Cable, High Speed Data Quad, 24 AWG copper alloy100 Ohm, 200°C,Ethernet 10/100 Base T

Cables specification: AS6070/1

High Speed Copper Data Quad Cables for Aerospace usage.
Ethernet 10/100 Base T

Cable characteristics

-55 +200°C

Excellent

FAR25_ ABD0031

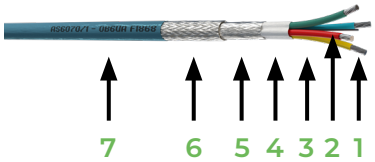
Environmental

- Operating temperature: -55°C to 200°C (ambient temperature + current heating)
- Resistant to Aircraft fluids (oils, hydrocarbons, kerosene, skydrols...), Chemical agents
- Smoke quantity: Following AS6070/1 (test time: 4 min)

Electrical

- Characteristic Impedance Zc RMS: 100 ± 15 Ω [1-100 MHz] at 20°C
- Velocity of propagation > 0,75 % at 31,25MHz
- Continuous working voltage: 60 V DC

Cable design



1. Stranded conductor: Silver plated copper alloy
2. Fluoropolymer Filler
3. Insulation: Fluoropolymer
4. PTFE tape
5. Flat Silver plated copper Braid
6. Round Silver plated copper Braid
7. Jacket: Fluoropolymer

Identification

- Pair n°1: Red and Blue
- Pair n°2: Yellow and Green
- Cable color: Blue, UV laser markable

Table A: Construction Options

Part Number	1st Digit Conductor size and Conductor/Shield Plating	2nd Digit Primary Insulation	3rd Digit Jacket Color	4th Digit Jacket Detail	5th Digit Primary wire color
AS6070/1-	**(0)** 24 AWG - 40 µinches **(1)** 26AWG - 80 µinches	**(B)** Foamed FEP or PFA	**(0)** Black **(1)** Brown **(2)** Red **(3)** Orange **(4)** Yellow **(5)** Green **(6)** Blue **(7)** Violet **(8)** Grey **(9)** White	**(U)** UV Laser markable **(X)** Translucent Color **No Digit:** Non UV Laser markable	**(A)** Pair 1: Red & Blue Pair 2: Yellow & Green **(B)** Pair 1: White/Red & White/Blue Pair 2: White/Yellow & White/Green

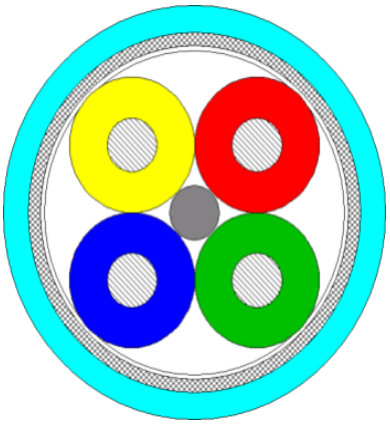
e.g.: AS6070/1-0B6UA is a cable with a UV Laser markable Blue jacket, Foam FEP insulated component Red, Blue, Yellow, Green wires and 40 µ inches Silver coated conductors.

Marking

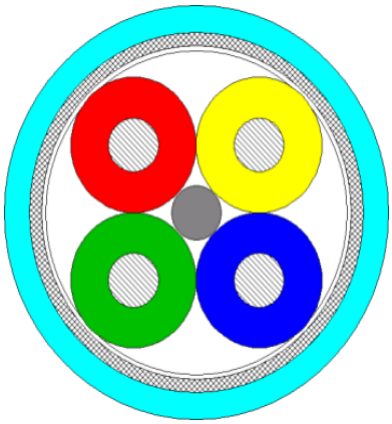
AS6070/1-XXXXX F1868 A-B
e.g. AS6070/1-0B6UA F1868 A-B

XXXXX: see table A
A-B: extremity code

The mark is oriented so the A and B are located towards the ends of the cable as shown on the pictures.



