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Shenzhen

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Specification for Approval

Customer	
Product Name	RF 1.13 Normal Spec.
Spec. No	SPH-3-RF1.13
Your P/N	
Our P/N	MC-RF1.13
Issue Date	Nov. 11, 2019

* stands for the jacket color identification.

Customer Approval:

Prepared by	Checked by	Approved by

Document preparation: Shin Din Cable, Ltd.

Prepared by	Checked by	Approved by
Isabella	Michael	Michael

Document List:

Content	Page No.
Part 1: Technical information	3
Part 2: Element Table for Material and MSDS	4~5
Part 3: Electronic& Physical performance data	6
Part 4: Environmental report	Attached separately

Part 1: Technical information

1. Scope:

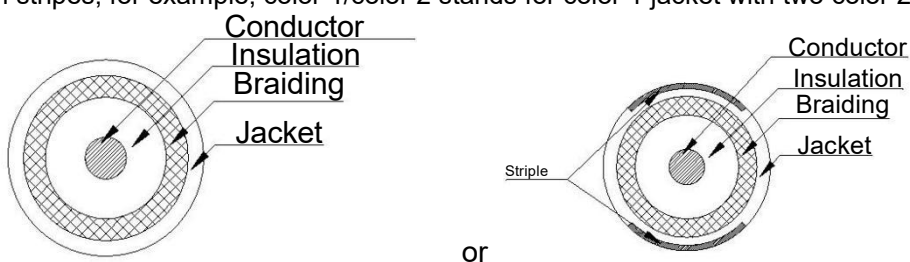
This specification covers FEP insulated High-Frequency coaxial cable for internal wiring of electronic equipment.

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

2. Construction:

Item	Unit	Spec. Value
Inner Conductor	Material	--- Silver plated copper
	Construction	No./mm 7/0.08
	Dia.(approx)	mm 0.24
Insulation	Material	--- FEP
	Nom. Thickness	mm 0.23
	Dia.(approx)	mm 0.70±0.05
Outer Conductor	Color	--- Natural
	Type	--- Braiding
	Material	--- Tinned copper
	Construction	No./ No./mm 16/4/0.05
	Coverage	% Nom.90
Jacket	Dia.(approx)	mm 0.95
	Material	--- FEP
	Nom. Thickness	mm 0.09
	Color	--- **
	Dia.(approx)	mm 1.13±0.05

** There are two types of jacket, one is single color, such as black, white, gray, blue and etc., another type is one color with stripes, for example, color 1/color 2 stands for color 1 jacket with two color 2 stripes.



3. Characteristics:

Test Item	Unit	Specified Value	Note	
Appearance	-	Faultless in visible	-	
Inner conductor resistance(at 20 °C)	Ω/km	Max.597	At 20°C	
Insulation resistance 1> (at 20°C)	$M\Omega-km$	Min.1500	At 20°C	
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
	Completed cable	-	Between the conductor and braiding: No breakdown at AC 500V for 1min	---
Flame retardant	-	VW-1	UL 1581	
Capacitance (Nom.)	pF/m	98	At 1KHz	
Characteristic impedance (at D-TDR)	Ω	50±3	TDR method	
Attenuation (Nom.**)	dB/m	2.2	1GHz	
		3.1	2GHz	
		3.9	3GHz	
		4.5	4GHz	
		5.0	5GHz	
		5.5	6GHz	
		TBD	8GHz	

** The connector loss in 0.20 dB have benn added for each tested frequency point.

4. Packing: In paper bobbin. The standard length and Min. no joint length should be discussed and agreed by both parties.

Part 2: Element Table for Material and MSDS

成分表

材料名稱: RF1.13 細同軸線 材料單重: 3240 (mg)
 材料規格: SPH-3-RF1.13 材料單位: (m)

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	350	鍍銀銅線	Cu	7440-50-8	344.75	10.640%	
			Ag	7440-22-4	5.25	0.162%	
絕緣體	742	FEP	FEP	26655-00-5	742	22.901%	
隔離	1322	鍍錫銅線	Cu	7440-50-8	1282.34	39.578%	
			Sn	7440-31-5	39.66	1.224%	
外皮	826	FEP	FEP	26655-00-5	770	23.765%	
			色母	/	56	1.728%	
合計	3240.000 mg				3240.000 mg	100.000 %	

作成日: Monday, July 27, 2019
 公司名: Xundian
 TEL: 0755-2399 2476
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 制作人名: 黃雕

Material Safety Data Sheet

Xundian.

Date: Jul.27, 2019

1. Product and Company identification:
Product name: RF-1.37 coaxial wire
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
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.

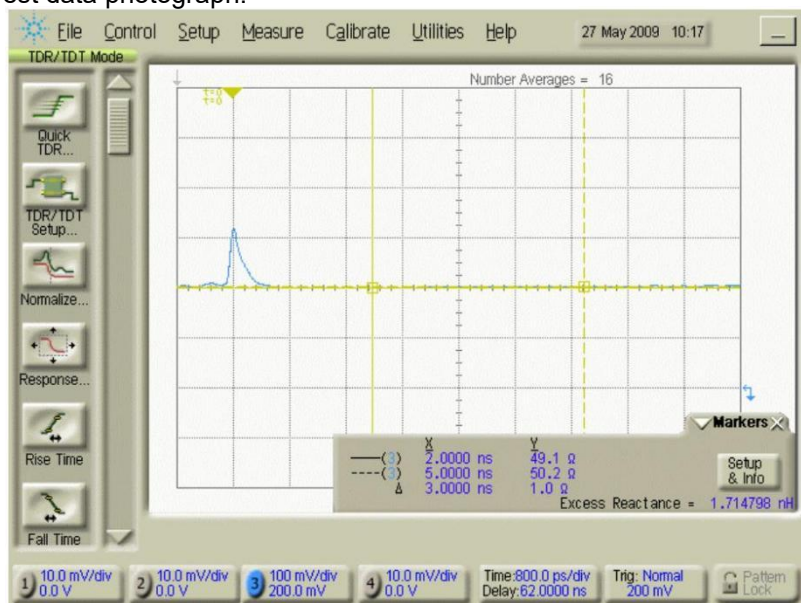
Connect DUT and Meter.

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 7GHz 8GHz.

Save trace data for S11 and S21.

Test connecting and data photograph:

