PROFESSOR TECHNOLOGY CO.,LTD.

RF Adapter Cable CP1.13-11cm-SMA/F INTRODUCTION

1. GENERAL DESCRIPTION

Model No	Professor P/N
CP1.13-11cm-SMA/M-IPEX	CP1.13-11cm

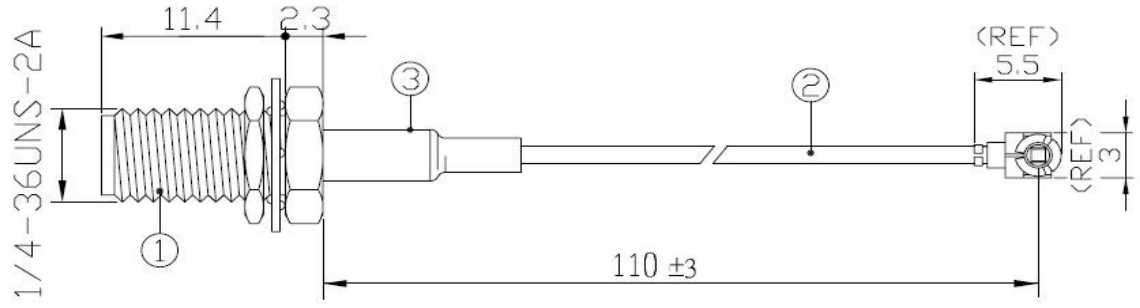
Below is a table summarizing the Adapter cable design specification.

1.1Mechanical Properties

Parameter	Description
Cable Type	Coaxial Cable 1.13mm
Connector	I PEX
Connector Type	SMA 180° Female HB
Cable length	110mm±2
Cable color	Gray
Operating Temperature Range	-30°C~+70°C
Storage Temperature Range	-40°C~+80°C

Appearance

NO.	NAME	FINISH	Q,TY
01	SMA 180° (Female)	Colden plating	01
02	萬泰線(1.13)+I-PEX Connector	Gray	01
03	Heat-shrink tube	Black	01



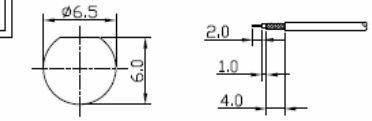
CP1.13-11cm-SMA/F-HB-IPEX(U.FL)

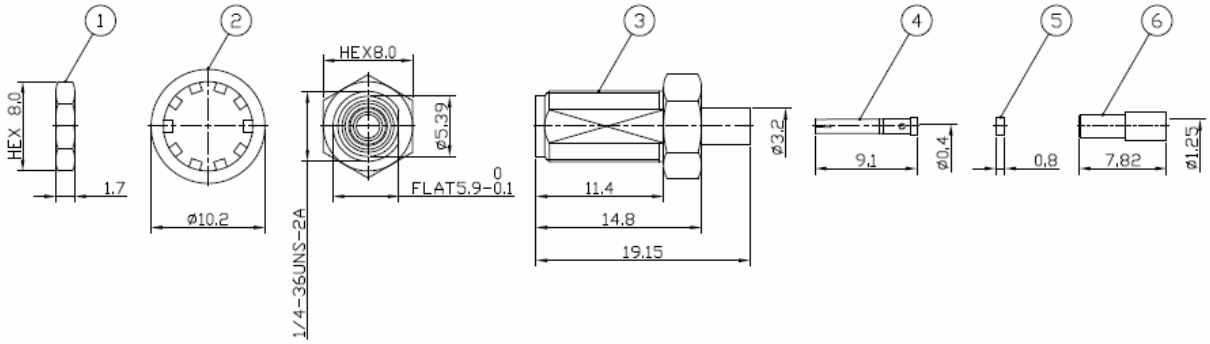
	CUSTOMER'S	MODEL	PARTS NUMBER	FREQUENCY	UNIT	SCALE	DATE	VERSION
Third angle projection					M/M		20120706	1
PROFESSOR 普傑國際股份有限公司	TOLERANCE	X.XX±0.15	NAME	PARTS NUMBER	APPROVED	CHECKED	DRAWING	DESIGNED
	SURFACE ROUGHNESS	S	APPEARANCE					

PROFESSOR TECHNOLOGY CO.,LTD.

