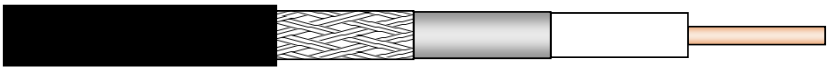
EC 400 Plus

Flexible 50 Ohms low loss coaxial cable



CHARACTERISTICS

Construction

• Inner conductor	
Material	**copper clad aluminium wire**
Construction	**-**
Diameter *(mm)*	**2.7**
• Dielectric	
Material	**gas-injected cellular polyethylene**
Diameter *(mm)*	**7.25**
• Outer conductor	
Tape	**aluminium tape, bonded to dielectric**
Diameter over tape *(mm)*	**7.35**
Braid	**tinned copper braid**
Diameter over braid *(mm)*	**8.0**
• Outer sheath	
Material	**black polyethylene**
Thickness *(mm)*	**1.1**
Diameter *(mm)*	**10.2**

Mechanical characteristics

• Minimum bending radius	
a) single bending *(cm)*	**2.5**
b) 15 repeated bends *(cm)*	**5**
• Maximum pulling strength *(daN)*	**30**
• Recommended temperature range	
- Storage	**-70 to +85 °C**
- Installation	**-40 to +60 °C**
- Operation	**-55 to +85 °C**
• Weight *(kg/km)*	**90**

Electrical characteristics

• Characteristic impedance *(Ω)*	**50 ± 2**
• Nominal capacity *(pF/m)*	**78.5**
• Relative propagation velocity *(%)*	**85**
• Inductance *(μH/m)*	**0.196**
• DC-resistance at 20°C	
- inner conductor *(Ω/km)*	**4.56**
- outer conductor *(Ω/km)*	**6.4**
• RF peak voltage *(kV)*	**1.0**
• RF peak power *(kW)*	**10**
• Cut-off-frequency *(GHz)*	**16**
• Insulation resistance *(MΩ.km)*	**>> 5000**
• Screening attenuation	**Class A**

• Attenuation[1] and power rating

Frequency *(MHz)*	Attenuation at 20°C [2] *(dB/100m)*	Mean power rating [3] *(kW)*
10	1.3	5.05
20	1.8	3.56
30	2.2	2.90
80	3.7	1.76
100	4.1	1.57
150	5.1	1.28
200	5.9	1.10
300	7.2	0.90
400	**8.4**	**0.77**
450	8.9	0.73
500	9.4	0.69
600	10.3	0.62
700	11.2	0.58
800	12.0	0.54
894	12.8	0.51
960	13.2	0.49
1000	13.5	0.48
1500	**16.8**	**0.38**
1700	18.0	0.36
1800	18.5	0.35
1880	19.0	0.34
2000	19.6	0.33
2170	20.5	0.31
2200	20.7	0.31
2300	21.2	0.31
2400	21.7	0.30
2500	**22.2**	**0.29**
3000	24.5	0.26

[1] The attenuation can be approximated by the formula:

$$\alpha(f[MHz]) = A \cdot \sqrt{f[MHz]} + B \cdot f[MHz] \quad (dB/100m)$$

A = 0.402
B = 0.00082

[2] Nominal values
[3] Ambient temperature = 40°C; temperature of inner conductor = 100°C; VSWR = 1.0; no solar loading