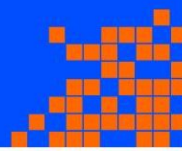


RADIO FREQUENCY CABLE

PRODUCTS

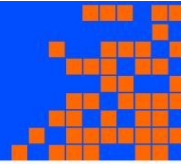
(Feeder, Leaky Coaxial Cable & Accessories)





Contents

Company Profile	1
Environment and Quality	2
Quality Certificates	2
Manufacture Equipments	3
Brief Introduction of Products	4
Base Station Communication	6
Indoor Distributing	7
RF Cable	8
Leaky Cable-radiating Mode	18
Leaky Cable-coupled Mode	19
Jumpers	20
Connectors	20
Cable Clamps	21
Grounding Kits	22
Other Accessories	23
Packing & Transportation	24



Company Profile

Zhongtian Hitachi Radio Frequency Cable Co., Ltd. (ZHRF) is founded by Jiangsu Zhongtian Technology, Hitachi Cable Ltd (Japan), and Nanjing University of Posts & Telecommunications, specialized in the researching and production of Radio Frequency Coaxial Cables and Accessories suiting for mobile communications. The investment of ZHRF is \$ 45,000,000. The production capability of high quality



Establishment Celebration of Zhongtian Hitachi RF Cable Co.,Ltd.

RF cables and accessories are up to 50,000 kilometers per year. The headquarter sets in Shanghai Baoding Mansion, and the production base is located at Nantong Economic & Technological Development Zone of Jiangsu Province.

ZHRF introduced the latest physical-foaming insulation line, argon-arc welding line from the worldfamous equipment manufacturers and a complete set of on-line test instruments made by Agilent. We adopted the high technology and advanced management of Hitachi Cable and provides the brand name products to serve the 3rd generation mobile communications (3G) market in China.

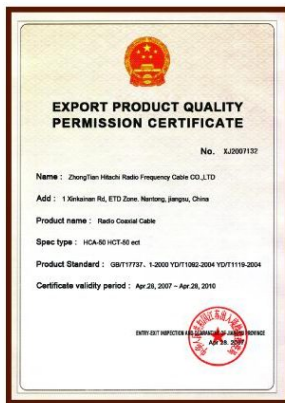
Zhongtian Technology Co.,Ltd is a listed Chinese telecommunication public company and national key-tech enterprise. ZTT is specialize in manufacturing optical fiber cables, OPGW and SOFC. There is a consensus in CT Industry that ZTT is specilised for all kinds of cables. The industry has the formed knowledge of "Special Cables, Zhongtian".

Hitachi Cable Ltd is a subsidiary of Hitachi Group, which has accumulated manufacturing experience for more than 40 years and has sold radio frequency cable world-wide.

Nanjing University of Posts & Telecommunications is a key university of the Ministry of Information Industry, which specializes in the research on CT, electronic and IT etc. It is the national cradle for training and bringing up people in communication science.

Environment and Quality

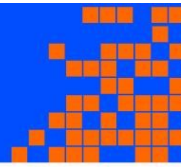
Zhongtian Hitachi Radio Frequency Cable Co., Ltd. established quality control system strictly according to ISO9001:2000、ISO14001:2004 international standard, takes the Quality Control Department as the core, and is directly led by the General Manager; starts from five aspects i.e. quality control system, management duties, resource management, product realization, measurement analysis, and quality improvement, follows eight quality management principles, and permeates various links such as procurement, production, sales; internally examines the operation of all the elements, externally provides pre-sale, as-sale, and postsale service, and deals with customer's information; all employees follow the service purpose of "Understanding customer, Serving customer", persist the quality guideline of "Making customer satisfied, Getting everything better", create Zhongtian Hitachi Brand, and make efforts to contribute the mobile communications.



Quality Certificates

The test instruments for manufacturing are Network analyzer, Digital LCR meter, Digital multimeter, High resistance meter, Milliohm meter, Dielectricity tester, Project profile analyzer, Spectrum Analyzer and Signal source Producer.



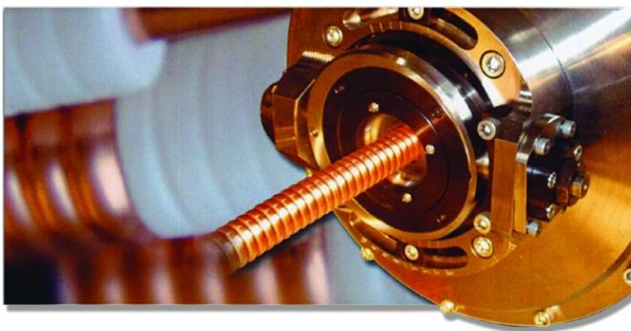


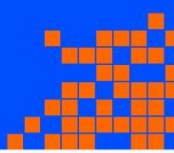
Manufacture Equipments

ZHRF introduced the latest first-class physical-foaming insulation line and welding corrugating line.

The physical foaming line adopts skin-foam-skin technologies, which achieves even and fine foam structure. The production line is equipped with online out diameter detector, eccentricity monitor and tester of capacitance (hot and cold). FFT is used to automatically improve the attenuation and VSWR properties.

Welding and corrugating line adopts the world-famous equipments and technologies. The slippage forming, nonvibration transferring and high speed corrugating technologies ensure the outer conductor with even pitch and precise wave crest and wave trough diameter. The high precision instruments are used to detect the geometry of online conductor to ensure the performance of three-order intermodulation and VSWR.