RoHS COMPLIANT

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL DESIGN	2007/10/09	Kuo-Hsien Hao
B	CHG 03 Material NO.	2010/11/15	Jiang
2.01	ADD X0A01WSB01 MATERIAL and FINISH	2012/05/24	Jiang





NO	DESCRIPTION	MATERIAL	FINISH	Q'TY	DRAWN NO.
06	SLEEVE	BRASS	GOLD	1	X0A01WSB01-06
05	INSULATOR B	TEFLON	NONE	1	X0A01WSB01-10
04	PIN	PHOS BRONZE	GOLD	1	X0A01WSB01-04
03	INSULATOR	TEFLON	NONE	1	X0A01WSB01
	BODY	BRASS	GOLD	1	
02	WASHER	BRASS	GOLD	1	X0A01WSA01-08
01	NUT	BRASS	GOLD	1	X0A01WSA01-09

TITLE: SMA Straight bulkhead Jack Crimp for 1.13 Cable

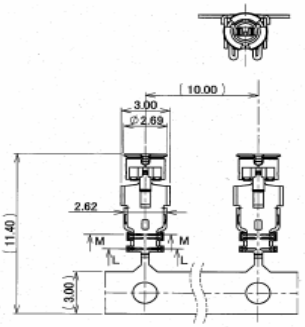
DWG NO. C02ABWS113003 | CUSTOMER P/N | UNIT mm | REV. 2.01

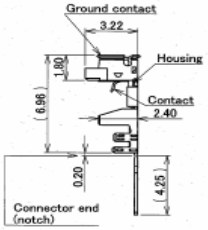
GENERAL TOLERANCES: X NA; XX NA; XXX NA; ANGLES NA (UNLESS OTHERWISE SPECIFIED)

SCALE 2.5 : 1 | SIZE A4 | SHEET 1 of 1

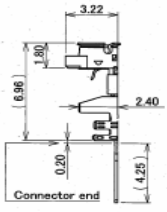
APPROVALS: DRAWN BY: Jiang 2012/05/24; CHK'D BY: J.S.Wu 2012/05/24; APP'D BY: J.S.Wu 2012/05/24

PART NO. 20278-***R-**

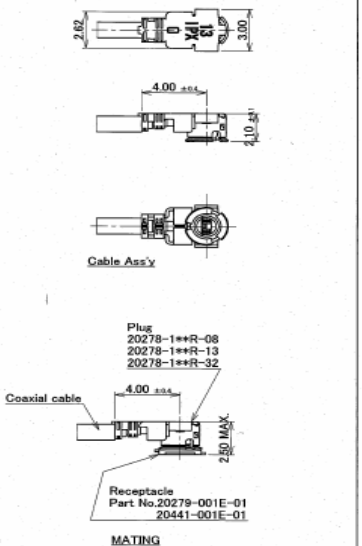




Part No. 20278-101R-08
20278-102R-08
20278-101R-13
20278-102R-13
20278-101R-32
20278-102R-32
For hand tool (with notch)



Part No. 20278-111R-08
20278-112R-08
20278-111R-13
20278-112R-13
20278-111R-32
20278-112R-32
For semi auto termination machine (without notch)



GENERAL TOLERANCE	
6 MAX.	±0.2
6 OVER MAX. 30	±0.3
30 OVER MAX. 120	±0.5
ANGLE	±2°

REV	ECN	BY	DATE	APP
20C	Z10892	H.M	Sep./07/'12	Tao
19C	Z08056	K.O	Feb./04/'08	E.K
18C	Z07346	K.O	Jul./10/'08	E.K
17C	Z05233	K.O	May./18/'05	T.H
16C	Z05024	K.O	Jan./20/'05	T.H

REV RECORD | SERIES No.

