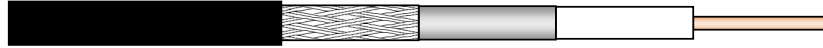




# 58RT5(V)

Flexible 50 Ohms low loss coaxial cable



## CHARACTERISTICS

### Construction

<b>• Inner conductor</b>	
Material	<b>copper wire</b>
Construction	-
Diameter (mm)	<b>1.05</b>
<b>• Dielectric</b>	
Material	<b>gas-injected cellular polyethylene</b>
Diameter (mm)	<b>2.95</b>
<b>• Outer conductor</b>	
Tape	<b>aluminium tape</b>
Diameter over tape (mm)	<b>3.05</b>
Braid	<b>tinned copper braid</b>
Diameter over braid (mm)	<b>3.7</b>
<b>• Outer sheath</b>	
Material	<b>Black PE / PVC</b>
Thickness (mm)	<b>0.7</b>
Diameter (mm)	<b>5.0</b>

### Mechanical characteristics

<b>• Minimum bending radius</b>	
a) single bending (cm)	<b>2.5</b>
b) 15 repeated bends (cm)	<b>5</b>
<b>• Maximum pulling strength (daN)</b>	
	<b>7</b>
<b>• Recommended temperature range</b>	
- Storage	<b>-70 to +85 °C</b>
- Installation	<b>-40 to +60 °C</b>
- Operation	<b>-55 to +85 °C</b>
<b>• Weight (kg/km)</b>	
	<b>25 (PE) / 30 (PVC)</b>

### Electrical characteristics

• Characteristic impedance (Ω)	<b>50 ± 2</b>
• Nominal capacity (pF/m)	<b>82</b>
• Relative propagation velocity (%)	<b>82</b>
• Inductance (μH/m)	<b>0.203</b>
<b>• DC-resistance at 20°C</b>	
- inner conductor (Ω/km)	<b>19.9</b>
- outer conductor (Ω/km)	<b>28.5</b>
• RF peak voltage (kV)	<b>0.4</b>
• RF peak power (kW)	<b>1.6</b>
• Cut-off-frequency (GHz)	<b>39</b>
• Insulation resistance (MΩ.km)	<b>&gt;&gt; 5000</b>
• Screening attenuation (dB)	<b>&gt; 75</b>
<b>• Attenuation<sup>[1]</sup> and power rating</b>	

Frequency (MHz)	Attenuation at 20°C <sup>[2]</sup>		Mean power rating <sup>[3]</sup> (kW)
	(dB/100m)	(dB/100m)	
10	4.20	1.92	
20	5.39	1.35	
30	6.31	1.09	
80	9.61	0.65	
100	10.64	0.58	
150	12.89	0.47	
200	14.83	0.40	
300	18.19	0.32	
400	21.11	0.27	
450	22.47	0.25	
500	23.77	0.24	
600	26.23	0.22	
700	28.54	0.20	
800	30.74	0.18	
894	32.71	0.17	
960	34.06	0.16	
1000	34.86	0.16	
1500	44.09	0.13	
1700	47.49	0.12	
1800	49.14	0.11	
1880	50.44	0.11	
2000	52.37	0.10	
2170	55.03	0.10	
2200	55.49	0.10	
2300	57.02	0.10	
2400	58.53	0.09	
2500	60.03	0.09	
3000	67.25	0.08	

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

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

A = 0.86  
B = 0.006244  
C = 1.417

[2] Nominal values

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

