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SPH-3-RF0.81Low Loss

Customer:

P/N:

Specification  
For  
RF0.81 Low Loss Coaxial cable

<b>Prepared</b>	<b>Checked</b>	<b>Approved</b>
Isabella Sept. 13, 2020	Michael Sept. 13, 2020	Michael Sept. 13, 2020

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## Part 1: Technical information

### 1. Scope:

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

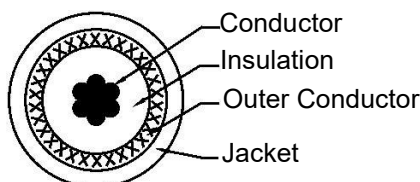
USE: Internal wiring of Class 2 Circuits of Electronic Equipment.

### 2. Construction:

Item	Unit	Spec. Value
Conductor	Material	---
	Construction	No./mm
	Dia.(approx)	mm
Insulation	Material	---
	Nom. Thickness	mm
	Dia.(approx)	mm
	Color	---
Outer Conductor	Type	---
	Material	---
	Construction	Carrier×Ends×mm
	Pitch	mm
	Dia.(approx)	mm
Jacket	Material	---
	Nom. Thickness	mm
	Color	---
	Dia.(approx)	mm

### 3. Characteristics:

Test Item	Unit	Specified Value	Note
Appearance	-	Faultless in visible	-
Conductor resistance (@20°C)	Ω/km	Max. 750	-
Insulation resistance (@20°C)	MΩ-km	Min. 1,000	-
Dielectric strength	Dielectric core	-	No breakdown at AC 1500V/0.15sec.
	Jacket	-	No breakdown at AC 1500V/0.15sec.
	Finished cable	V/min	No breakdown at AC 500V/1min
Capacitance	pF/m	Nominal 98	At 1KHz
Characteristic impedance	Ω	50±2	TDR @ 1.0 ns
VSWR	--	Max. <a href="#">1.20@2.4GHz</a> , 1.40@6.0GHz	--
Max. Attenuation	dB/m	2.35	1.0 GHz
		3.45	2.0 GHz
		4.35	3.0 GHz
		4.95	4.0 GHz
		6.20	6.0 GHz



Cross-section of cable

### 4. Packing

500 M/Bobbin or upon your request.

# Material Safety Data Sheet

Xundian.

Date: Oct. 6, 2020

## 1. Product and Company identification:

Product name: RF-08 細同軸線

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: Silver plated copper

Insulation: FEP

Shielding: Tinned copper wire

Jacket: PFA

## 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:  
Meter: TDR (Time domain reflector)  
DUT (device under test): SMA connector+ 1M length cable  
QTY: 1 PC

Test procedure:

Calibrate meter.

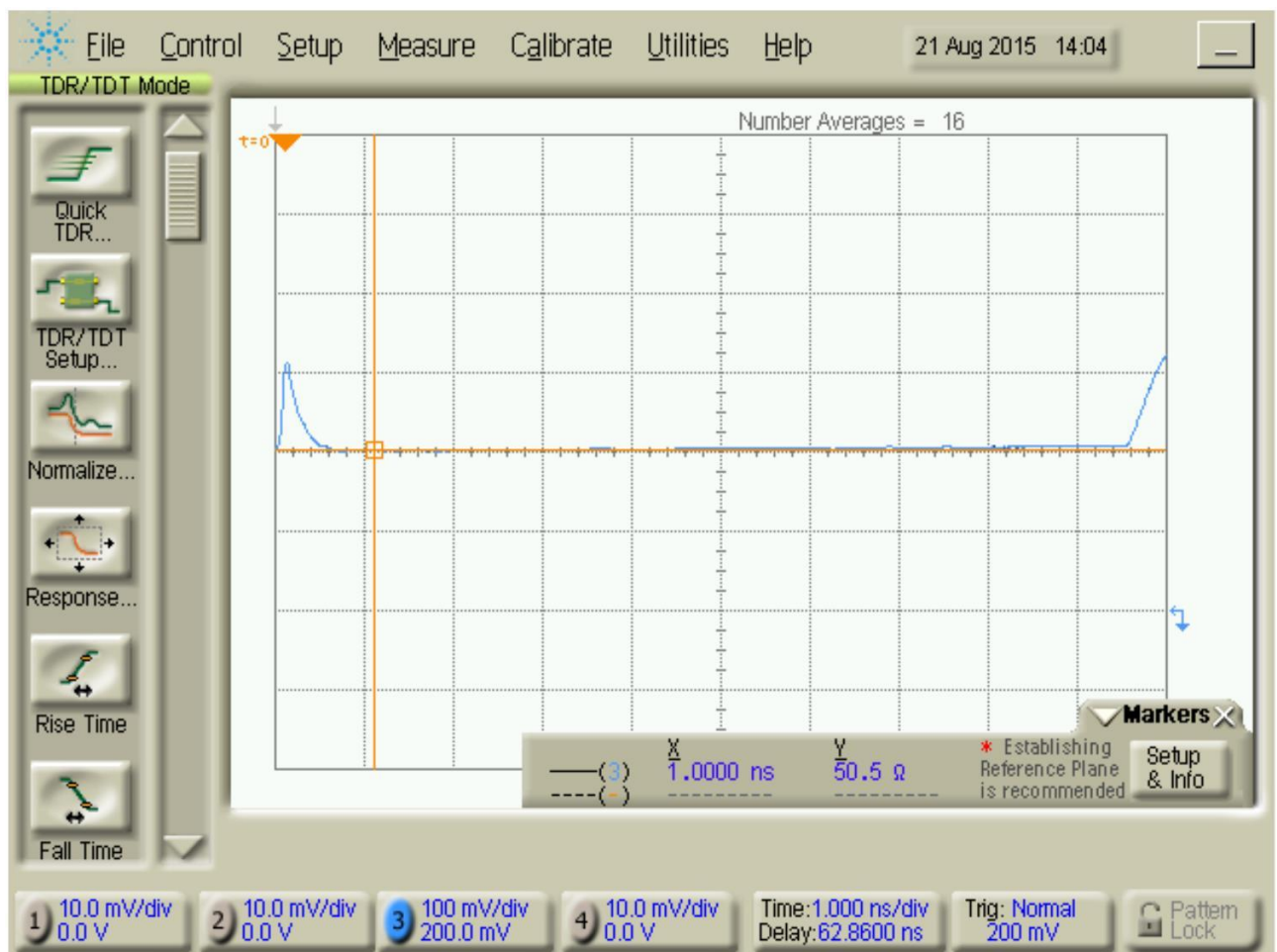
Connect DUT and Meter.