Brief Introduction of Products

Our company design and produce according to international standards of YD/T-1092, YD/T-1119, YD/T-1120-2001, GB/T17737.1, GB/T15285-1994, MIL-C-28830, IEC 61196, IEC 61196-4-2004, YD/T1319-2004. Our product has the advantages of low attenuation, low VSWR, low modulation, high power rating, excellent flexibility and shielding feature. It can be widely used in connection of transmitting feeder line and communicating equipment in various areas such as mobile communication, microwave communication, wireless broadcasting system and radar system in aviation and marine. It fulfils the full frequency and high requirement of public and private telecom network of CDMA, GSM, PHS, TD-SCDMA, WCDMA, CDMA2000, WiMAX especially suits for the third generation mobile communication network. ZHRF supplies RF cable, Leaky cable and related accessories in certain projects.



Brief Introduction of Products

Leaky coaxial cables are mainly used in the long, narrow and enclosed areas that conventional antenna designs could not provide effective, For example: track traffic, tunnels, mines, buildings and large edifices, and so on.

Leaky coaxial cable integrates the function of antenna and feeder cable, its functions: a) transmit electromagnetic wave, b) launch electromagnetic wave, c) receive specific electromagnetic wave outside.

There are two kinds of leaky coaxial cable, Radiating Mode and Coupled Mode.



