

# RCT7-WBC-3A-RNA

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RCT7, RADIAX® Coaxial Radiating Cable with Bump, 50–2400 MHz, tuned foil, 1-5/8 in, black non-halogenated, fire retardant polyolefin jacket

## OBSOLETE

This product was discontinued on: July 30, 2021

## Product Classification

<b>Product Type</b>	Radiating cable
<b>Product Brand</b>	RADIAX®
<b>Product Series</b>	RCT7

## General Specifications

<b>Polarization</b>	Vertical
<b>Cable Type</b>	Radiating Mode (RCT) Series
<b>Jacket Color</b>	Black

## Dimensions

<b>Diameter Over Jacket, maximum</b>	49.784 mm   1.96 in
<b>Inner Conductor OD</b>	18.161 mm   0.715 in
<b>Outer Conductor OD</b>	43.815 mm   1.725 in
<b>Nominal Size</b>	1-5/8 in
<b>Recommended Distance from the Wall</b>	101.6 mm   4 in
<b>Recommended Hanger Spacing</b>	1.3 m   4.265 ft

## Electrical Specifications

<b>Attenuation Test Method</b>	IEC 61196-4
<b>Attenuation Tolerance</b>	±5%
<b>Cable Impedance</b>	50 ohm ±2 ohm

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<b>dc Resistance, Inner Conductor</b>	1.435 ohms/km   0.437 ohms/kft
<b>dc Resistance, Outer Conductor</b>	1.969 ohms/km   0.6 ohms/kft
<b>dc Test Voltage</b>	15000 V
<b>Insulation Resistance</b>	100000 MOhms-km
<b>Jacket Spark Test Voltage (rms)</b>	10000 V
<b>Operating Frequency Band</b>	50 – 2400 MHz
<b>Optimum Operating Frequency Band</b>	1700 – 2400 MHz   70 – 960 MHz
<b>Peak Power</b>	302 kW
<b>Stop Bands</b>	1090 – 1145 MHz   1635 – 1705 MHz   545 – 570 MHz
<b>Velocity</b>	93 %
<b>VSWR Installed, typical, 1700–2700 MHz</b>	1.38
<b>VSWR Installed, typical, 50–960 MHz</b>	1.3
<b>VSWR on Reel, typical</b>	1.43

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Coupling Loss 50%	Coupling Loss 95%
<b>75.0</b>	0.5	0.15	70	84
<b>100.0</b>	0.6	0.18	64	75
<b>150.0</b>	0.8	0.24	73	83
<b>350.0</b>	1.1	0.34	75	82
<b>450.0</b>	1.2	0.36	72	77
<b>600.0</b>	1.6	0.49	68	75
<b>700.0</b>	1.8	0.55	69	74
<b>800.0</b>	1.9	0.58	69	72
<b>900.0</b>	2	0.61	67	70
<b>960.0</b>	2.1	0.64	70	75
<b>1700.0</b>	3.2	0.97	62	69
<b>1800.0</b>	3.6	1.1	60	64
<b>1900.0</b>	3.9	1.2	61	66
<b>2000.0</b>	4.1	1.25	60	64
<b>2100.0</b>	4.5	1.37	58	65
<b>2200.0</b>	5	1.52	59	64
<b>2400.0</b>	6	1.83	56	62

## Material Specifications

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<b>Dielectric Material</b>	Foam PE
<b>Jacket Material</b>	Non-halogenated, fire retardant polyolefin
<b>Inner Conductor Material</b>	Corrugated copper tube
<b>Outer Conductor Material</b>	Copper foil

## Mechanical Specifications

<b>Minimum Bend Radius, single Bend</b>	508 mm   20 in
<b>Tensile Strength</b>	215 kg   473.993 lb
<b>Bending Moment</b>	16 N-m   141.612 in lb
<b>Coupling Loss Test Method</b>	IEC 61196-4
<b>Coupling Loss Tolerance</b>	±5 dB
<b>Flat Plate Crush Strength</b>	0.8 kg/mm   44.798 lb/in
<b>Indication of Slot Alignment</b>	Yes—bumps face the wall

## Environmental Specifications

<b>Installation temperature</b>	-30 °C to +60 °C (-22 °F to +140 °F)
<b>Operating Temperature</b>	-30 °C to +80 °C (-22 °F to +176 °F)
<b>Storage Temperature</b>	-30 °C to +80 °C (-22 °F to +176 °F)
<b>Attenuation, Ambient Temperature</b>	68 °F   20 °C
<b>Average Power, Ambient Temperature</b>	104 °F   40 °C
<b>Average Power, Inner Conductor Temperature</b>	212 °F   100 °C
<b>Fire Retardancy Test Method</b>	IEC 60332-1-2   IEC 60332-3C-24
<b>Smoke Index Test Method</b>	IEC 61034
<b>Toxicity Index Test Method</b>	IEC 60754-1   IEC 60754-2

## Packaging and Weights

<b>Cable weight</b>	0.83 kg/m   0.558 lb/ft
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