DESIGNED BY: K.Ohbayashi DATE: Jun./13/'01
CHK'D BY: DATE:
APP'D BY: K.Katabuchi DATE: Jun./13/'01
CUSTOMER COPY | PROJECTION

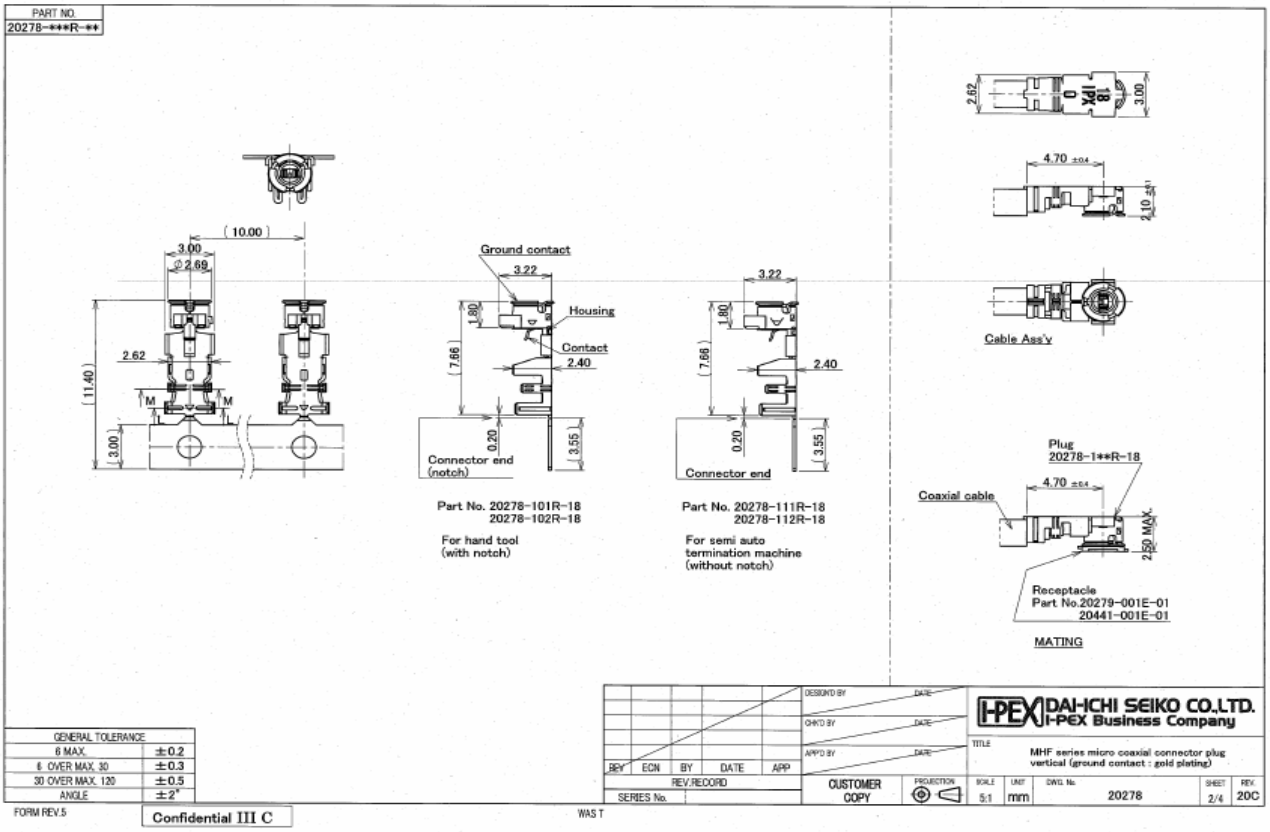
I-PEX DAI-ICHI SEIKO CO.,LTD. I-PEX Business Company

TITLE: MHF series micro coaxial connector plug vertical (ground contact : gold plating)

SCALE 5:1 | UNIT mm | DWG. No. 20278 | SHEET 1/4 | REV. 20C

FORM REV.5 | Confidential III C | WAS T

PROFESSOR TECHNOLOGY CO.,LTD.

