounds (Tributyl tin compounds, triphenyl tin compounds) / 有機錫化合物 (三丁基錫化合物, 三苯基錫化合物)	ND
Asbestos / 石棉	ND
Azo compounds / 偶氮化合物	ND

Remarks : ppm = Parts per million
ND = Not detected

TEST CONDUCTED

(B) Test method :

Testing item	Testing method	Reporting limit
Cadmium (Cd) content 鎘含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Lead (Pb) content 鉛含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Mercury (Hg) content 汞含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Chromium VI (Cr ⁶⁺) content 六價鉻含量	With reference to USEPA 3060A & 7196A, by alkaline digestion and determined by UV-Vis	1 ppm
PBBs/PBDEs 多溴聯苯/溴聯苯醚	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	10 ppm
Polychlorinated biphenyls (PCBs) 多氯聯苯	With reference to USEPA 8082, by solvent extraction and determined by GC-ECD and GC-MSD	1 ppm
Polychlorinated naphthalenes (PCNs) 多氯化萘	With reference to USEPA 3540C, by solvent extraction and determined by GC-MSD	10 ppm
Chlorinated paraffins (C10~C13) 氯化石蠟	With reference to USEPA 3540C, by solvent extraction and determined by GC-ECD and GC-MSD	10 ppm
Formaldehyde 甲醛	As per applicant's request with reference to DIN 53315 and determined by UV-Vis	5 ppm
Polyvinyl chloride (PVC) 聚氯乙烯和聚氯乙烯混合物	Beilstein's test (flame test) and FT-IR analysis	NA
Organic tin compounds (Tributyl tin & triphenyl tin) 有機錫化合物 (三丁基錫化合物, 三苯基錫化合物)	With reference to ISO 17353, by solvent extraction and determined by GC-MSD	1 ppm
Asbestos 石棉	FT-IR analysis	NA
Azo compounds 偶氮化合物	As per ISO/TS 17234:2003, EN 14362-1:2003, EN 14362-2:2003, determined by GC-MSD	5 ppm

Remarks : NA = Not applicable

Reporting limit = Quantitation limit of analyte in sample solution

— END —

TEST REPORT

APPLICANT

Kurabe Industrial Co., Ltd.
4830 Takatsuka-Cho Hamamatsu-Shi
Shizuoka-Ken, Japan

SAMPLE DESCRIPTION

One (1) group of submitted samples said to be :

Item name : FWS5020 / FWS5022 - Center Conductor, Outer Conductor
FWS5005 / FWS5030 / FWS5032 - Center Conductor

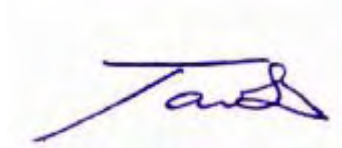
Date sample received : Sep. 24, 2004

Date test started : Sep. 24, 2004

TEST CONDUCTED

As requested by the applicant, for details please refer to attached page.

Prepared and checked by :
For Intertek Testing Services
Taiwan Limited



Jacob Lin
General Manager



This report shall not be
reproduced except in full,
without the written approval
of the laboratory.

Intertek Testing Services Taiwan Ltd.

14F, 27, Chung Shan North Road, Sec. 3, Taipei, Taiwan, R.O.C.

全國公證檢驗股份有限公司

台北市中山北路三段 27 號 14 樓

Tel : (+886-2) 2592-6033 · 2597-9955 Fax : (+886-2) 2593-6566

TEST CONDUCTED

(A) Test result summary :

<u>Testing item</u>	<u>Result (ppm)</u>
	<u>Metal sheath</u>
Cadmium (Cd) content / 鎘含量	ND
Lead (Pb) content / 鉛含量	ND
Mercury (Hg) content / 汞含量	ND
Chromium VI (Cr ⁶⁺) content / 六價鉻含量	ND

Remarks : ppm = Parts per million
ND = Not detected

(B) Test method :

<u>Testing item</u>	<u>Testing method</u>	<u>Reporting limit</u>
Cadmium (Cd) content 鎘含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Lead (Pb) content 鉛含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Mercury (Hg) content 汞含量	With reference to USEPA 3052, by microwave digestion and determined by ICP-OES	2 ppm
Chromium VI (Cr ⁶⁺) content 六價鉻含量	With reference to USEPA 3060A & 7196A, by alkaline digestion and determined by UV-Vis	1 ppm

Remark : Reporting limit = Quantitation limit of analyte in sample solution

— END —



Test Report

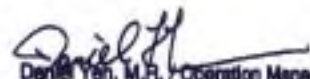
SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-18, TORANOMON 1-CHOME, MINATO-KU,
TOKYO 105-8444 JAPAN

Report No. : CE/2004/61520
Date : 2004/06/21
Page : 1 of 3

The following merchandise was (were) submitted and identified by the client as :

Type of Product : COAXIAL CABLE
Style / Item No : KHCX-32AWG-SB-TA
Sample Received : 2004/06/11
Testing Date : 2004/06/11 TO 2004/06/21

Test Result : - Please see the next page -


Daniel Yen, M.R., Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf. Attention is drawn to the limitations of liability, indemnification, and jurisdictional issues defined therein. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. (此報告係根據本公司訂定之測試標準與程序所發出，請注意此報告中關於責任、賠償及司法管轄權之限制。未經本公司之許可，不得翻印或轉載。)

TW 0889732

SGS Taiwan Ltd.
台灣檢驗科技股份有限公司

No. 136-1 Wu Kang Road, Wuliu Industrial Zone, Taipei County, Taiwan / 台北縣五股工業區五工路136-1號
T (886-2) 2299-8899 F (886-2) 2299-2231

www.tw.sgs.com

Member of SGS Group

11001



Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-18, TORANOMON 1-CHOME, MINATO-KU,
TOKYO 105-8444 JAPAN

Report No. : CE/2004/61520
Date : 2004/06/21
Page : 2 of 3

Test Result

PART NAME NO.1 : BLACK PLASTIC JACKET(KHCX-32AWG-SB-TA)

Test Item (s):	Unit	Method	MDL	Result			
				No.1			
PBBs(Polybrominated biphenyls)(CAS NO:67774-32-7)	%	With reference to 83/264/EEC. Analysis was performed by GC/MS/ECD or HPLC/DAD/MS.	0.0005	N.D.			
PBDEs(PBDEs)(Polybrominated biphenyl ethers)	%	With reference to 83/264/EEC. Analysis was performed by GC/MS/ECD or HPLC/DAD/MS.	0.0005	N.D.			