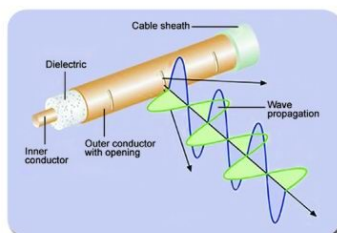
subway communication



building communication



tunnel communication



Transmit theory of leaky coaxial cable



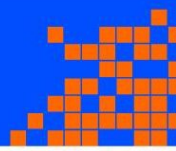
track traffic communication



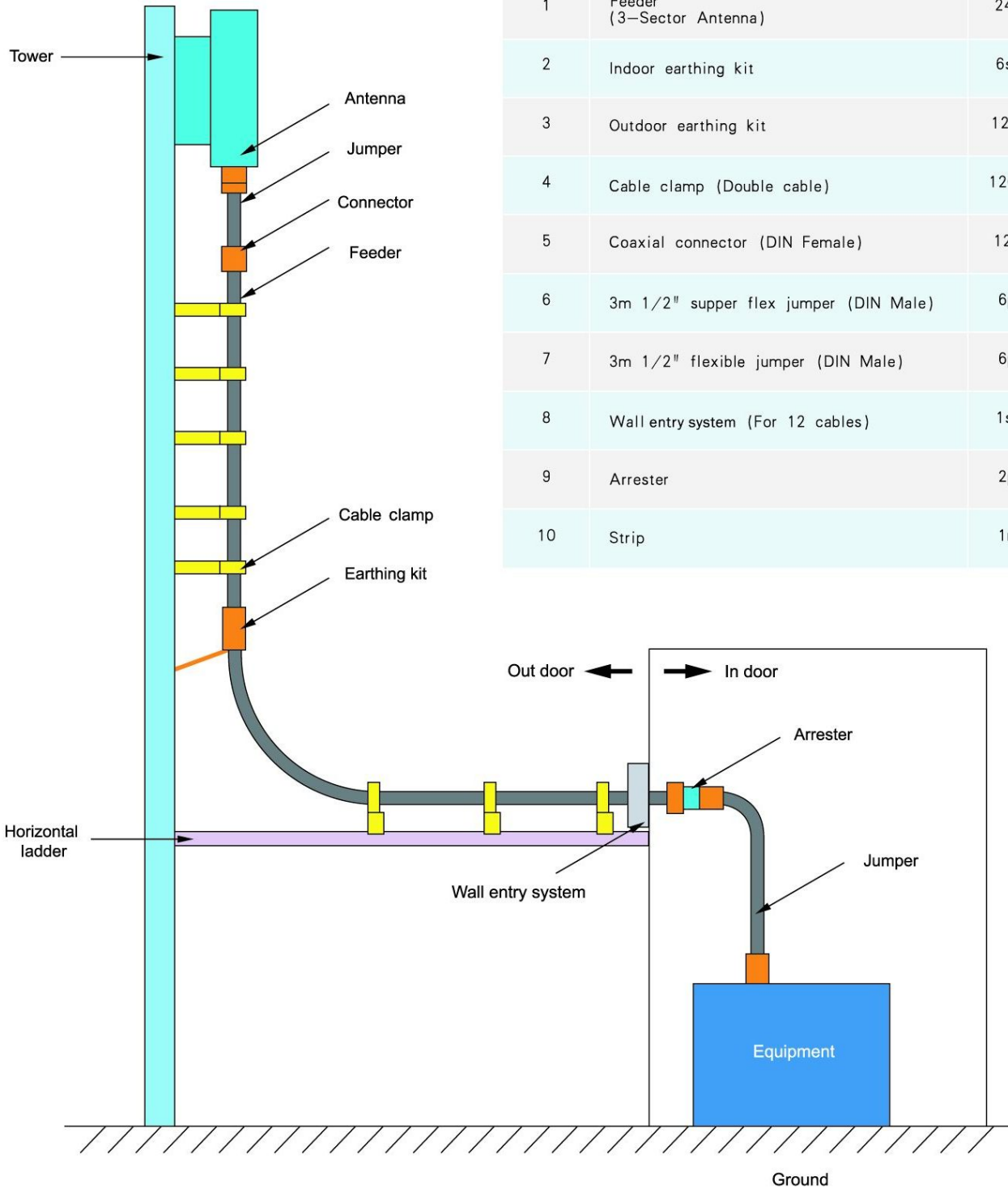
edifices communication



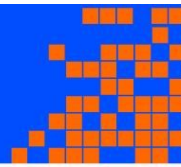
mine communication



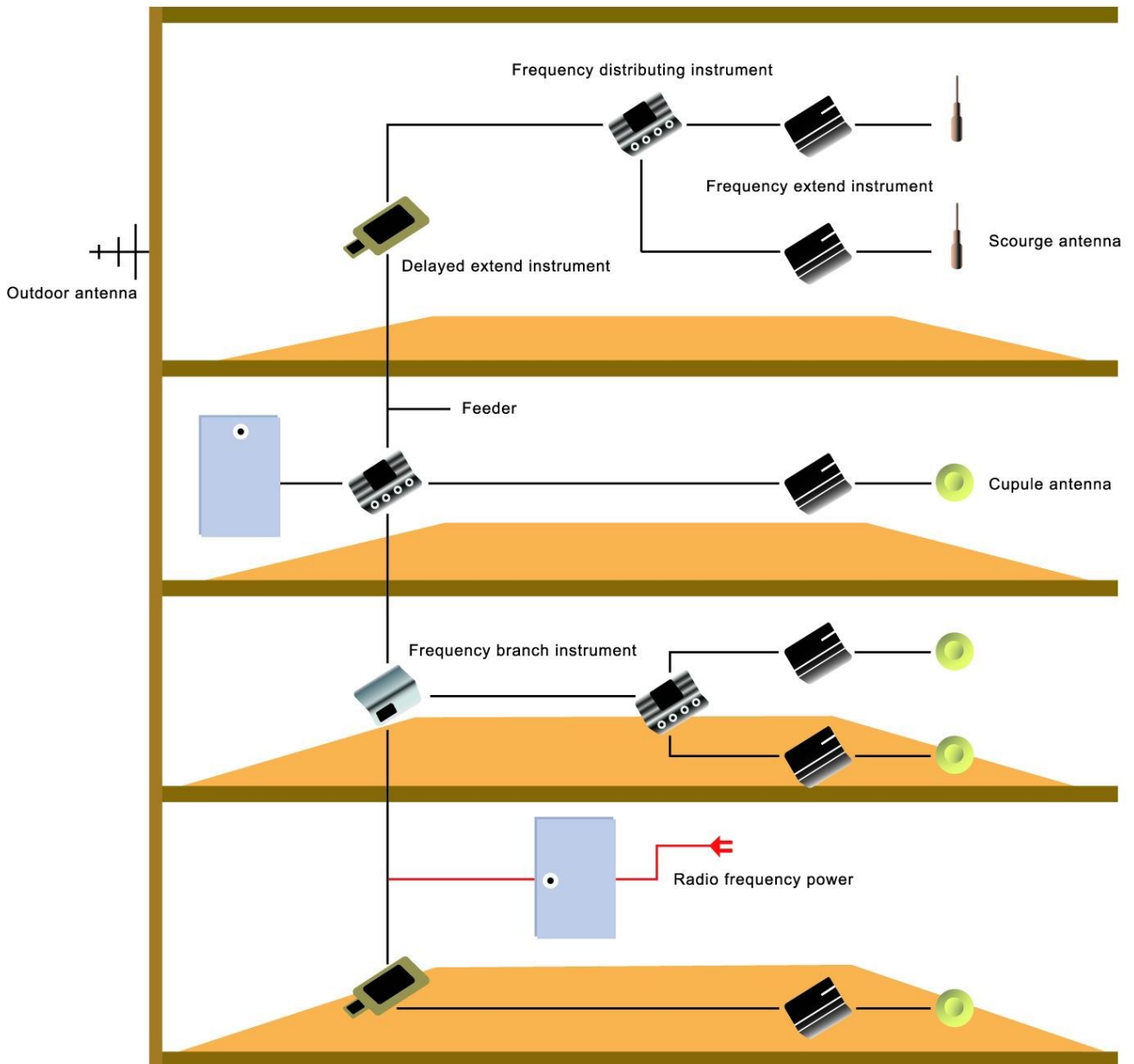
Base Station Communication



NO.	Material	Quantity
1	Feeder (3-Sector Antenna)	240m
2	Indoor earthing kit	6sets
3	Outdoor earthing kit	12sets
4	Cable clamp (Double cable)	120pcs
5	Coaxial connector (DIN Female)	12pcs
6	3m 1/2" supper flex jumper (DIN Male)	6pcs
7	3m 1/2" flexible jumper (DIN Male)	6pcs
8	Wall entry system (For 12 cables)	1sets
9	Arrester	2pcs
10	Strip	1roll



Indoor Distributing



RF Cable
1-5/8"(HHTAY-50-42)

*** Construction**

Item	Diameter	Material
Inner conductor	17.3mm	Helical corrugated copper tube
Insulation	42.0mm	Foamed polyethylene
Outer conductor	46.5mm	Annular corrugated copper tube
Jacket	49.5mm	Polyethylene



