Product Specifications

RCT4-WBC-1X-RNA

RCT4, RADIAX® Coaxial Radiating Cable with Bump, 50–3500 MHz, foil, 1/2 in, black non-halogenated, fire retardant polyolefin jacket

Construction Materials

Jacket Material	Non-halogenated, fire retardant polyolefin
Dielectric Material	Foam PE
Inner Conductor Material	Copper-clad aluminum wire
Jacket Color	Black
Outer Conductor Material	Copper foil

Dimensions

Nominal Size	1/2 in
Diameter Over Jacket, maximum	16.256 mm | 0.640 in
Inner Conductor OD	4.8260 mm | 0.1900 in
Outer Conductor OD	12.954 mm | 0.510 in
Cable Weight	0.13 lb/ft | 0.19 kg/m

Electrical Specifications

Operating Frequency Band	50 – 3500 MHz
Polarization	Vertical
VSWR Installed, typical, 1700–2700 MHz	1.38
VSWR Installed, typical, 50–960 MHz	1.30
VSWR on Reel, typical	1.43
Cable Impedance	50 ohm ±3 ohm
dc Resistance, Inner Conductor	0.450 ohms/kft | 1.480 ohms/km
dc Resistance, Outer Conductor	1.617 ohms/kft | 5.305 ohms/km
dc Test Voltage	4000 V
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Peak Power	40.0 kW
Velocity	88%

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	Coupled Mode Series
Brand	RADIAX®

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Mechanical Specifications

Bending Moment	3.7 N-m | 2.7 ft lb
Flat Plate Crush Strength	40.0 lb/in | 0.7 kg/mm
Indication of Slot Alignment	Yes; bumps face the wall
Minimum Bend Radius, Single Bend	127.00 mm | 5.00 in
Recommended Distance from the Wall	50.8 mm | 2.0 in
Recommended Hanger Spacing	1.0 m | 3.3 ft
Tensile Strength	45 kg | 100 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	±10 dB

Electrical Performance

Frequency	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Coupling Loss 50%	Coupling Loss 95%
75 MHz	1.80	0.54	59	67
100 MHz	2.10	0.65	52	63
150 MHz	2.60	0.79	61	71
350 MHz	3.90	1.19	72	83
450 MHz	4.40	1.34	74	84
800 MHz	6.00	1.82	73	84
900 MHz	6.40	1.95	73	85
960 MHz	6.60	2.01	73	85
1700 MHz	9.30	2.83	70	81
1800 MHz	9.50	2.90	69	80
1900 MHz	9.80	2.98	71	82
2000 MHz	10.20	3.10	69	81
2100 MHz	10.60	3.23	72	84
2200 MHz	11.00	3.35	70	82
2300 MHz	11.50	3.50	64	75
2400 MHz	11.60	3.53	66	77
2500 MHz	12.00	3.65	66	77
2600 MHz	12.20	3.70	68	79
2700 MHz	12.70	3.87	67	78
2800 MHz	13.10	3.99	67	78
3300 MHz	15.80	4.82	70	80
3400 MHz	15.90	4.85	70	80
3500 MHz	16.30	4.97	70	80

Electrical Performance (Internal)

Frequency	Horizontal Coupling Loss 50%	Horizontal Coupling Loss 95%	H/P Coupling Loss 50%	H/P Coupling Loss 95%	Mean Coupling Loss 50%	Mean Coupling Loss 95%

75 MHz	66	76	51	62	55	66
100 MHz	56	69	52	62	53	63
150 MHz	67	77	56	69	59	71
350 MHz	76	87	66	76	69	80
450 MHz	80	91	72	85	74	86
800 MHz	80	92	69	79	72	82
900 MHz	81	93	72	83	74	85
960 MHz	81	86	73	82	75	84
1700 MHz	78	90	70	81	71	82
1800 MHz	80	91	70	81	71	82
1900 MHz	79	91	71	80	72	83
2000 MHz	78	89	73	84	72	83
2100 MHz	77	88	70	82	72	84
2200 MHz	76	88	72	84	72	84
2300 MHz	74	85	68	80	67	78
2400 MHz	77	88	72	83	70	81
2500 MHz	77	88	71	83	69	81
2600 MHz	78	90	72	83	71	82
2700 MHz	80	93	73	83	71	82
2800 MHz	76	87	72	83	70	81

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system