RCT6, RADIAX® Coaxial Radiating Cable with Bump, 50–900 MHz, tuned foil, 1-1/4 in, black non-halogenated, fire retardant polyolefin jacket

Product Classification

Brand: RADIAX®
Product Series: RCT6
Product Type: Radiating cable

Construction Materials

Jacket Material: Non-halogenated, fire retardant polyolefin
Dielectric Material: Foam PE
Inner Conductor Material: Corrugated copper tube
Jacket Color: Black
Outer Conductor Material: Copper foil

Dimensions

Nominal Size: 1-1/4 in
Inner Conductor OD: 0.5200 in | 14.2080 mm
Outer Conductor OD: 1.340 in | 34.030 mm
Diameter Over Jacket: 39.116 mm | 1.540 in
Cable Weight: 0.43 lb/ft | 0.64 kg/m

Electrical Specifications

Operating Frequency Band: 50 – 900 MHz
Optimum Operating Frequency Band: 70 – 500 MHz
Polarization: Horizontal
Velocity: 91 %
VSWR Installed, typical, 50–960 MHz: 1.30
VSWR on Reel, typical: 1.43
Stop Bands: 295 – 335 MHz | 610 – 664 MHz
Cable Impedance: 50 ohm ±2 ohm
dc Resistance, Inner Conductor: 0.530 ohms/kft | 1.740 ohms/km
dc Resistance, Outer Conductor: 0.900 ohms/kft | 2.953 ohms/km
dc Test Voltage: 8500 V
Insulation Resistance: 100000 Mohms•km
RCT6-LT-1A-RNA

Jacket Spark Test Voltage (rms) 10000 V
Peak Power 180.0 kW

Environmental Specifications
Installation Temperature -30 °C to +60 °C (-22 °F to +140 °F)
Operating Temperature -30 °C to +80 °C (-22 °F to +176 °F)
Storage Temperature -30 °C to +80 °C (-22 °F to +176 °F)

General Specifications
Cable Type Radiating Mode (RCT) Series

Mechanical Specifications
Bending Moment 15.5 N-m | 11.4 ft lb
Flat Plate Crush Strength 80.0 lb/in | 1.4 kg/mm
Indication of Slot Alignment Yes; bumps face the wall
Minimum Bend Radius, Single Bend 381.00 mm | 15.00 in
Recommended Distance from the Wall 101.6 mm | 4.0 in
Recommended Hanger Spacing 1.3 m | 4.3 ft
Tensile Strength 168 kg | 370 lb
Fire Retardancy Test Method IEC 60332-1 | IEC 60332-3C-24
Smoke Index Test Method IEC 61034
Toxicity Index Test Method IEC 60754-1 | IEC 60754-2

Standard Conditions
Attenuation Test Method IEC 61196-4
Attenuation Tolerance ±5%
Attenuation, Ambient Temperature 20 °C | 68 °F
Average Power, Ambient Temperature 40 °C | 104 °F
Average Power, Inner Conductor Temperature 100 °C | 212 °F
Coupling Loss Test Method IEC 61196-4
Coupling Loss Tolerance ±5 dB

Electrical Performance

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Attenuation (dB/100 m)</th>
<th>Attenuation (dB/100 ft)</th>
<th>Coupling Loss 50%</th>
<th>Coupling Loss 95%</th>
</tr>
</thead>
<tbody>
<tr>
<td>75 MHz</td>
<td>0.70</td>
<td>0.21</td>
<td>63</td>
<td>74</td>
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<tr>
<td>100 MHz</td>
<td>0.80</td>
<td>0.24</td>
<td>55</td>
<td>67</td>
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<tr>
<td>150 MHz</td>
<td>1.00</td>
<td>0.30</td>
<td>67</td>
<td>77</td>
</tr>
<tr>
<td>350 MHz</td>
<td>1.80</td>
<td>0.55</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>400 MHz</td>
<td>1.90</td>
<td>0.58</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>450 MHz</td>
<td>2.00</td>
<td>0.61</td>
<td>62</td>
<td>68</td>
</tr>
<tr>
<td>500 MHz</td>
<td>2.10</td>
<td>0.64</td>
<td>53</td>
<td>55</td>
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</table>
## Regulatory Compliance/Certifications

<table>
<thead>
<tr>
<th>Agency</th>
<th>Classification</th>
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<tbody>
<tr>
<td>ISO 9001:2015</td>
<td>Designed, manufactured and/or distributed under this quality management system</td>
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</table>

<table>
<thead>
<tr>
<th>Frequency (MHz)</th>
<th>Gain (dB)</th>
<th>Phase (°)</th>
<th>Power (dBm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>800</td>
<td>3.50</td>
<td>1.10</td>
<td>54</td>
</tr>
<tr>
<td>900</td>
<td>4.20</td>
<td>1.28</td>
<td>52</td>
</tr>
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