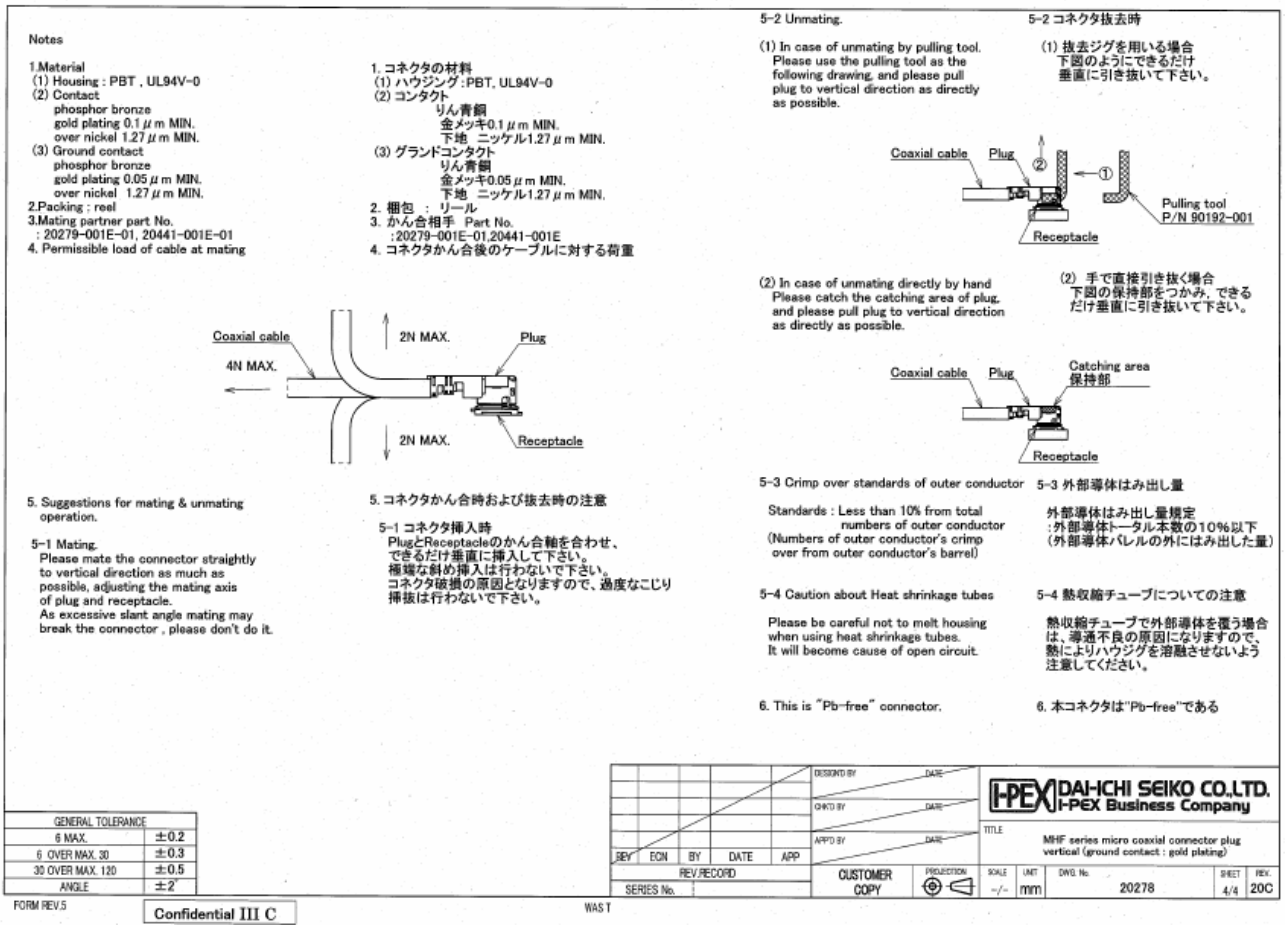


Part No. of non halogen free type	20278-101R-08 / 20278-111R-08	20278-101R-13 / 20278-111R-13	20278-101R-32 / 20278-111R-32	20278-101R-18 / 20278-111R-18
Part No of halogen free type	20278-102R-08 / 20278-112R-08	20278-102R-13 / 20278-112R-13	20278-102R-32 / 20278-112R-32	20278-102R-18 / 20278-112R-18
Housing color	White	Black	Black	White
Applicable cable nominal dimension	ø0.81 Nominal, ø0.65, ø0.40 Nominal, AWG#36(7/0.05) ※ Note-1	ø1.13 Nominal, ø0.93, ø0.68 Nominal, AWG#32(7/0.08) ※ Note-1	ø1.32 Nominal, ø1.12, ø0.66 Nominal, AWG#32(7/0.08) ※ Note-1	RG178 B/U, ø1.80 Nominal, ø1.35, ø0.84 Nominal, AWG#30(7/0.102) ※ Note-1
Braided shield of Outer conductor 外部導体の編組	Single / 1重編組	Single / 1重編組	Double / 2重編組	Single / 1重編組
P/N of hand Tool / P/N of semi auto termination machine	90187-008C / 90213-008C	90187-013C / 90213-013C	90187-032C / 90213-032C	90233-018 / 90232-018
Sect. M-M	1.68, 1.12	2.24, 1.48	2.29, 1.56	2.71, 1.90
Sect. L-L	1.72, 1.19	2.28, 1.56	2.37, 1.71	3.10, 2.26
Crimp Height CH-1	1.34～1.40	1.34～1.40	1.34～1.40	1.34～1.40
Crimp Height CH-2	0.76～0.84	1.06～1.14	1.20～1.30	1.41～1.49
Crimp Height CH-3	0.85～0.97	1.15～1.35	1.26～1.46	1.70～1.80

Note-1
中心導体、外部導体への半田コーティングは不可
Must not use solder coated
inner conductor and outer conductor.

FORM REV.5
Confidential III C
WAS T
REV ECN BY DATE APP
REV.RECORD
SERIES No.
DESIGN'D BY DATE
CHK'D BY DATE
APP'D BY DATE
CUSTOMER COPY
PROJECTION
DAI-ICHI SEIKO CO.,LTD.
I-PEX Business Company
TITLE
MHF series micro coaxial connector plug
vertical (ground contact : gold plating)
SCALE -/-
UNIT mm
DWG. No. 20278
SHEET 3/4
REV. 20C

PROFESSOR TECHNOLOGY CO.,LTD.



Specification for Approval