*** Mechanical characteristics**

Item	Specification	Remarks
Static minimum bending radius	250mm	Single bend
Dynamic minimum bending radius	500mm	Repeated 15 times
Tensile strength	3000N	
Cable weight	1500kg/km	

*** Electrical characteristics**

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ .km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC15000V	1 minute
Peak power rating	300kw	
RF peak voltage	5600V	
VSWR typical value	1.10	820M~960MHz
	1.10	1700M~1900MHz
	1.15	1900M~2500 MHz

*** Attenuation & Average power rating**

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.25	51.0	1400	3.58	3.45
100	0.72	15.9	1600	3.85	3.22
200	1.05	11.1	1700	4.05	3.06
300	1.32	9.00	1800	4.21	2.96
400	1.55	7.43	1900	4.31	2.93
500	1.80	6.43	2000	4.52	2.73
600	1.95	5.83	2100	4.68	2.65
700	2.30	5.35	2200	4.81	2.58
800	2.50	4.86	2400	5.02	2.44
900	2.71	4.53	2600	5.23	2.30
1000	2.88	4.24	2800	5.52	2.15
1200	3.20	3.76	3000	5.92	1.91

RF Cable
1-1/4"(HCTAY-50-32)

★ Construction

Item	Diameter	Material
Inner conductor	13.1mm	Copper tube
Insulation	32.2mm	Foamed polyethylene
Outer conductor	35.8mm	Annular corrugated copper tube
Jacket	40.0mm	Polyethylene



★ Mechanical characteristics

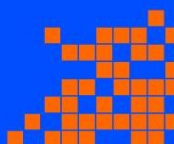
Item	Specification	Remarks
Static minimum bending radius	200mm	Single bend
Dynamic minimum bending radius	350mm	Repeated 15 times
Tensile strength	2000N	
Cable weight	1000kg/km	

★ Electrical characteristics

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC10000V	1 minute
Peak power rating	200kw	
RF peak voltage	4300V	
VSWR typical value	1.10	820M-960MHz
	1.10	1700M-1900MHz
	1.15	1900M-2500 MHz

★ Attenuation & Average power rating

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.25	39.5	1400	4.14	2.33
100	0.87	11.0	1600	4.54	2.11
200	1.26	7.56	1700	4.73	2.04
300	1.51	6.25	1800	4.92	1.97
400	1.88	5.10	1900	5.10	1.90
500	2.15	4.50	2000	5.29	1.83
600	2.40	4.05	2100	5.46	1.76
700	2.65	3.64	2200	5.64	1.70
800	2.88	3.32	2400	5.99	1.59
900	3.10	3.15	2600	6.33	1.47
1000	3.32	2.85	2800	6.67	1.36
1200	3.74	2.58	3000	7.02	1.24



RF Cable
7/8"(HCTAY-50-22)

★ Construction

Item	Diameter	Material
Inner conductor	9.0mm	Copper tube
Insulation	22.3mm	Foamed polyethylene
Outer conductor	24.9mm	Annular corrugated copper tube
Jacket	27.5mm	Polyethylene



★ Mechanical characteristics

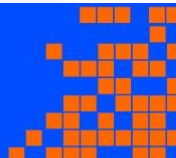
Item	Specification	Remarks
Static minimum bending radius	120mm	Single bend
Dynamic minimum bending radius	250mm	Repeated 15 times
Tensile strength	1800N	
Cable weight	550kg/km	

★ Electrical characteristics

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ .km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC10000V	1 minute
Peak power rating	90kw	
RF peak voltage	3000V	
VSWR typical value	1.10	820M~960MHz
	1.10	1700M~1900MHz
	1.15	1900M~2500 MHz

★ Attenuation & Average power rating

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.38	24.5	1400	4.97	1.80
100	1.20	7.55	1600	5.36	1.67
200	1.72	5.26	1700	5.55	1.62
300	2.13	4.24	1800	5.74	1.57
400	2.49	3.63	1900	5.92	1.53
500	2.80	3.21	2000	6.10	1.48
600	3.10	2.91	2100	6.27	1.44
700	3.37	2.67	2200	6.45	1.40
800	3.63	2.48	2400	6.78	1.34
900	3.88	2.34	2600	7.11	1.28
1000	4.11	2.19	2800	7.44	1.22
1200	4.55	1.96	3000	7.75	1.16



RF Cable
5/8"(HCTAY-50-17)

★ Construction

Item	Diameter	Material
Inner conductor	7.0mm	Copper tube
Insulation	17.0mm	Foamed polyethylene
Outer conductor	19.7mm	Annular corrugated copper tube
Jacket	22.0mm	Polyethylene



★ Mechanical characteristics

Item	Specification	Remarks
Static minimum bending radius	90mm	Single bend
Dynamic minimum bending radius	190mm	Repeated 15 times
Tensile strength	1600N	
Cable weight	390kg/km	

★ Electrical characteristics

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC5000V	1 minute
Peak power rating	65kW	
RF peak voltage	2000V	
VSWR typical value	1.15	10M~3000MHz
	1.08	800M~1000MHz
	1.08	1700M~2000MHz
	1.08	2100M~2400MHz