View Cable end «A»



View Cable end «B»

UV Laser markability: Contrast ≥ 50 % for UV laser markable jackets (see table A for the part numbers)

Specifications

Conductor Specification
AS29606

Cable Specification
AS6070/1

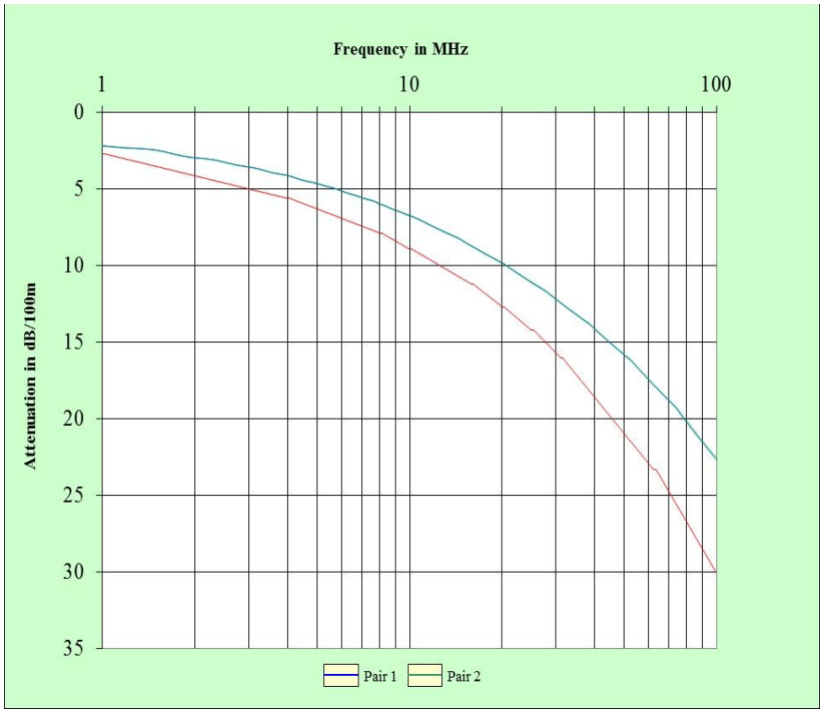
Technical Specification
AS6070

Compliant to ABD0031
Flammability, Smoke and Toxicity requirements and 14 CFR FAR25-1713

Transmission parameters

Attenuation

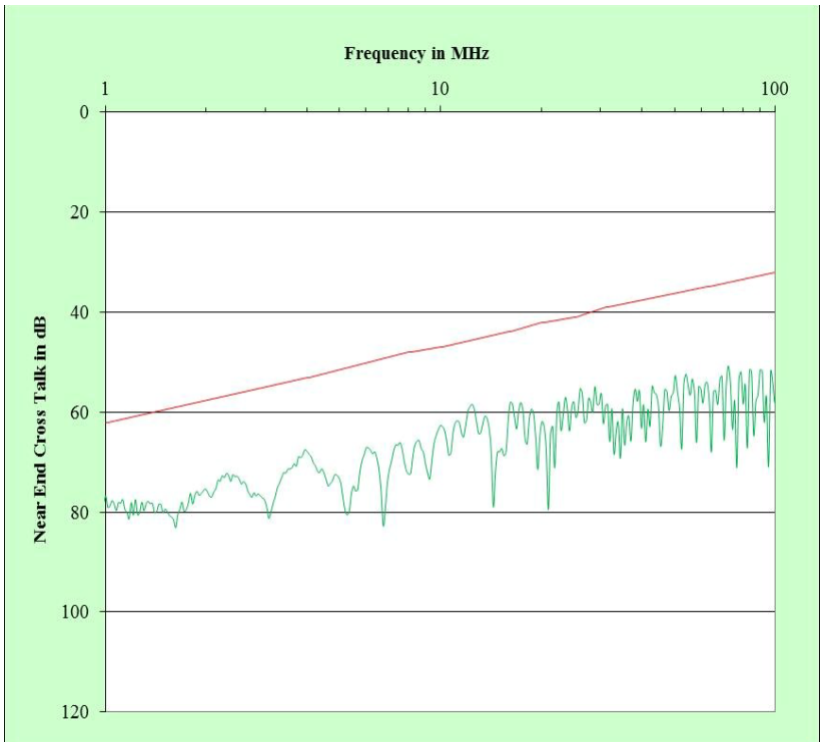
Frequency	Requirements of AS6070/1: Attenuation at 20°C Maximal value
MHz	dB/100m
1	2.7
4	5.6
8	7.9
10	8.9
16	11.2
20	12.7
25	14.2
31.25	16.0
62.5	23.3
100	30.0



