



Dongguan Manson Wire And Cable Ltd.

*One-Cable Solution for Automotive
High Frequency Communication*

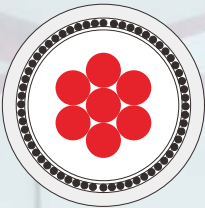
高频通信一线解决方案

RTK031 Cable - Fakra Connectors



High-Frequency Signal Cable

新一代高频讯号线

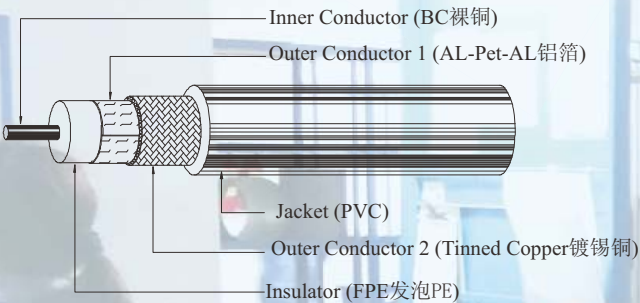


Application(应用):

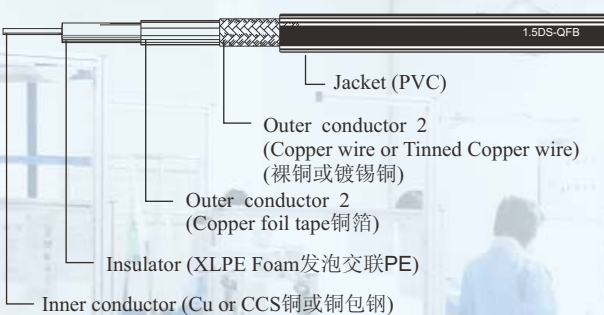
TV, radio, or phone receivers on automobile; Car navigation system (GPS); Wiring inside telecommunications and electronic equipment such as portable phone.

用于车载设备，如电视，收音或者电话等的接收；车载GPS导航；用于电子设备内部的布线，如移动电话等。

RTK-031



1.5DS-QFB / 2.5DS-QFB / 3.5D-QFB



■ Rated Temperature (额定温度): -40~105 °C

■ RoHS Compliant

■ Flame Retardancy (防火性能): IEC 60332-1, 60332-3

■ Jacket (外被): PVC, LSZH, PUR, etc.

Model		RTK-031	1.5DS-QFB	2.5DS-QFB	3.5D-QFB	
Inner conductor(内导体): wires/conductor dia.(mm)		7/0.27	7/0.20	7/0.32	1/1.2	
Insulator O. D. (绝缘线径) (mm)		2.1	1.6	2.7	3.5	
Outer conductor 1(外导体1) (>100%)		AL/PET/AL	Copper Foil	Copper Foil	Copper Foil	
Outer conductor 2(外导体2)		0.1x16x7	0.10x16x5	0.08x16x10	0.14x16x5	
Jacket O. D. (外径) (mm)		3.2±0.1	3.0±0.2	3.8±0.3	5.6±0.3	
Electrical properties (电性能)	Max. Conductor resistance (20℃) (Ω/km)	48	85	33.3	15.9	
	Capacitance (1 kHz) (nF/km)	85±4	89±4	86±4	86±4	
	Characteristic impedance (Ω)	50±2	50±2	50±2	50±2	
	Std. attenuation (20℃) (dB/km)	800 MHz	437	590	420	310
		900 MHz	453	630	450	330
		1500 MHz	605	830	560	440
		1900 MHz	684	950	660	510
		2300 MHz	757	1060	760	570
		2500 MHz	797	1110	800	600
		3000 MHz	881	--	--	--
5800 MHz		--	1790	1260	1030	

We can also manufacture the traditional automotive antenna coaxial cables, including RG58, RG174, 1.5C-2V/HAV0.5, etc. 我们也能生产传统的汽车天线，如RG58, RG174, 1.5C-2V/HAV0.5等。

弊社は伝統的な自動車アンテナ用の同軸ケーブルを生産することもでき、例えばRG58, RG174, 1.5C-2V/HAV0.5 等です。

Fakra Connector

Fakra 连接器

Center contact (中心连接端子)

Material(材质): Spring bronze(弹簧青铜)
Plating: Gold, min. 0.8 μm, over chemical nickel
电镀: 化学镀镍层上度 ≥ 0.8 μm金