Customer	
Product Name	**RF1.13 (T+T) Coaxial Cable Spec.**
Spec. No	**SPH-3-1495**
Your P/N	
Our P/N	**MC-0073-***
Issue Date	**Jun. 2, 2010**

*** stands for the jacket color identification.**

PROFESSOR TECHNOLOGY CO.,LTD.

Document List:

Content

Part 1: Technical information

1. Scope:

This specification covers FEP insulated High-Frequency coaxial cable for internal wiring of electronic equipment.

USE: Internal wiring of Class 2 Circuits of Electronic Equipment.

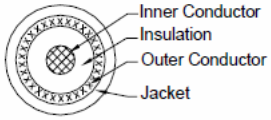
2. Construction:

Item		Unit	Spec. Value
Inner Conductor	Material	---	Tinned copper
	Construction	No./mm	7/0.08
	Pitch	mm	2~3
	Dia.(approx)	mm	0.24
Insulation	Material	---	FEP
	Nom. Thickness	mm	0.23
	Dia.(approx)	mm	0.70±0.05
	Color	---	Natural
Outer Conductor	Type	---	Braiding
	Material	---	Tinned copper
	Construction	No./ No./mm	16/4/0.05
	Pitch	mm	6~7 (standard type)
	Dia.(approx)	mm	0.93
Jacket	Material	---	FEP
	Nom. Thickness	mm	0.10
	Color	---	Upon request
	Dia.(approx)	mm	1.13±0.03

3. Characteristics:

Test Item	Unit	Specified Value	Note
Appearance	-	Faultless in visible	-
Inner conductor resistance(at 20℃)	Ω/km	Max.597	At 20℃
Insulation resistance 1> (at 20℃)	MΩ-km	Min.1500	At 20℃
Dielectric strength	-	Dielectric core: No breakdown at AC1.5KV for 0.15sec.	Spark test
	-	Jacket: No breakdown at AC 1.5KV for 0.15sec.	Spark test
	-	Between Inner and outer conductor: No breakdown at AC 500V for 1min	Completed cable
Flame retardant	-	VW-1	UL 1581
Capacitance (Nom.)	pF/m	95	At 1KHz
Characteristic impedance (at D-TDR)	Ω	50±3	TDR method
VSWR	-	Max. 1.20	0～3G
		Max. 1.35	3～6G
Attenuation (Nom.**)	dB/m	2.08	1GHz
		3.03	2GHz
		3.82	3GHz
		4.47	4GHz
		5.09	5GHz
		5.68	6GHz

** Max. value=Nom. Value x 1.15



Cross-section of cable

3. Packing:

Standard unit length of finished cable shall be 500 m/reel, there are max. two joints per reel. The min. Length between joints is 50 m. The finished cable shall be packed not to be damaged during transportation.

Part 2: Element Table for Material and MSDS

成分表

材料名稱: RF1.13 (T+T)　　材料單重: 3658(mg)

材料規格: SPH-3-1495A　　材料單位: (m)

PROFESSOR TECHNOLOGY CO.,LTD.

材料構成

使用部位	部位質量(mg)	材料名	材料的構成物質	CAS No.	含有量(mg)	含有率(%)	備考
導體	330	鍍錫銅線	Cu	7440-50-8	320.1	8.751%	
			Sn	7440-31-5	9.9	0.271%	
絕緣	720	FEP	FEP	26655-00-5	720	19.683%	
屏蔽	1640	鍍錫銅線	Cu	7440-50-8	1590.8	43.488%	
			Sn	7440-31-5	49.2	1.345%	
外皮	968	FEP	FEP	26655-00-5	871.2	23.816%	
			色母	/	96.8	2.646%	
合計	3658.000 mg				3658.000 mg	100.000%	0

Material Safety Data Sheet

Shin Din Cable, Ltd.
Date: Jul.27, 2009

1. Product and Company identification:
   Product name: RF1.13 (T+T) coaxial cable
   Company name: Shin Din Cable, Ltd.
   Address: Pak Mong, Xili, Nanshan, Shenzhen city, China
   Fax No.: 86-755-2765 3459
   Tel No.: 86-755-2765 3333

2. Composition/Information on ingredient:
   Single substance or mixture: Mixture
   Inner conductor: Tinned copper wire
   Insulation: FEP
   Outer conductor: Tinned copper wire
   Jacket: FEP

3. Hazard identification:
   - Do not discharge into the environment;
   - When this product is heated for a long time or at higher temperature, it generates particulate matter or hazardous fume gas.

4. First-aid measures:
   - Inhalation:
     In case of headache and nausea, remove the victim from contamination immediately to fresh air, keep quiet and seek medical advice.
   - Skin contact:

No hazards.

- Eyes contact:
  No hazards.
- Ingestion:
  Rinse mouth. Get medical attention.

5. Fire fighting measures:
   - General Information:
     In case of fire in surrounding area, shut off the source of origin of fire. Wear full protective equipments, fire-fighting clothes, with full-masked air respirator for fire-fighting operation.

   - Extinguishing Media:
     Use any type of extinguisher, like foam, dry powder, carbon dioxide and dry sand.