Measure cable, we can find a sine wave on the screen of meter.

Set mark points at 1ns the wave.

Read the mark point and record it!

Test data photograph:

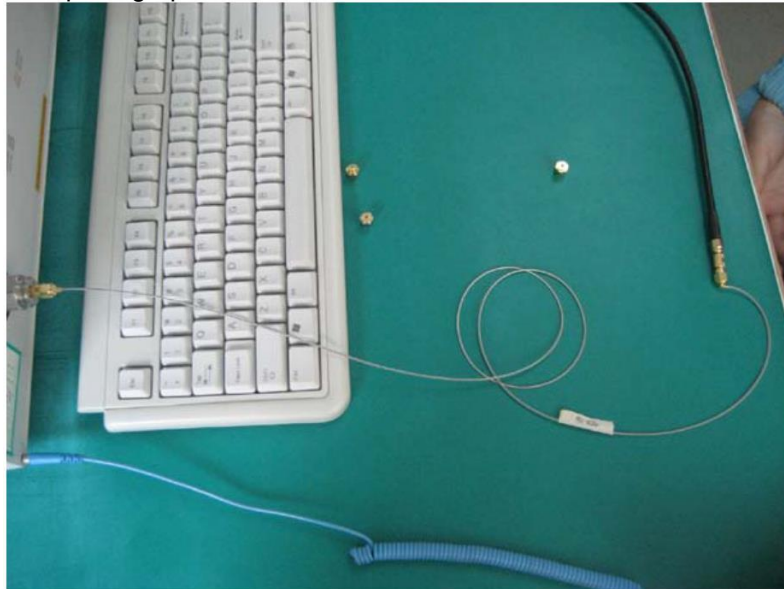


- 2. S11 and S21 parameters test  
 Meter: NA (Network analyzer); 2 port and up to 6GHz  
 DUT: I-Pex connector+ 1 M length cable +I-Pex connector.  
 QTY: 1PC

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:



## Part 4: Test Report Data

# Test Report

Part Name: RF-0.81 Low Loss 同轴线

Ref. Spec.: SPH-3-RF0.81L

XD P/N: MC-RF0.81L

### 1. Construction:

No.	Item	Spec.	Result	Judgment
1	Inner conductor material	Silver plated annealed copper	Silver plated annealed copper	Pass
2	Inner conductor size	7/0.071±0.005 mm	7/0.072	Pass
3	FEP insulation thickness	Nom. 0.195mm	0.193	Pass
4	Insulation diameter	0.61±0.03 mm	0.621	Pass
5	Outer Conductor (braid shield)	Tinned coated copper	Tinned coated copper	Pass
6	Outer Conductor construction	16/3/0.032±0.003mm	16/3/0.031~0.032	Pass
7	PFA Jacket thickness	Nom. 0.05mm	0.065	Pass
8	Overall diameter	0.82±0.05 mm	0.839	Pass

### 2. Performance:

No.	Item	Spec.	Result	Judgment
1	Appearance	Faultless in visible	OK	Pass
2	Inner conductor resistance	Max. 750Ω /Km	714	Pass
3	Dielectric withstanding between outer conductor and jacket	AC 500V/1 min., no breakdown	OK	Pass
4	Insulation resistance	Min. 1000 MΩ .km	>1300	Pass
5	Characteristic Impedance	48~52Ω by TDR	50.5	Pass
6	VSWR	Max. <a href="#">1.2@2.4GHz</a> Max. 1.4@6.0GHz	<a href="#">1.153@2.4GHz</a> 1.1538@6.0GHz	Pass

Prepared: Zou feng

Approved: Ran Aug. 13,2020