Outer contact (外连接)

90 DEGREE FEMALE:
Material(材质): Stainless steel(不锈钢)
Plating: Stainless steel (Interface), Tin, 2-4μm (Crimp)
电镀: 不锈钢(接口), 2-4 μm锡(压接位置)

STRAIGHT FEMALE:
Material(材质): Spring bronze(弹簧青铜)
Plating(电镀): Tin(锡), 1.5-3 μm

STRAIGHT MALE:
Material(材质): Spring bronze(弹簧青铜)
Plating(电镀): Tin(锡), 1.5-3 μm

Technical data(技术参数)

Impedance (阻抗): 50Ω
Insertion loss (插入损耗): ≤ 0.1×√(f(GHz)) dB
Insulation resistance (绝缘电阻): ≥ 1×10³ MΩ
Mating cycles (插拔次数): ≥ 25
Engagement force (插力): ≤ 25 N
Disengagement force (拔力): ≥ 2 N
Retention force (插头拉力): ≥ 110 N
Temperature range (工作温度范围): -40°C to +105°C

90 DEGREE FEMALE:
Frequency (频率): DC to 6 GHz
Return loss (回波损耗): ≥ 28 dB, DC to 1 GHz
≥ 22 dB, DC to 2 GHz
≥ 20 dB, DC to 4 GHz
≥ 18 dB, DC to 6 GHz
Center contact resistance (中心连接端子电阻): ≤ 15 mΩ
Outer contact resistance (外连接电阻): ≤ 10 mΩ
RF-leakage (射频泄漏): ≥ 65 dB up to 1 GHz

STRAIGHT FEMALE:
Frequency (频率): DC to 6 GHz
Return loss (回波损耗): ≥ 26 dB, DC to 1 GHz
≥ 19 dB, DC to 2 GHz
≥ 15 dB, DC to 4 GHz
≥ 14 dB, DC to 6 GHz
Center contact resistance (中心连接端子电阻): ≤ 5 mΩ
Outer contact resistance (外连接电阻): ≤ 5 mΩ
RF-leakage (射频泄漏): ≥ 53 dB up to 1 GHz

STRAIGHT MALE:
Frequency (频率): DC to 3 GHz
Return loss (回波损耗): ≤ -28 dB, DC to 1 GHz
≤ -23 dB, DC to 2 GHz
≤ -19 dB, DC to 3 GHz
Center contact resistance (中心连接端子电阻): ≤ 5 mΩ
Outer contact resistance (外连接电阻): ≤ 5 mΩ
RF-leakage (射频泄漏): ≥ 53 dB up to 1 GHz

Application(应用):

Fakra connectors have been especially designed to fulfill the tough requirements of the automotive industry.

A comprehensive coding system offers 13 mechanical and colored coding (A to N) and one neutral coding (Z = water blue) for modern automotive applications, e.g. GPS, keyless entry, GSM mobile radio or RF Bluetooth applications.

Cable connectors for RG 58, RG 174, RG 178, RG 316, and RTK 031;

Primary and secondary locking systems lead to high assembling security;

Stamped & Formed Technology: Parts of highest precision due to high reliability in manufacturing process;

Suitable for fully automated assembly by harness makers.

Fakra 接插件是目前汽车广泛采用的部件，通过颜色和防错结构进行正确匹配；应用于：导航系统、远程控制、车载电话、车载电视、音响设备、天线等功能。

适用于RG 58, RG 174, RG 178, RG 316, RTK 031等线缆；

具有二次锁紧功能，安全性能更加良好；

对比传统的焊接技术，新一代的压接成型技术和生产设备，使得生产出来的线缆连接器套件性能非常稳定；

适用于自动化和高速化生产；

90 DEGREE FEMALE



STRAIGHT FEMALE



STRAIGHT MALE



FLR Automotive Single Core Cable

FLR 汽车单支线



Construction(结构)

Conductor: stranded, tin plated copper, flexible
Insulation: XLPE Crosslinked polyolefin, various colors
导体: 镀锡铜绞线
绝缘: 交联低烟无卤

Technical data(技术参数)

Voltage rating(额定电压): 300V
Test voltage(测试电压): 3000V
Temperature range(温度范围): -40~150°C
Min. bending radius: 3 X cable diameter
最小弯曲半径: 3倍线径