Test Item (s):	Unit	Method	MDL	Result			
				No.1			
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.			
Cadmium (Cd)	ppm	ICP-AES after as per EN 1122, method B:2001 or other acid digestion.	2	N.D.			
Mercury (Hg)	ppm	ICP-AES after as per US EPA 3052 or other acid digestion.	2	N.D.			
Lead (Pb)	ppm	ICP-AES after as per US EPA 3050B or other acid digestion.	2	N.D.			

NOTE: (1) N.D. = Not detected (<MDL)
(2) ppm = mg/kg
(3) MDL = Method Detection Limit

This Test Report is issued by the Company subject to its General Conditions of Service printed overleaf. Attention is drawn to the limitations of liability, indemnification, and jurisdiction clauses defined therein. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. 此報告係根據本公司訂定之檢驗服務條款所發出，請注意關於責任限制、賠償及司法管轄權之條款。本公司之檢驗結果，僅供客戶參考，不得作為其他用途。此報告未經本公司同意，不得複製或轉載。

TW0889733

SGS Taiwan Ltd.
台灣檢驗科技股份有限公司

No. 738-1 Wu Kang Road, Wuku Industrial Zone, Taipei County, Taiwan.
886 (8) 2289-3539

(886) (3) 2289-1231

www.tw.sgs.com

Member of SGS Group

10011

SGS

Test Report

SHOWA ELECTRIC WIRE & CABLE CO., LTD.
NO. 1-18, TORANOMON 1-CHOME, MINATO-KU,
TOKYO 105-8444 JAPAN

Report No. : CE/2004/61520
Date : 2004/06/21
Page : 3 of 3



The Test Report is issued by the Company subject to its General Conditions of Service printed overleaf. Attention is drawn to the limitations of liability, indemnification, and Apportionment of costs set forth therein. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This Test Report cannot be reproduced, except in full, without prior written permission of the Company. 此報告係根據本公司訂定之通用服務條件所發出，請注意關於責任限制、賠償及費用分擔之條款。本公司之服務、品質、檢驗報告均應受此限制。此報告係根據本公司訂定之通用服務條件所發出，請注意關於責任限制、賠償及費用分擔之條款。此報告係根據本公司訂定之通用服務條件所發出，請注意關於責任限制、賠償及費用分擔之條款。

TW 0689734



Test Report

I-PEX JP CO., LTD. TAIWAN BRANCH (JAPAN)
4F-4, NO.2, JIAN BA ROAD, CHUNG HO CITY,
TAIPEI 235, TAIWAN, R.O.C.

Report No : CE/2004/42496
Date : 2004/04/27
Page : 1 of 1

The following merchandise was(were) submitted and identified by the client as :

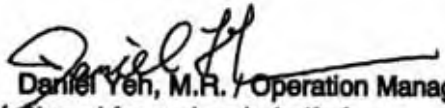
Type of Product : MHF CONNECTOR
Style/Item No : 20278-111R-XX
Sample Received : 2004/04/22.
Testing Date : 2004/04/22 TO 2004/04/27

Test Result

PART NAME NO.1 : MIX GOLDEN COLORED METAL & BLACK PLASTIC

Test Item(s):	Unit	Method	MDL	Result				
				NO.1				
Chromium VI (Cr+6)	ppm	As per US EPA 7196A and US EPA 3060A.	2	N.D.				
Cadmium (Cd)	ppm	ICP-AES After As per EN 1122, Method B:2001 or other acid digestion.	2	N.D.				
Mercury (Hg)	ppm	ICP-AES After As per US EPA 3052 or other acid digestion.	2	N.D.				
Lead (Pb)	ppm	ICP-AES After As per US EPA 3050B or other acid digestion.	2	N.D.				

NOTE : (1) N.D. = Not detected.(<MDL)
(2) ppm = mg/kg
(3) MDL= Method Detection Limit
(4) " ---" = Not Applicable


Daniel Yeh, M.R., Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.



Test Report

光紅建聖股份有限公司
*112台北市北投區立德路121巷12號3樓

報告號碼 : CE/2004/91776
日期 : 2004/09/20
頁數 : 1 of 1

以下測試樣品乃供應廠商所提供及確認：

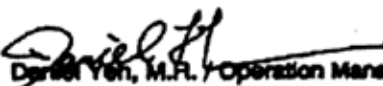
樣品名稱 : 銅條
產品型號 : 銅條
收件日期 : 2004/09/10.
測試日期 : 2004/09/10 TO 2004/09/20

測試結果

測試部位 NO.1 : 金色金屬塊

測試項目:	單位	測試方法	偵測極限值	結果				
				NO.1				
銅	ppm	依照 EN1122 方法B:2001或 其他酸消化方法,用感應耦 合電漿原子發射光譜儀 (ICP-AES)做分析	2	54.0				
鉛	ppm	依照 US EPA 3050B 方法或 其他酸消化方法,用感應耦 合電漿原子發射光譜儀 (ICP-AES)做分析	2	24245.9				

備註: (1) N.D. = Not detected. (<MDL) / 未檢出(低於偵測極限值)
(2) ppm = mg/kg / 百萬分之一
(3) MDL= Method Detection Limit(偵測極限值)