★ Attenuation & Average power rating

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.46	18.2	1800	7.02	1.20
100	1.49	5.8	1900	7.24	1.16
150	1.84	4.6	2000	7.46	1.12
200	2.14	4.0	2100	7.51	1.12
300	2.65	3.2	2200	7.87	1.06
450	3.28	2.6	2400	8.27	1.04
500	3.47	2.4	2500	8.50	0.99
700	4.16	2.1	2700	8.85	0.95
800	4.48	1.9	3000	9.41	0.91
900	4.77	1.8	3400	10.12	0.85
1000	5.06	1.7	4000	11.14	0.77
1500	6.42	1.35	5000	12.72	0.67
1700	6.80	1.23	6000	14.20	0.60

RF Cable
1/2"(HCAAY-50-12)

*** Construction**

Item	Diameter	Material
Inner conductor	4.8mm	Copper clad aluminum wire
Insulation	12.3mm	Foamed polyethylene
Outer conductor	13.8mm	Annular corrugated copper tube
Jacket	15.8mm	Polyethylene



*** Mechanical characteristics**

Item	Specification	Remarks
Static minimum bending radius	60mm	Single bend
Dynamic minimum bending radius	120mm	Repeated 15 times
Tensile strength	1200N	
Cable weight	250kg/km	

*** Electrical characteristics**

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC4000V	1 minute
Peak power rating	40kw	
RF peak voltage	1800V	
VSWR typical value	1.10	820M~960MHz
	1.10	1700M~1900MHz
	1.15	1900M~2500 MHz

*** Attenuation & Average power rating**

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.69	11.3	1400	8.99	0.85
100	2.22	3.43	1600	9.68	0.78
200	3.18	2.44	1700	10.01	0.77
300	3.97	2.10	1800	10.35	0.74
400	4.57	1.65	1900	10.67	0.71
500	5.17	1.48	2000	10.98	0.67
600	5.67	1.36	2100	11.28	0.66
700	6.16	1.25	2200	11.58	0.65
800	6.63	1.14	2400	12.17	0.63
900	7.12	1.06	2600	12.74	0.60
1000	7.48	1.05	2800	13.29	0.57
1200	8.26	0.92	3000	13.82	0.55

RF Cable
3/8"(HCAAY-50-8)

★ Construction

Item	Diameter	Material
Inner conductor	3.1mm	Copper clad aluminum wire or copper wire
Insulation	8.0mm	Foamed polyethylene
Outer conductor	9.5mm	Annular corrugated copper tube
Jacket	11.0mm	Polyethylene



★ Mechanical characteristics

Item	Specification	Remarks
Static minimum bending radius	40mm	Single bend
Dynamic minimum bending radius	100mm	Repeated 15 times
Tensile strength	800N	
Cable weight	120kg/km	

★ Electrical characteristics

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	标称值 Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	76pF/m	标称值 Nominal value
Dielectric strength	DC2500V	1 minute
Peak power rating	15.6KW	
RF peak voltage	1050V	
VSWR typical value	1.15	10M~3000MHz
	1.08	800M~1000MHz
	1.08	1700M~2000MHz
	1.08	2100M~2400MHz

★ Attenuation & Average power rating

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	1.04	7.00	1800	15.20	0.46
100	3.38	2.10	1900	15.60	0.44
150	4.16	1.70	2000	16.10	0.43
200	4.84	1.50	2100	16.50	0.42
300	5.98	1.20	2200	16.70	0.41
450	7.42	1.00	2400	17.70	0.39
500	7.84	0.90	2500	18.10	0.39
700	9.40	0.76	2700	18.90	0.37
800	10.10	0.70	3000	21.10	0.34
900	10.80	0.66	4000	23.40	0.30
1000	11.10	0.63	5000	26.50	0.26
1500	13.80	0.51	6000	29.30	0.24
1700	14.70	0.47	8000	34.50	0.20

RF Cable
7/8"S(HHTAY-50-21)

*** Construction**

Item	Diameter	Material
Inner conductor	9.4mm	Helical corrugated copper tube
Insulation	21.7mm	Foamed polyethylene
Outer conductor	24.9mm	Annular corrugated copper tube
Jacket	27.5mm	Polyethylene



*** Mechanical characteristics**

Item	Specification	Remarks
Static minimum bending radius	80mm	Single bend
Dynamic minimum bending radius	125mm	Repeated 15 times
Tensile strength	2000N	
Cable weight	550kg/km	

*** Electrical characteristics**

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	88%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	76pF/m	Nominal value
Dielectric strength	DC6000V	1 minute
Peak power rating	90kw	
RF peak voltage	3100V	
VSWR typical value	1.10	820M-960MHz
	1.10	1700M-1900MHz
	1.15	1900M-2500MHz

*** Attenuation & Average power rating**

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	0.40	21.5	1400	5.36	1.61
100	1.30	6.62	1600	5.81	1.59
200	1.87	4.61	1700	6.02	1.44
300	2.31	3.72	1800	6.20	1.39
400	2.72	3.20	1900	6.37	1.35
500	3.05	2.83	2000	6.58	1.31
600	3.37	2.55	2100	6.76	1.27
700	3.65	2.36	2200	6.97	1.24
800	3.94	2.19	2400	7.28	1.20
900	4.20	2.06	2600	7.67	1.14
1000	4.45	1.95	2800	8.03	1.09
1200	4.85	1.90	3000	8.35	1.04



RF Cable
1/2" S(HRCAY-50-9)

*** Construction**

Item	Diameter	Material
Inner conductor	3.6mm	Copper clad aluminum wire
Insulation	9.0mm	Foamed polyethylene
Outer conductor	12.1mm	Helical corrugated copper tube
Jacket	13.5mm	Polyethylene