Typical values

Near End Cross Talk

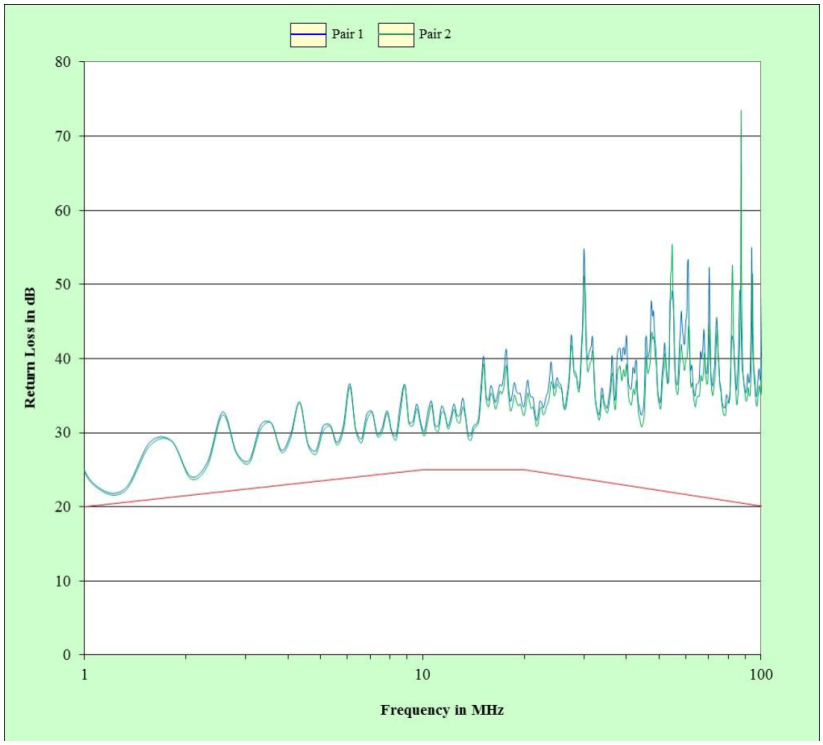
Frequency	Requirements of AS6070/1: Near End Cross Talk (NEXT) Minimal value
MHz	dB
1	62.0
4	53.0
8	48.0
10	47.0
16	44.0
20	42.0
25	41.0
31.25	39.0
62.5	35.0
100	32.0



Typical values

Return Loss

Frequency	Requirements of AS6070/1: Return Loss Minimal value
MHz	dB
1	20
4	23
8	24.5
10	25
16	25
20	25
25	24.3
31.25	23.6
62.5	21.5
100	20.1



Typical values

Dimensional

Conductor diameter		Linear resistance max. at 20°C (before cabling)	Insulation diameter max.	1st braid flat strand width nominal	2nd braid strand diameter nominal	Cable outer diameter max.	Weight max.
min.	max.						
mm *inch*	mm *inch*	Ω/km *Ω/1000ft*	mm *inch*	mm *inch*	mm *inch*	mm *inch*	kg/km *Lbs/ 1000ft*
0.572	0.645	93.2	1.245	0.85	0.10	4.32	38.7
0.0225	*0.0254*	*28.4*	*0.049*	*0.0335*	*0.0039*	*0.17*	*26*

Bending radius

Permissible bend radius	AWG24
Static use	43,2 mm minimum *1,70 inch minimum*

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