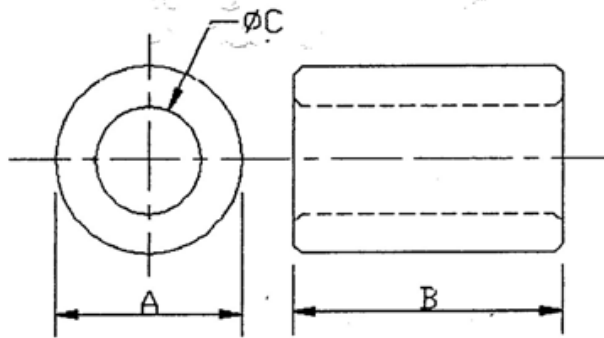
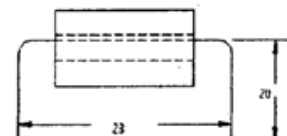

Daniel Yen, M.P., Operation Manager
Signed for and on behalf of
SGS TAIWAN LTD.

The content of this PDF file is in accordance with the original issued reports for reference only. This Test Report cannot be reproduced, except in full, without prior written permission of the Company.

SGS TAIWAN LTD.

NO. 126-1, Wu Kung Road, Wu Ku Industrial Zone, Taipei county, Taiwan.
8906-2) 22982939 (086-2) 2299-3237 www.sgs.com.tw

SPECIFICATION FOR APPROVAL

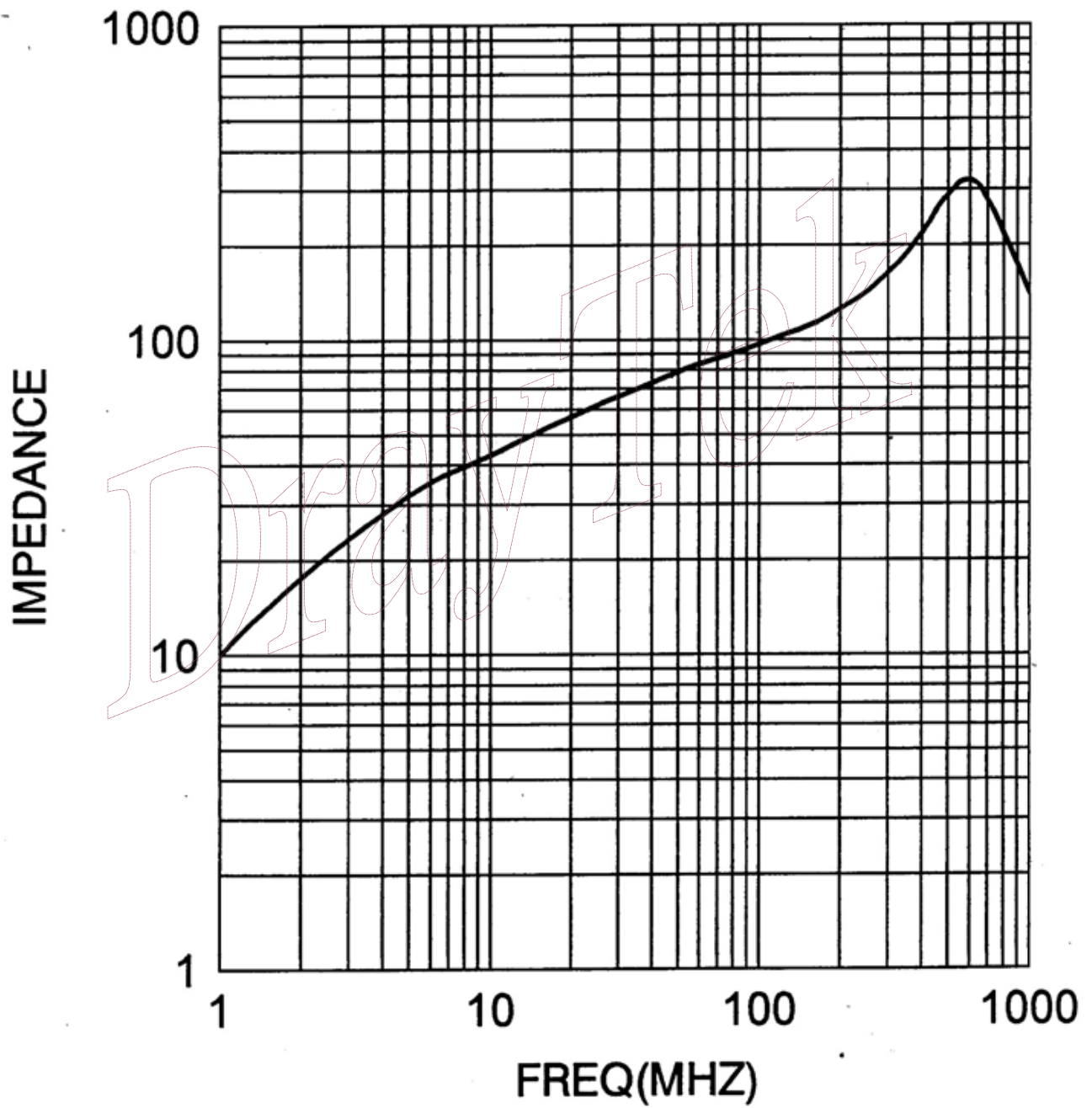
CUSTOMER:		CUST.P/N:
ITEM:	K5B RH 3.5x9x1.3	K.C.P/N: PS0329IA
(1) SHAPE : 		A 3.50±0.15 m/m
		B 9.0±0.3 m/m
		C 1.30±0.15 m/m
		D m/m
		E m/m
		F m/m
		G m/m
(2) ELECTRICAL REQUIREMENTS: $Z_1 = 46^{-0}$ OHM AT 25 MHz $Z_2 = 72^{-0}$ OHM AT 100 MHz		(3) TEST CONDITIONS: 1. IMPEDANCE ANALYZER HP4191A TEST FIXTURE: HP16092A 2. WIRE: $\phi 0.65$ T.C.W63m/ml/2Ts 3. DRAWING: 
(4) PACKING ☒ IN BULK 2000 PCS/BAGS* 5 PCS/PLATE* PCS/TRAY* ☐ VACUUM BAG/INNER BOX* 4 PLATES/CARTON= TRAYS/CARTON= ☐ INSERTION BOXES/CARTON = 40000 PCS PCS PCS		(5) APPEARANCE 缺角 ≤ 端面 1/3 面積為合格 深度 ≤ 壁厚 1/2 為合格
(6) REMARK:		Approved by 黃新恩
		Checked by 黃志梅
		Drawn by 黃志梅
		DWG.NO.