Application(应用)

low voltage cable with thin wall insulation for road vehicles (FLR according to DIN 72551 T.6, Thin Wall according to ISO 6722)

低压薄壁汽车线; FLR标准: DIN 72551 T.6 薄壁标准: ISO 6722

Properties(性能)

Reduced outer diameter
Resistant to motor fluids, fuels
Hydrolysis resistant
Resistant to pressure at high temperatures
High abrasion resistance
Excellent electrical characteristics

线径更小
抗油性能良好
抗水解性能良好
在高温条件下能够耐压
耐磨
电性能良好

Type A

Cross section 截面积 mm ²	No. of Wires 支数	Wire dia. 每支线径 max. mm	Conductor dia. 导体线径 max. mm	Resistance at 20°C 电阻 Ω/km	Insulation wall thichn. 绝缘皮厚 min. mm	Cable dia. 线径 mm	Weight 线重 nom. kg/100m
0.35	7	0.26	1.20	54.5	0.20	1.25±0.05	0.4
0.50	19	0.19	1.35	38.2	0.22	1.50±0.10	0.6
0.75	19	0.23	1.70	25.4	0.24	1.80±0.10	0.9
1.00	19	0.26	2.20	19.1	0.24	2.00±0.10	1.1
1.50	19	0.32	2.75	13.0	0.24	2.30±0.10	1.6
2.50	19	0.41	3.30	7.80	0.28	2.85±0.15	2.6

Type B

Cross section 截面积 mm ²	No. of Wires 支数	Wire dia. 每支线径 max. mm	Conductor dia. 导体线径 max. mm	Resistance at 20°C 电阻 Ω/km	Insulation wall thichn. 绝缘皮厚 min. mm	Cable dia. 线径 mm	Weight 线重 nom. kg/100m
0.75	24	0.21	1.20	25.40	0.24	1.80±0.10	0.90
1.00	32	0.21	1.35	19.10	0.24	2.00±0.10	1.10
1.50	30	0.26	1.70	13.00	0.24	2.30±0.10	1.60
2.50	50	0.26	2.20	7.80	0.28	2.85±0.15	2.60
4.00	56	0.31	2.75	4.80	0.32	3.55±0.15	4.20
6.00	84	0.31	3.30	3.20	0.32	4.15±0.15	6.10

Antennas

天线杆

Antennas(天线杆)

AM/FM (Radio 收音) Antennas
GSM (Telephone 移动电话) Antennas
GPS (Navigation 导航) Antennas
Dual & Multiband Antennas (双频和多频天线杆)

Frequency (频段):
AM/FM : AM 0.1 — 2MHz (non resonant非谐振); VHF 88 — 108 MHz
GSM 900/ 1800 Antenna: 880-960MHz; 1710 —1880MHz
GPS Antenna :1575.42 MHz +- 2MHz

Temperature range (额定温度): -40°C to 85°C
Impedance range (阻抗): 50Ω, 75Ω ,etc.



AM/FM (Radio收音) Antennas

Multiband Antennas
(AM/FM, GSM, GPS)



Motorcycle Wire Harness

摩托车线束



Application(应用)

For application of electronic fuel injection carburetor
应用于摩托车电喷化油器

Wire specification (线标)

AVSS 0.5, AVSS 0.85



Application(应用)

For application of motorcycle engine
应用于摩托车发动机

Wire specification (线标)

AVSS 0.75, AVSS 0.85, AVSS1.25



Application(应用)

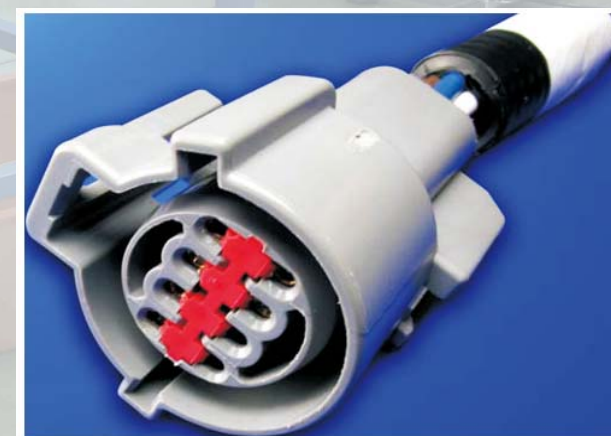
For application of motorcycle engine
应用于摩托车发动机

Wire specification(线标)

AVSS 0.75, AVSS 0.85

Automotive Power Wire Harness

汽车电源线束



Features (特性)

For application of automotive power supply;

The wires are UL listed;

We can use the connectors of TYCO, MOLEX, YAZAKI and DELPHI, etc, according the customer request.