*** Mechanical characteristics**

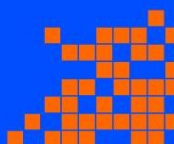
Item	Specification	Remarks
Static minimum bending radius	30mm	Single bend
Dynamic minimum bending radius	40mm	Repeated 15 times
Tensile strength	1000N	
Cable weight	190kg/km	

*** Electrical characteristics**

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	81%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	80pF/m	Nominal value
Dielectric strength	DC2500V	1 minute
Peak power rating	15.6kw	
RF peak voltage	1400V	
VSWR typical value	1.10	820M-960MHz
	1.10	1700M-1900MHz
	1.15	1900M-2500MHz

*** Attenuation & Average power rating**

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	1.09	10.0	1400	14.17	0.76
100	3.53	2.97	1600	15.19	0.71
200	5.04	2.42	1700	15.72	0.68
300	6.21	1.31	1800	16.22	0.66
400	7.26	1.12	1900	16.75	0.63
500	8.16	1.29	2000	17.29	0.61
600	8.96	1.18	2100	17.70	0.60
700	9.74	1.09	2200	18.15	0.58
800	10.44	1.01	2400	19.10	0.55
900	11.12	0.95	2600	20.06	0.52
1000	11.84	0.89	2800	21.13	0.50
1200	13.02	0.83	3000	22.08	0.49



RF Cable
3/8" S(HRCAY-50-7)

*** Construction**

Item	Diameter	Material
Inner conductor	2.6mm	Copper clad aluminum wire or copper wire
Insulation	7.0mm	Foamed polyethylene
Outer conductor	9.0mm	Annular corrugated copper tube
Jacket	10.5mm	Polyethylene



*** Mechanical characteristics**

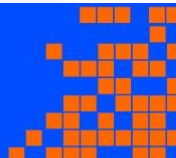
Item	Specification	Remarks
Static minimum bending radius	12.5mm	Single bend
Dynamic minimum bending radius	25mm	Repeated 15 times
Tensile strength	600N	
Cable weight	150kg/km	

*** Electrical characteristics**

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	81%	Nominal value
Minimum Insulation resistance	5000MΩ.km	DC 500V 1 minute
Capacitance	82pF/m	Nominal value
Dielectric strength	DC2500V	1 minute
Peak power rating	13.4kW	
RF peak voltage	1200V	
VSWR typical value	1.15	10M~3000MHz
	1.08	800M~1000MHz
	1.08	1700M~2000MHz
	1.08	2100M~2400MHz

*** Attenuation & Average power rating**

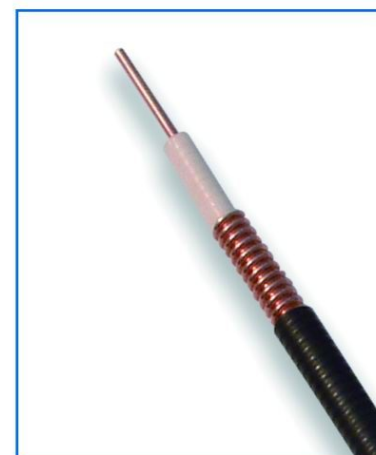
Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	1.30	6.0	1800	19.64	0.407
100	4.09	1.87	1900	20.35	0.396
150	4.89	1.52	2000	21.06	0.384
200	5.59	1.31	2100	21.77	0.374
300	6.84	1.06	2200	22.46	0.364
450	8.49	0.86	2400	23.55	0.350
500	9.00	0.81	2500	24.51	0.340
700	10.90	0.678	2700	25.85	0.325
800	11.79	0.631	3000	27.82	0.306
900	12.66	0.593	4000	34.17	0.260
1000	13.50	0.560	5000	40.24	0.229
1500	17.43	0.449	6000	46.13	0.206
1700	18.91	0.420	8000	57.50	0.174



RF Cable
1/4"S(HRY-50-5)

★ Construction

Item	Diameter	Material
Inner conductor	1.9mm	Copper wire
Insulation	5.0mm	Foamed polyethylene
Outer conductor	6.4mm	Helical corrugated copper tube
Jacket	8.0mm	Polyethylene



★ Mechanical characteristics

Item	Specification	Remarks
Static minimum bending radius	12.5mm	Single bend
Dynamic minimum bending radius	25mm	Repeated 15 times
Tensile strength	400N	
Cable weight	70kg/km	

★ Electrical characteristics

Item	Specification	Remarks
Characteristic impedance	50 ± 1 Ω	
Velocity	83%	Nominal value
Minimum Insulation resistance	3000MΩ.km	DC 500V 1 minute
Capacitance	80pF/m	Nominal value
Dielectric strength	DC2000V	1 minute
Peak power rating	6.4kW	
RF peak voltage	800V	
VSWR typical value	1.15	10M-3000MHz
	1.08	800M-1000MHz
	1.08	1700M-2000MHz
	1.08	2100M-2400MHz

★ Attenuation & Average power rating

Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)	Frequency (MHz)	Attenuation (dB/100m)	Average power (kw)
10	1.71	2.8	1800	26.35	0.186
100	5.58	0.86	1900	27.16	0.181
150	6.89	0.70	2000	27.97	0.176
200	8.01	0.60	2100	28.75	0.171
300	9.92	0.49	2200	29.53	0.167
450	12.31	0.39	2400	31.06	0.154
500	13.03	0.37	2500	31.77	0.151
700	15.61	0.31	2700	33.21	0.149
800	16.80	0.290	3000	35.30	0.140
900	17.92	0.272	4000	41.86	0.115
1000	18.98	0.257	5000	47.83	0.100
1500	23.78	0.206	6000	53.42	0.090
1700	25.51	0.192	8000	63.78	0.075