TEST DATA FOR PREPRODUCTION SAMPLES

CUSTOMER					CUST. P/N	
ITEM	K5B RH 3.5x9x1.3				K.C. P/N	PS0329IA
TEMP.	24 °C	RH	69 %	DWG.NO.		
WIRE	0.65x53m/L T.C.W	WINDING	1/2 Ts	QTY		
Test Instruments						
Meas. Item.	Z (OHM)	Z (OHM)	A m/m	B m/m	C m/m	
Spec./ Yours.						
Spec./Suggest.	46⁻⁰	72⁻⁰	3.50±0.15	9.0±0.3	1.3±0.15	
Test Freq.	25 MHZ	100 MHZ				
1	62	98	3.48	8.98	1.21	
2	62	96	3.48	8.96	1.20	
3	62	95	3.46	9.00	1.20	
4	62	95	3.48	8.96	1.20	
5	61	96	3.48	8.98	1.18	
6						
7						
8						
9						
10						
X	62	96	3.48	8.98	1.20	
R	1	3	0.02	0.04	0.03	
Your Sample.						
REMARK:				Approved by: 黄新恩 12/31		
				Checked by: 黄杏梅 12/31		
				Drawn by: 黄杏梅 12/31		

KING CORE ELECTRONICS INC.

K5B RH 3.5x9x1.3



鈞寶工程 部

DrayTek居易科技
部門資料傳簽/會簽單

表單編號: 94 申請日期: 2005/6/13 結單日期: 2005/6/14 結單: ☒

部 門: PE產品工程部 名 稱: WLAN Cable 16cm + core

主 旨: WLAN Cable 16cm + core test

傳簽內容: WLAN Cable 16cm + core test Report

會簽人員	意見	說明
吳冠德	☒ ☐	
王盈凱	☒ ☐	
林群傑	☒ ☐	

DrayTek

核 准: 林棟樑 2005/06/14 審 查: 吳岱倫 2005/06/14 執 行: 湯仁智 2005/06/13



PE 主料測試報告

16cm WLAN Cable

測試機種：VigorPro 100

DrayTek

測試結果：Pass

Tested by: _____

Date: _____

Checked by: _____

Date: _____

Approved by: _____

Date: _____

項次	Test 項目	
0	File Download and Upload over-night Test	Pass
1	Outdoor test	Pass
2	Indoor Test	Pass
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

DrayTek

敘述

主測人員	Charles	協測人員		日期	94 年 5 月 26 日
主 料：	16cm WLAN Cable		代用料：		
製造商：	亞驪		製造商：		
測試機種	VigorPro100VGi		相關機種	Vigor2600VG Vigor2900VG	

價格差異

品名	報價	幣別	匯率	平均單價 NTD
16cm WLAN Cable + core(無鉛)	31.5	NTD	0	31.5
16cm WLAN Cable(無鉛)	30	NTD	0	30

DrayTek

使用設備：

項目	設備名稱	數量
1	AC Power Source(INTEK)	NA
2	PC(Windows XP)	2
3	FTP Server	1
4	電表	NA
5	LAN Cable	2
6	Wireless LAN Card(Vigor560)	1
7	VigorPro100VGi	1
8	Note Book(IBM R40)	1
9	DLISM(M801)	NA
10	SmartBits	NA
11	Vigor2600VG	NA
12	COUNTER	NA
13	ISDN Server	NA

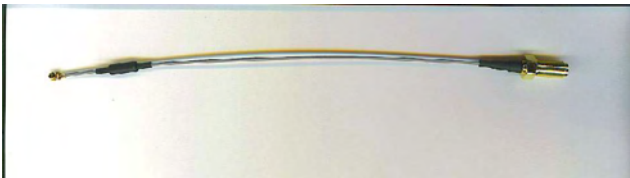
DrayTek

1. DUT substance

Vendor : 亞驪企業股份有限公司

Cable length : 16 cm

Having a core on the antenna cable
(DUT1)



Not include a core on the antenna cable
(DUT2)



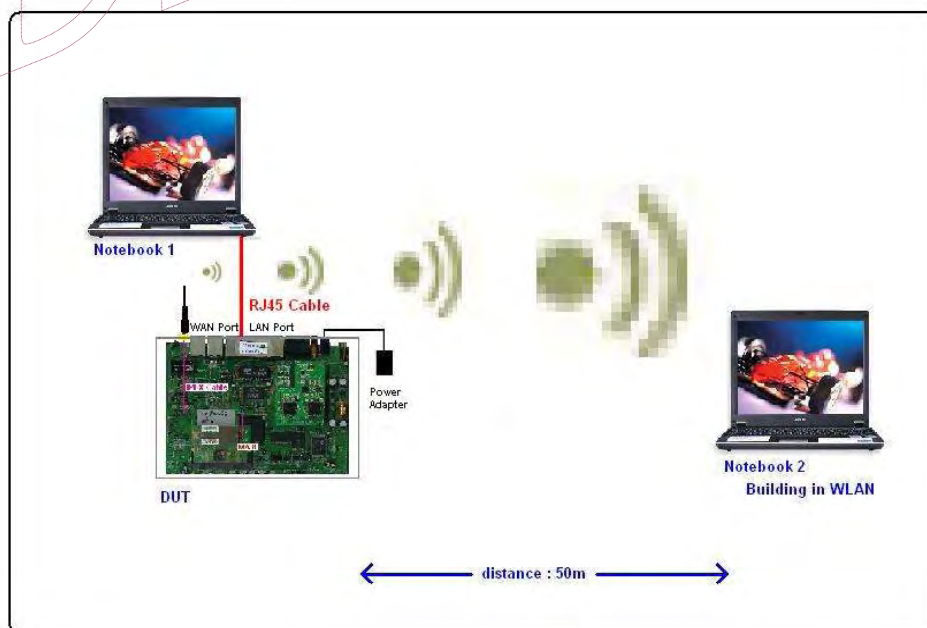
2. Quality of Antenna cable test

A). Outdoor test :

A-1). Devices requirement :

Device	Quantity
DUT (VigorPro 100VGi)	*1
Notebook	*2
WLAN Cardbus	*1
Router Test Tool	*2

A-2). Test environment :



A-3). Notice :

*The test engineer must to acknowledge at the test environment clear.

*About Router test tool setup :

Sampling Frequency : 1 times / sec.

Sessions : 2

Time interval :180 sec.

*Test channel : Channel 1

A-4). Result table :

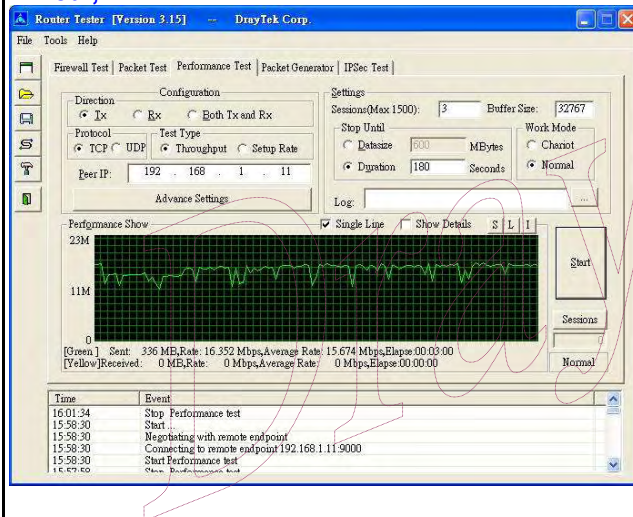
	Mixed(11b + 11g)	
	加core	未加core
TX	15.674 Mbps	14.853 Mbps
RX	17.895 Mbps	17.672 Mbps

A-5). Test result :

