Star quad inflight ABS1503 KD24 (F4704-05)

Cables specification: ABS1503

Cable, electrical, shielded quad, for digital data transmission, severe EMI conditions, +200 °C

Cable characteristics

-65 +125°C

Excellent

FAR25_ ABD0031

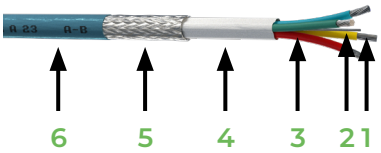
Environmental

- Operating temperature: -65°C to 125°C (ambient temperature + current heating)
- Storage temperature: -65°C to +200°C
- Resistant to Aircraft fluids (oils, hydrocarbons, kerosene, skydrols...), Chemical agents
- Abrasion resistance

Electrical

- Maximum voltage: 600 V AC
- Characteristic Impedance Zc RMS: 100 ± 15 Ω [1-100 MHz] at 20°C
- Velocity of propagation > 0,70 C at 31,25MHz
- Maximum capacity unbalance pair to ground: 330 pF max./100 m (1 pF max./ft)
- Mutual capacitance: 60 pF/m max (18,3 pF/ft max.) at 1 kHz

Cable design



1. Stranded conductor: Silver plated copper
2. Fluoropolymer filler
3. Insulation: Fluoropolymer
4. PTFE 1/2 sintered tape
5. Silver plated copper Braid
6. Fluoropolymer

Identification

- Core color

Pair n° 1:
Core 1-R: Red (Tx +)
Core 1-B: Blue (Tx -)

Pair n° 2:
Core 2-Y: Yellow (Rx +)
Core 2-G: Green (Rx -)

- Cable color: Light blue, UV laser markable

Marking

KD 24 FR A xx A-B
1 2 3 4

1. Short Designation
2. Gauge
3. Country of Origin
4. Manufacturer (A: Draka)

xx: Manufacturing year
A-B: extremity code

Specifications

Cable specification

ABS1503 Cable, electrical, shielded quad, for digital data transmission, severe EMI conditions, +200°C

Technical Specification

EN3375-001

Compliant to ABD0031

Flammability, Smoke and Toxicity requirements and 14 CFR FAR25-1713

Transmission parameters

Frequency In MHz	Attenuation at 25°C Maximal value in dB/100m	*dB/100ft*	Unbalance attenuation LCL Minimal value in dB	Near end crosstalk (NEXT) Minimal value in dB/100m
1	2.1	*0.65*	30-10log (F/100) Calculations that result in LCL values greater than 40 dB can be revert to a requirement of 40 dB minimum	68
4	4.3	*1.31*		59
10	6.6	*2.01*		53
16	8.7	*2.65*		50
20	9.7	*2.96*		48
31.25	12.5	*3.8*		46
62.5	18.0	*5.5*		41
100	23	*7.01*		38

LCTL (Min.):
0,1 < F < 1 MHz = 40 dB
1 < F < 10 MHz = 40 – 10 log(F)
10 < F < 100 MHz = 30 dB

SRL (Min.):
1 < F < 10 MHz = 20 + 5 log(F)
10 < F < 20 MHz = 25 dB
20 < F < 100 MHz = 25 – 7 log(F/20) in dB

Transfer Impedance (Max.):

0.01MHz to 5 MHz = 2.0 10^{-2} Ω/m	(0.61 Ω/100ft)
at 10 MHz = 3.0 10^{-2} Ω/m	(0.92 Ω/100ft)
at 20 MHz = 4.5 10^{-2} Ω/m	(1.37 Ω/100ft)
at 50 MHz = 10 10^{-2} Ω/m	(3.05 Ω/100ft)
at 100 MHz = 40 10^{-2} Ω/m	(12.2 Ω/100ft)

Dimensional

Conductor diameter				Loop resistance max. at 20°C		Insulation diameter				Braid strand diameter		Cable outer diameter		Weight max.	
min.		max.				min.		max.		nominal		max.			
mm	*inch*	mm	*inch*	Ω/km	*Ω/ 1000ft*	mm	*inch*	mm	*inch*	mm	*inch*	mm	*inch*	kg/ km	*Lbs/ 1000ft*
0.598	*0.0235*	0.656	*0.0258*	192	*58,5*	1.35	*0.0531*	1.52	*0.0598*	0.1	*0.0039*	5	*0.1968*	41	*27.55*

Bending radius

Permissible bend radius	AWG 24
Static (installed) use	24 mm minimum
Dynamic use	47 mm minimum

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