Leaky Coaxial Cable-radiating Mode

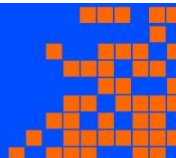
* Construction

Item	Inner conductor		Outer conductor		Jacket	
	Material	Diameter	Material	Diameter	Material	Diameter
7/8" (HLCTY-50-22)	Copper tube	9.0mm	Slotted Longitudinally- wrapped Copper tape	23.5mm	PE or LSOH	27.5mm
1-1/4" (HLCTY-50-32)		13.1mm		33.5mm		37.5mm
1-1/4" (HLCTY-75-32)		8.0mm		33.5mm		37.5mm
1-5/8" (HLCTY-50-42)	Helical corrugated Copper tube	17.3mm		43.5mm		48.0mm



* Characteristics

Item		HLCTY-50-22 7/8"	HLCTY-50-32 1-1/4"	HLCTY-75-32 1-1/4"	HLCTY-50-42 1-5/8"
Dynamic minimum (cm)		70	100	100	150
Dynamic minimum (°C)		-40 ~ +80			
Capacitance (pF/m)		76	76	50	76
Impedance (Ω)		50	50	75	50
Velocity (%)		88	88	88	88
Insulation resistance, Min (MΩ·km)		5000	5000	5000	5000
VSWR, Max		1.30	1.30	1.30	1.30
Attenuation, Max 20 °C, dB/100m	150MHz	1.5	1.1	1.4	0.8
	450MHz	2.8	2.1	—	1.4
	900MHz	4.5	3.5	—	2.3
	1800MHz	8.0	6.0	—	4.2
	2400MHz	12.0	8.5	—	5.2
Coupling loss 2m, dB, 50%/95%	150MHz	65/75	66/78	—/75	66/78
	450MHz	72/84	75/85	—/75	78/88
	900MHz	65/74	65/72	—	58/63
	1800MHz	60/70	62/65	—	57/63
	2400MHz	60/68	60/65	—	61/67



Leaky Coaxial Cable-coupled Mode

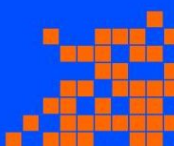
* Construction

Item	Inner conductor		Outer conductor		Jacket	
	Material	Diameter	Material	Diameter	Material	Diameter
1/2" (HLCTY-50-12)	Copper clad Aluminium wire	4.8mm	Slotted Longitudinally-wrapped Copper tape	13.8mm	PE or LSOH	15.8mm
7/8" (HLCTY-50-22)	Copper tube	9.0mm		24.9mm		27.5mm
1-1/4" (HLCTY-50-32)		13.1mm		35.8mm		38.5mm
1-5/8" (HLCTY-50-42)	Helical corrugated Copper tube	17.3mm		46.5mm		49.5mm



* Characteristics

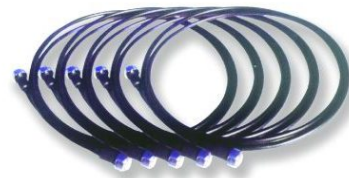
Item		HLCTY-50-12 1/2"	HLCTY-50-22 7/8"	HLCTY-50-32 1-1/4"	HLCTY-50-42 1-5/8"
Dynamic minimum (cm)		25	50	70	100
Dynamic minimum (°C)		-40 ~ +80			
Capacitance (pF/m)		76	76	76	76
Impedance (Ω)		50	50	50	50
Velocity (%)		88	88	88	88
Insulation resistance, Min (MΩ · km)		5000	5000	5000	5000
VSWR, Max		1.30	1.30	1.30	1.30
Attenuation, Max 20 °C, dB/100m	150MHz	3.0	1.8	1.3	0.8
	450MHz	5.5	3.5	3.0	2.0
	900MHz	8.2	5.0	4.1	2.7
	1800MHz	12.5	7.2	5.5	4.4
	2400MHz	14.5	8.8	6.8	5.5
Coupling loss 2m, dB, 50%/95%	150MHz	62/78	65/75	66/75	72/82
	450MHz	70/80	72/80	75/85	75/85
	900MHz	71/82	75/85	76/86	76/85
	1800MHz	77/87	78/87	77/88	78/86
	2400MHz	77/87	78/88	78/88	78/88



Jumpers

★ ZHRF jumpers have the following advantageous features:

Low VSWR, excellent flexibility, Easy Attachment and Water-proof.



★ Characteristic chart

Item		Cable size	7/8"S	1/2"S	3/8"S	1/4"S	1/2"	3/8"	1/4"
Characteristic impedance			50Ω	50Ω	50Ω	50Ω	50Ω	50Ω	50Ω
Insulated resistance			≥5000MΩ	≥5000MΩ	≥5000MΩ	≥5000MΩ	≥5000MΩ	≥5000MΩ	≥5000MΩ
Dielectric strength			4000V	2500V	2500V	2000V	2500V	2500V	2000V
Frequency range			0-3GHz	0-3GHz	0-3GHz	0-3GHz	0-3GHz	0-3GHz	0-3GHz
VSWR	0-3000MHz		≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1
	800-1000MHz		≤1.06	≤1.06	≤1.06	≤1.06	≤1.06	≤1.06	≤1.06
	1700-2500MHz		≤1.08	≤1.08	≤1.08	≤1.08	≤1.08	≤1.08	≤1.08
Work voltage			1500V	1500V	1500V	1500V	1500V	1500V	1500V

Connectors

★ Connectors provided by us have the following advantageous features:

Low VSWR, Low Intermodulation, Easy Attachment and Water-proof.