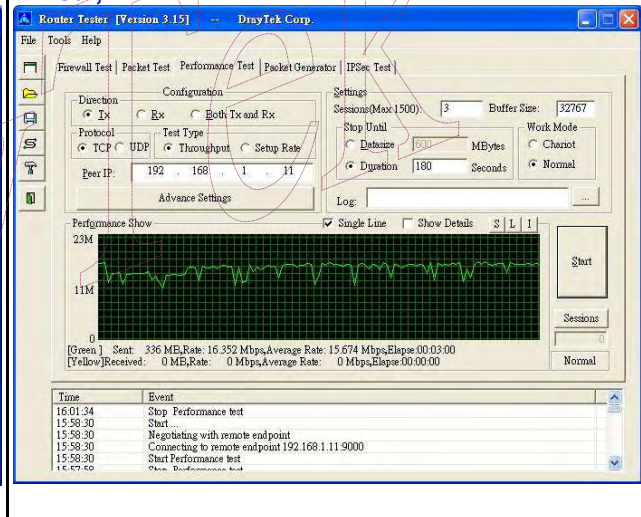
Having a core on the antenna cable

Not include a core on the antenna cable

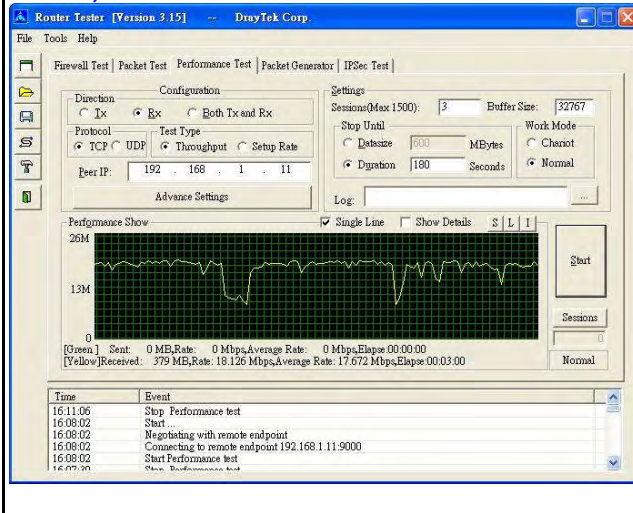
Mixed , TX



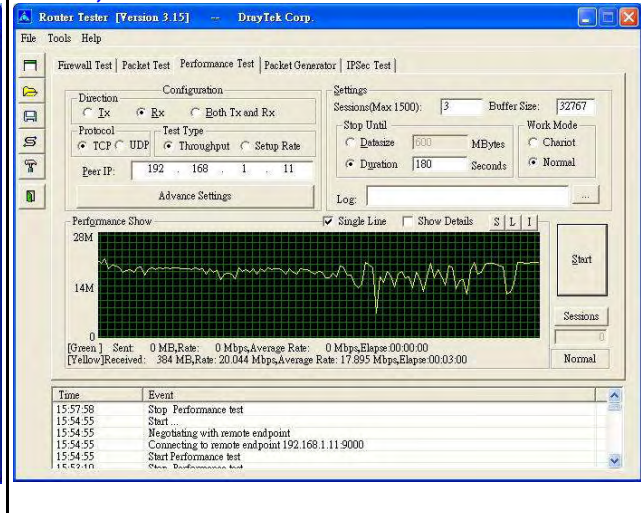
Mixed , TX



Mixed , RX



Mixed , RX

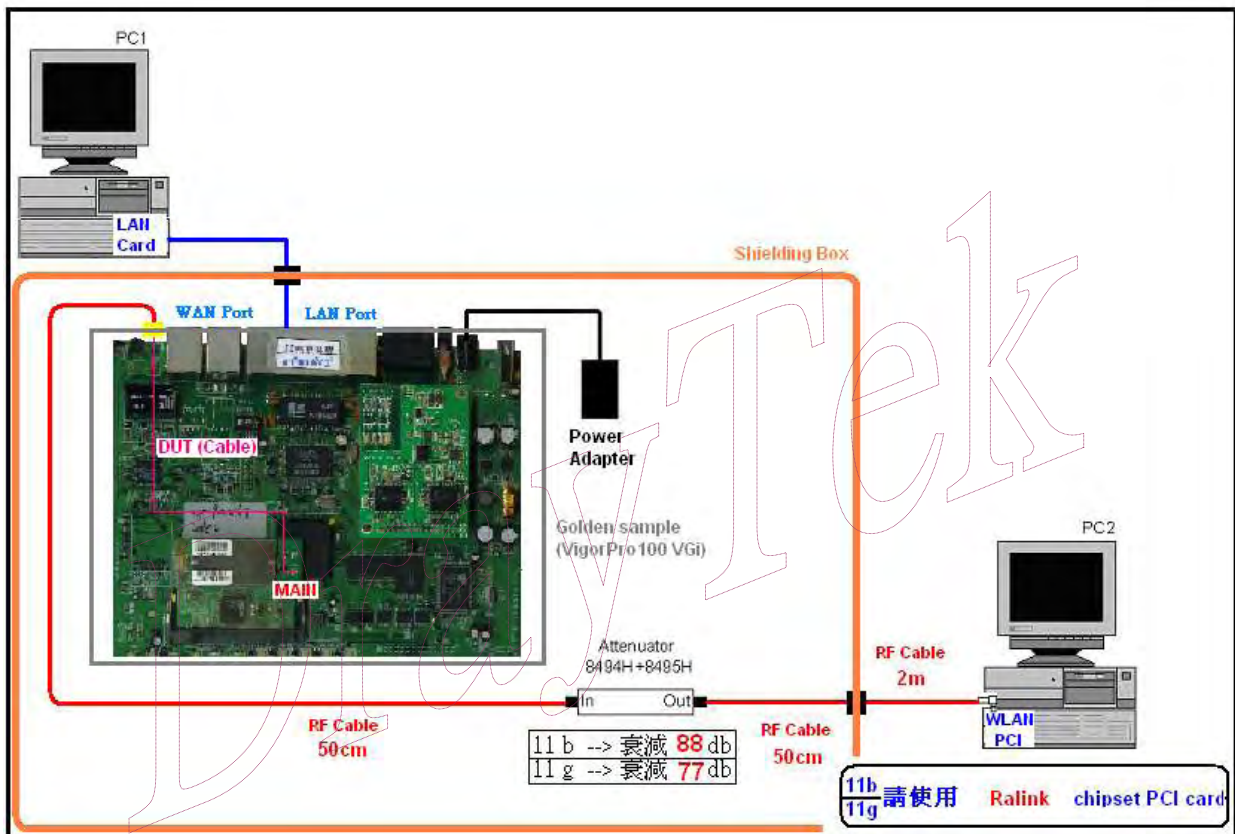


B). Indoor test

B-1). Devices requirement :

Device	Quantity
DUT (VigorPro 100VGi)	*1
PC	*2
WLAN PCI card (Ralink solution)	*1
Router Test Tool	*2

B-2). Test environment :



B-3). Notice :

- *The test engineer must to acknowledge at the test environment clear.
- *About Router test tool setup :
 - Sampling Frequency : 1 times / sec.
 - Sessions : >=2
 - Time interval : >=60 sec.

B-4). Result table :

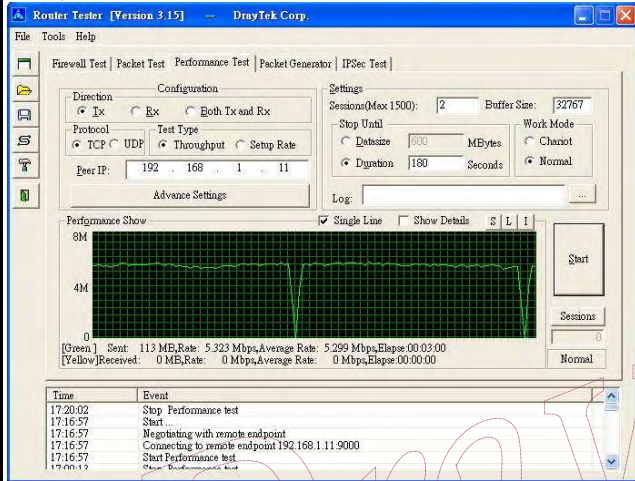
	TX		RX	
	加core	未加core	加core	未加core
11b	5.323 Mbps	5.376 Mbps	5.635 Mbps	5.595 Mbps
11g	21.262 Mbps	22.076 Mbps	19.871 Mbps	20.163 Mbps
Mixed(11b+11g)	19.948 Mbps	20.148 Mbps	20.762 Mbps	20.700 Mbps

B-5). Test result :

