



# SUHNER® COAXIAL CABLE DATA SHEET

## TYPE RG\_303\_U

*Single screened coaxial cable*

### Cable Design



|                     | Material                              | Detail        | Diameter       |
|---------------------|---------------------------------------|---------------|----------------|
| Centre conductor:   | Steel: Copper+Silver Plated Wire      |               | 0.95 mm        |
| Dielectric:         | PTFE (Polytetrafluorethyln.)          |               | 2.95 mm        |
| 1. Outer conductor: | Copper: Silver Plated Braid           | 97%           | 3.6 mm         |
| Jacket:             | FEP (Fluorethylene Prop.)             | RAL 8015 - br | 4.3 mm +/- 0.1 |
| Print:              | HUBER+SUHNER RG 303 U 50 Ohm (PA no.) |               |                |

### Electrical Data

|                                 |      |                                  |
|---------------------------------|------|----------------------------------|
| Impedance:                      | 50   | $\Omega$ +/-2                    |
| Max. operating frequency:       | 3    | GHz                              |
| Capacitance :                   | 95   | pF / m                           |
| Velocity of signal propagation: | 70   | %                                |
| Signal delay:                   | 4.75 | ns / m                           |
| Min. screening effectiveness:   | > 40 | dB (up to 3 GHz)                 |
| Max. operating voltage:         | 2.5  | kV <sub>rms</sub> (at sea level) |
| Test voltage:                   | 5    | kV <sub>rms</sub> (50 Hz/ 1min)  |
| Insulation resistance:          | > 1  | $\times 10^6$ M $\Omega$ /m      |

### General Data

|                       |                                       |
|-----------------------|---------------------------------------|
| Temperature range:    | -65 °C... +165 °C                     |
| Weight:               | 4.48 kg / 100 m                       |
| Min. bending radius : | static 30 mm                          |
|                       | repeated (for max. 50 bendings) 50 mm |

### Suitable Connectors

Cable group U7 / U7  
(for details refer to the "SUHNER coaxial connector catalogue" or contact your nearest HUBER+SUHNER partner)

### Notes

#### WAIVER!

While the information contained in this folder has been carefully compiled to the best of our present knowledge, it is not intended as representation or warranty of any kind on our part regarding the fitness of the products concerned for any particular use or purpose and neither shall any statement contained herein be construed as a recommendation to infringe any industrial property rights or as a license to use any such rights. The fitness of each product for any particular purpose must be checked beforehand with our specialists.



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Issued: 12.8.2004 16:10

Document:  
DOC-0000178024.DOC

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Page 1



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**Matrix**      **Attenuation** [formula :  $(a \cdot f^{0.5} + b \cdot f)$ ] and **Power CW** [formula :  $(p^* / f^{0.5})$ ]

Coefficients:

a= 0.3969

b= 0.0676

$f_{\max} = 3$

$p_{\text{at } 1\text{GHz}} = 407$

| Frequency<br>(GHz) | Nom. attenuation<br>(dB / m)<br>sea level<br>25° C ambient temperature | Nom. attenuation<br>(dB / ft)<br>sea level<br>25° C ambient temperature | Max. CW power<br>(watt)<br>sea level<br>40° C ambient temperature |
|--------------------|--|---|---|
| 0.15               | 0.164  | 0.0500  | 1'050.9   |
| 0.30               | 0.238  | 0.0725  | 743.1   |
| 0.45               | 0.297  | 0.0905  | 606.7   |
| 0.60               | 0.348  | 0.1061  | 525.4   |
| 0.75               | 0.394  | 0.1201  | 470.0   |
| 0.90               | 0.437  | 0.1332  | 429.0   |
| 1.05               | 0.478  | 0.1457  | 397.2   |
| 1.20               | 0.516  | 0.1573  | 371.5   |
| 1.35               | 0.552  | 0.1682  | 350.3   |
| 1.50               | 0.588  | 0.1792  | 332.3   |
| 1.65               | 0.621  | 0.1893  | 316.8   |
| 1.80               | 0.654  | 0.1993  | 303.4   |
| 1.95               | 0.686  | 0.2091  | 291.5   |
| 2.10               | 0.717  | 0.2185  | 280.9   |
| 2.25               | 0.747  | 0.2277  | 271.3   |
| 2.40               | 0.777  | 0.2368  | 262.7   |
| 2.55               | 0.806  | 0.2457  | 254.9   |
| 2.70               | 0.835  | 0.2545  | 247.7   |
| 2.85               | 0.863  | 0.2630  | 241.1   |
| 3.00               | 0.890  | 0.2713  | 235.0   |

**Test** (following tests have been passed successfully)

Flame propagation: IEC 60332-3

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Page 2