6. Accidental release measures:
   Collect wasted wire and bury it. Do not burn with incinerator.

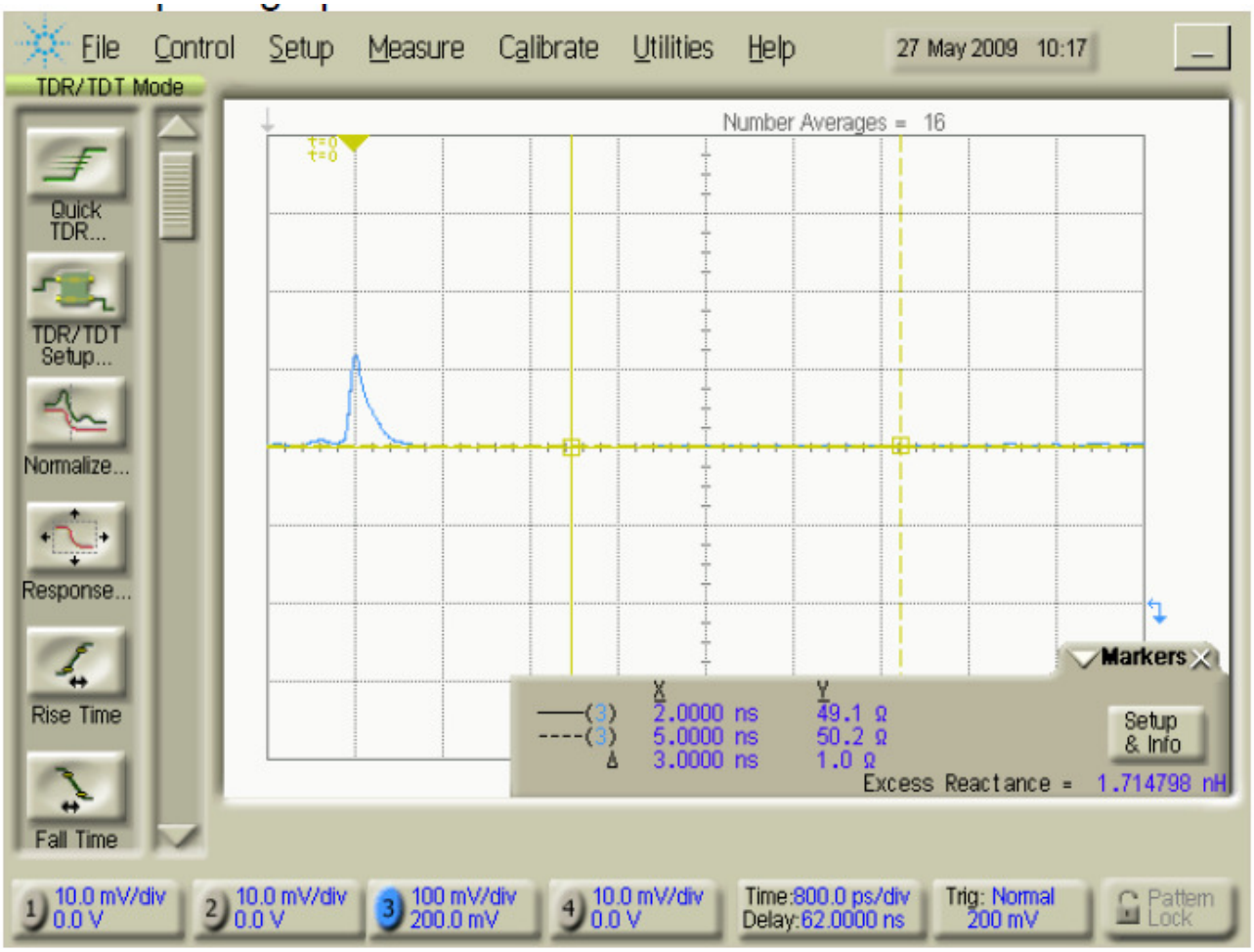
7. Handling and storage:
   - Handling:
     "No smoking" practice should be maintained in a work place and after handling materials, wash face and hands thoroughly. Cigarettes are not carried into a work place so that materials may not adhere to there.
   - Storage:
     Store in a cool, dry area, away from direct heat or sunlight.

Part 3: Electronic performance data

1. Impedance test: (Test by Vendor)
   Meter: TDR (Time domain reflector)
   DUT (device under test): SMA connector+ 1M length cable
   QTY: 1 PC

   Test procedure:
   - Calibrate meter.
   - Connect DUT and Meter.
   - Measure cable, we can find a sine wave on the screen of meter.
   - Set mark points at 2ns and 5ns of the wave.
   - Read the mark point and record it!

   Test data photograph:



2. S11 and S21 parameters test (Test at our factory or RD)
   Meter: NA (Network analyzer); 2 port and up to 8.5GHz
   DUT: I-Pex connector+ 1 M length cable +I-Pex connector.
   QTY: 1PC

Test procedure:

- Calibrate NA for "full 2 port". At least, need a test cable connect to NA.
- Connect DUT and NA.
- Measure cable, and spared screen, one for S11 the other is S21.
- Set mark points for 1GHz 2GHz 3GHz 4GHz 5GHz 6GHz.
- Save trace data for S11 and S21.

Test connecting and data photograph:

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