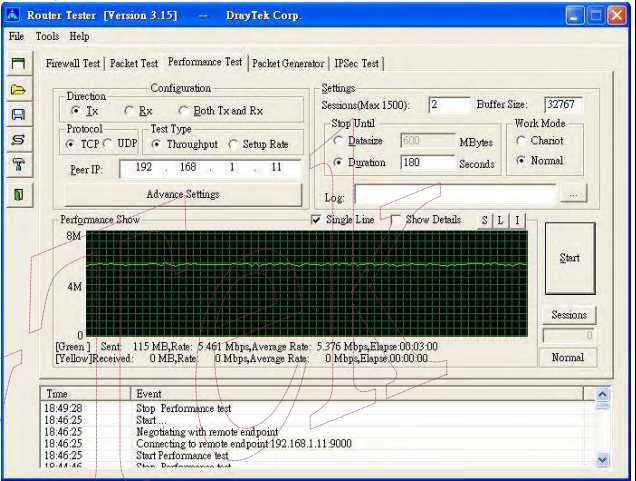
Having a core on the antenna cable

Not include a core on the antenna cable

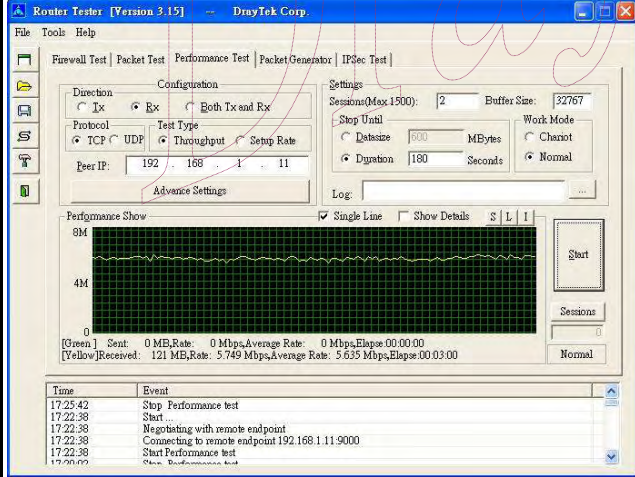
11b , TX



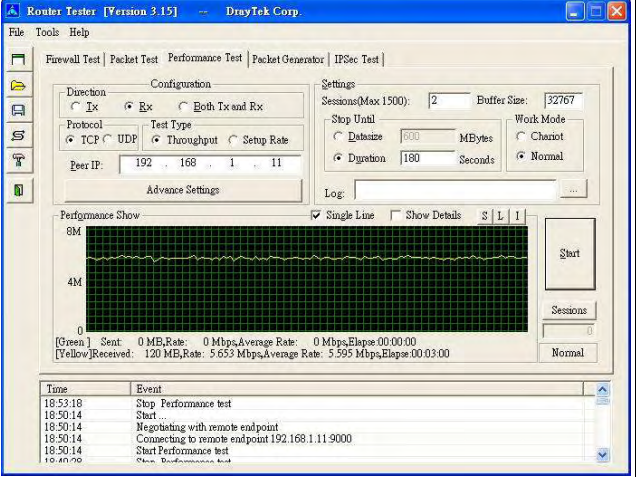
11b , TX



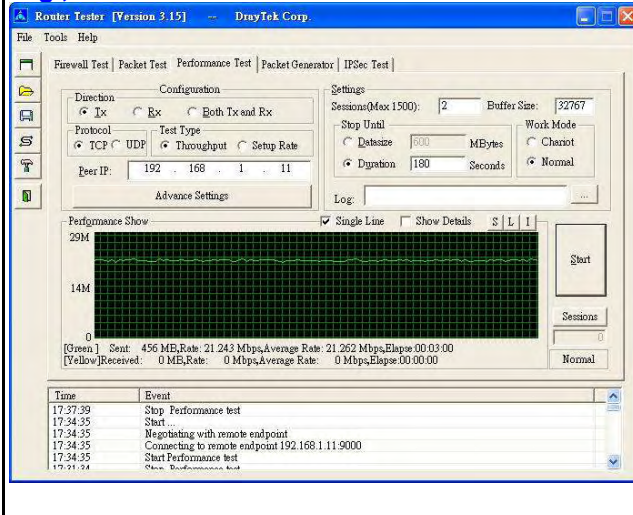
11b , RX



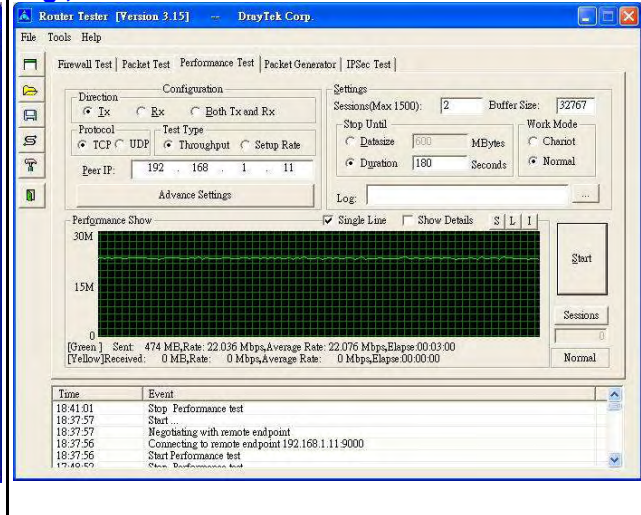
11b , RX