Customized package;

1. 此线束是用于汽车的电源线
2. 100%测试
3. 线材是经过了UL认证
4. 根据客户的要求，连接器是用TYCO、MOLEX、YAZAKI、DELPHI等品牌
5. 符合ROHS要求
6. 根据客户的要求进行包装
7. 可追踪
8. 严格的质量控制保证产品的质量。

Automotive Equipment Wire Harness

车载设备线束

Antenna Cable Assembly

汽车天线连接线束



ABS Brake Wire Harness

ABS防抱死刹车系统线束

Features (特性)

Consisting of flexible cable and precision connector.

由柔性电缆与高精度连接器组成



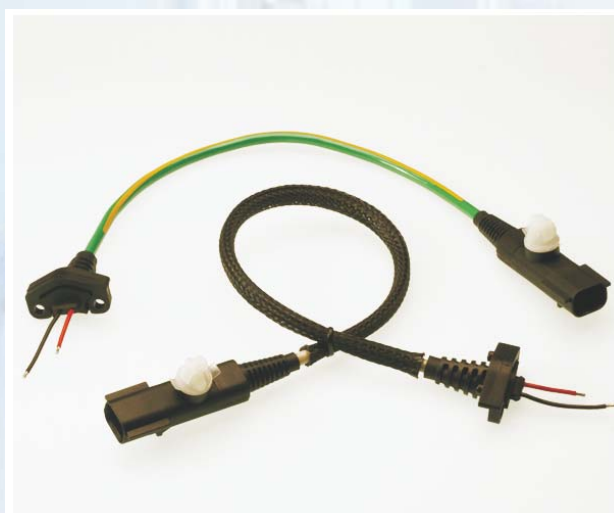
Ford C344

Application(应用):

TV, radio, or phone receivers on automobile; Car navigation system (GPS);

Wiring inside telecommunications and electronic equipment such as portable phone.

用于车载设备，如电视，收音或者电话等的接收；车载GPS导航；用于电子设备内部的布线，如移动电话等。



Entertainment Systems Wire Harness

车载娱乐系统线束

Features (特性)

For vehicle's Audio/Video applications

应用与车载音频和视频设备



Ford CD345

Features (特性)

Consisting of RTK-031 cable and Fakra Connectors;

Primary and secondary locking systems lead to high assembling security;

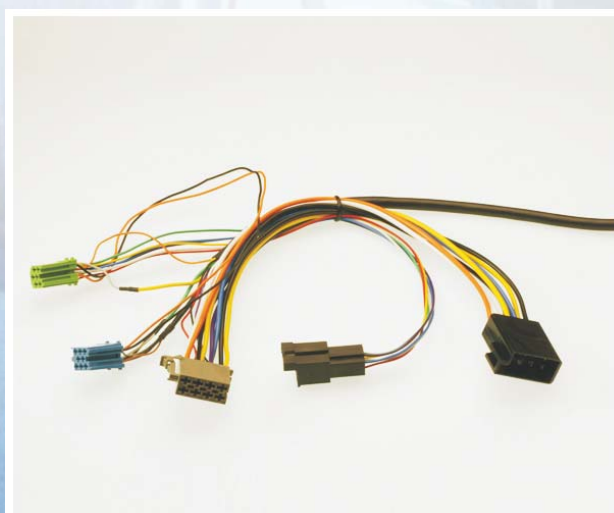
Stamped and Formed Technology: Parts of highest precision due to high reliability in manufacturing process;

Suitable for fully automated assembly by harness makers.

由RTK-031高频线缆与新一代汽车连接器 Fakra 组成；

适用于RG 58, RG 174, RG 178, RG 316, RTK 031等线缆；
具有二次锁紧功能，安全性能更加良好；

对比传统的焊接技术，新一代的压接成型技术和生产设备，使得生产出来的线缆连接器套件性能非常稳定；
适用于自动化和高速化生产；



Windows Regulator Wire Harness

车窗控制线束

Features (特性)

Flexible cable and over-molded strain relief for bending and twist

由柔性电缆组成，适合于弯曲和扭转



Ford C346