★ Characteristic chart

Item		type	N type	7/16 (DIN) type	SMA type	BNC type
Characteristic impedance			50Ω	50Ω	50Ω	50Ω
Frequency range			1M-11GHz	1M-6GHz	0-18GHz	0-3GHz
Dielectric strength (Min at sea level)			2500V	4000V	500V	1500V
VSWR			≤1.06 (1M-3G) ≤1.08 (3G-11G)	≤1.1 (2G-6G) ≤1.08 (1M-2G)	≤1.2 (0-3G) ≤1.4 (3-18G)	≤1.15 (0-3G)
Contact resistance	Inner conductor		≤0.8mΩ	≤0.8mΩ	≤5mΩ	≤5mΩ
	Outer conductor		≤0.4mΩ	≤0.2mΩ	≤2.5mΩ	≤2.5mΩ
Insulated resistance			≥5000MΩ	≥10000MΩ	≥5000MΩ	≥5000MΩ
Insertion loss			≤0.1dB	≤0.1dB	≤0.1dB	≤0.1dB
Center retentivity			>0.6N	>0.6N	>0.28N	>0.57N
Durability			≥500 Cycles	≥1000 Cycles	≥500 Cycles	≥500 Cycles



Cable Clamps

- * Feeder clamps are made of stainless steel and Anti-UV rubber, adopting special technic of coating, widely used in the fix of RF cables. Applied in different operation temperature.



Through type

Item	Type	ΦD(mm)
1/2" single	1*1/2"	16
1/2" double	2*1/2"	16
1/2" triple	3*1/2"	16
7/8" single	1*7/8"	27.5
7/8" double	2*7/8"	27.5
7/8" triple	3*7/8"	27.5
7/8" quadruple	4*7/8"	27.5



Anchor ear type

Item	Type	ΦD(mm)
1/2" single	1*1/2"	16
7/8" single	1*7/8"	27.5



Throat hoop type

Item	Type	ΦD(mm)
1/2" single	1*1/2"	16
7/8" single	1*7/8"	27.5
7/8" six fold	6*7/8"	27.5



Wall attachment type

Item	Type	ΦD(mm)
1/2" single	1*1/2"	16
1/2" double	2*1/2"	16
7/8" single	1*7/8"	27.5
7/8" double	2*7/8"	27.5
7/8" triple	3*7/8"	27.5



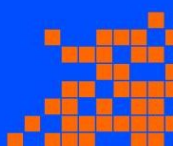
LCX type

Item	Type	ΦD(mm)
1/2" single-1	1/2"	16
7/8" single-1	7/8"	27.5
1-1/4" single-1	1-1/4"	39.5
1-5/8" single-1	1-5/8"	50
1/2" single-2	1/2"	16
7/8" single-2	7/8"	27.5
1-1/4" single-2	1-1/4"	39.5
1-5/8" single-2	1-5/8"	50



Shackle type


Item	Type	ΦD(mm)
7/8" single	1*7/8"	27.5
7/8" double	2*7/8"	27.5
7/8" triple	3*7/8"	27.5




Grounding Kits

- * Various indoor & outdoor grounding kits are applied to the grounding protecting of various feeders, installation easily and performance reliable.


Spring type outdoor grounding kits

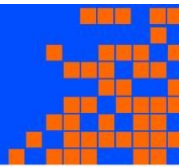
	Item	Description
	1/2" series	1/2" ground kits used outdoor
	7/8" series	7/8" ground kits used outdoor
	1-1/4" series	1-1/4" ground kits used outdoor
	1-5/8" series	1-5/8" ground kits used outdoor

Framework type outdoor grounding kits

	Item	Description
	1/2" series	1/2" ground kits used outdoor
	7/8" series	7/8" ground kits used outdoor
	1-1/4" series	1-1/4" ground kits used outdoor
	1-5/8" series	1-5/8" ground kits used outdoor

Indoor grounding kits

	Item	Description
	common type	Indoor ground kits
	common type	Indoor ground kits (with C copper Nose)



Other Accessories



Arrester



Grounding bracket



Tie wraps



Wall entry system



Load



Feeder markings



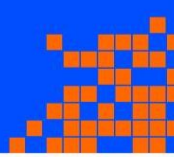
Daub & Adhesive tape



Cold shrink weather proofing kits



Hanging clamp



Packing & Transportation

- ★ Zhongtian Hitachi RF cables are packed in carton, coiled on wooden reel. Both carton and wooden reel are non-returnable. When the cable is ordered with connector, the connector is assembled in the end of the cable. During transportation, right tool should be used to avoid damaging the package, and handle carefully.
- ★ When cables are in the process of transportation, storage and usage, some notice should be taken: Cables should be protected from moisture; Cables should be kept away from high temperature condition and spark; Cables should be protected from overbending and crushing; Cables should be protected from mechanical damage.