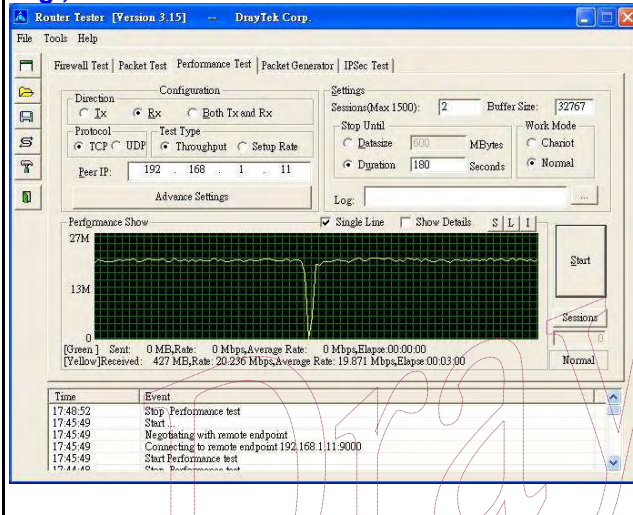
11g, TX



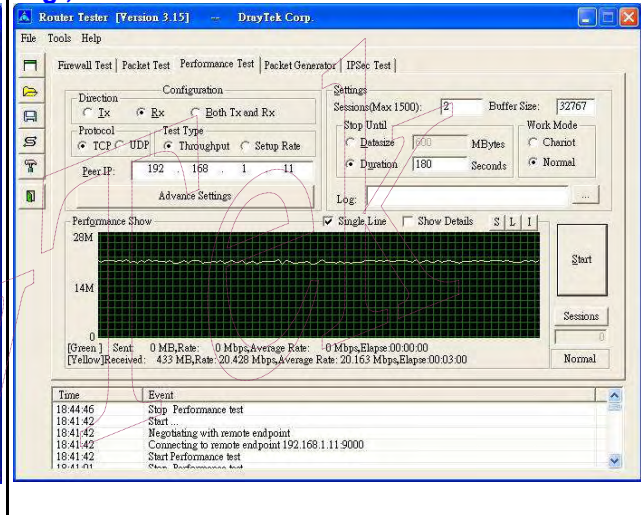
11g, TX



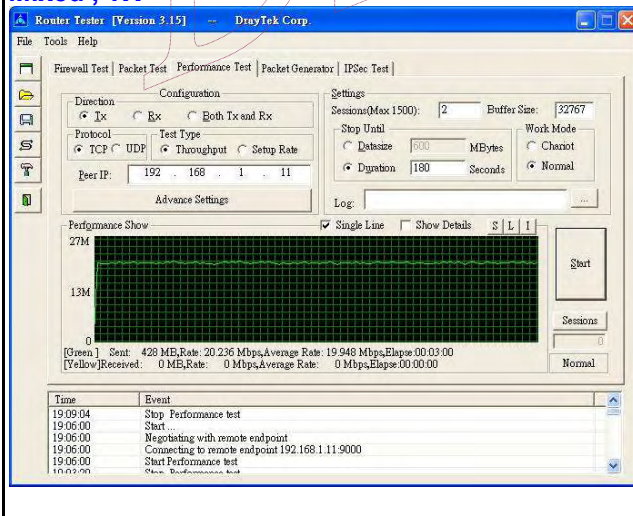
11g, RX



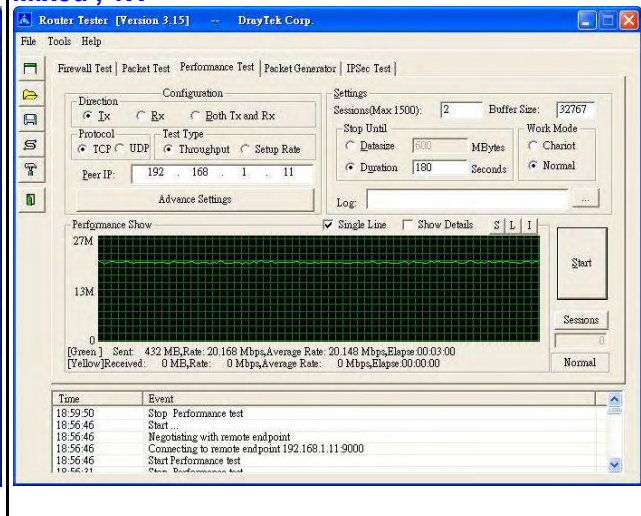
11g, RX



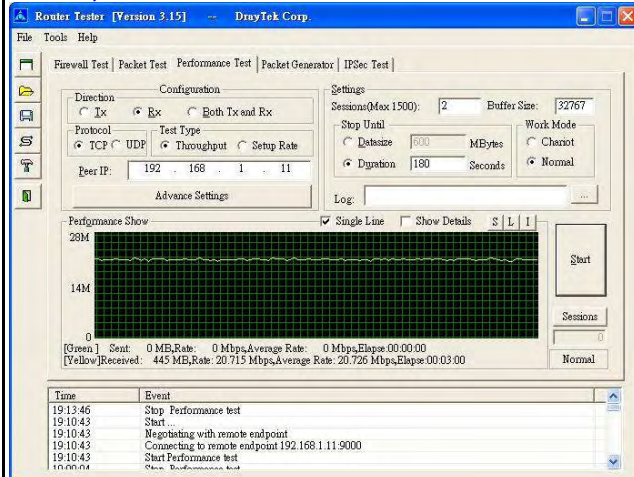
Mixed, TX



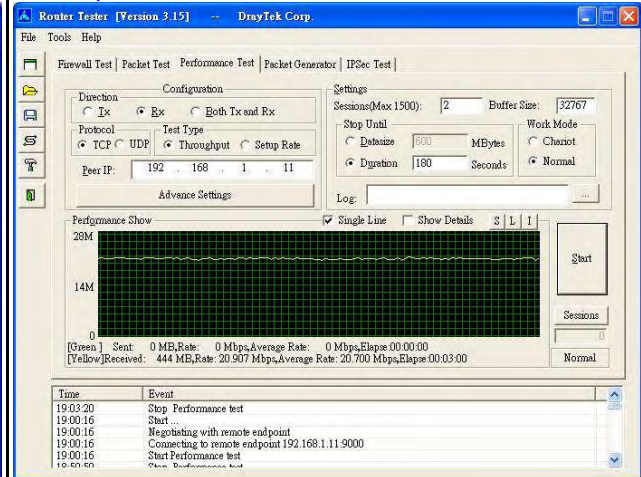
Mixed, TX



Mixed , RX



Mixed , RX



DrayTek