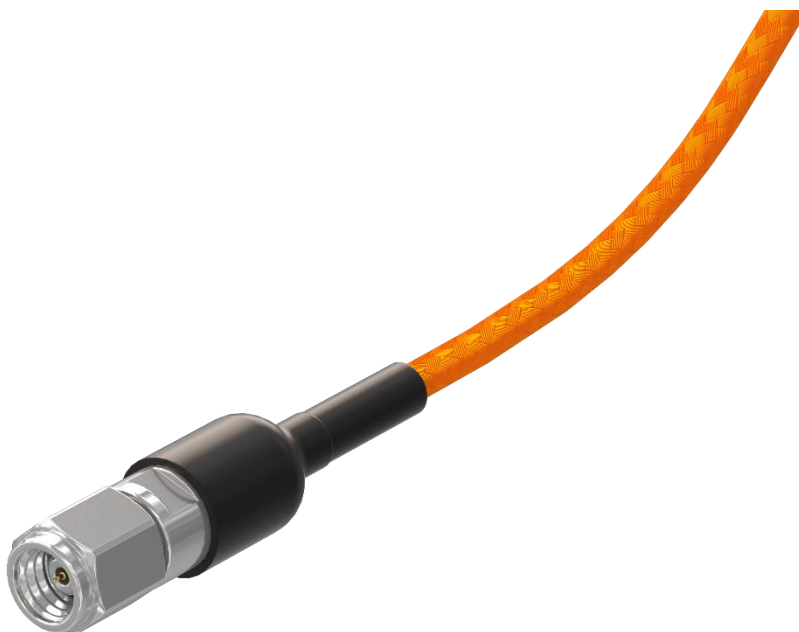
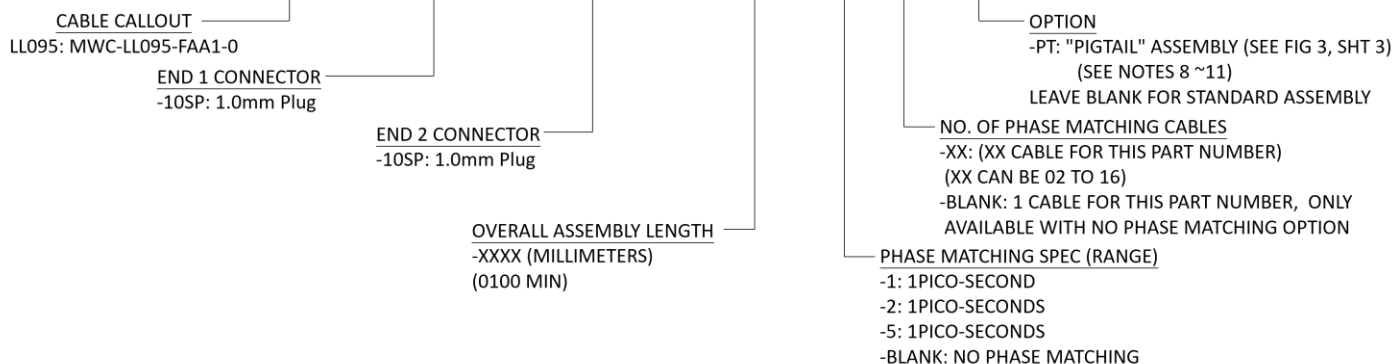


Series: LL095, Microwave Cable Assembly, 50 Ω



Part Number:

LL095-XXXX-XXXXXX-XXXX-X-XX-XX



Series: LL095, Microwave Cable Assembly, 50 Ω

CABLE CONSTRUCTION

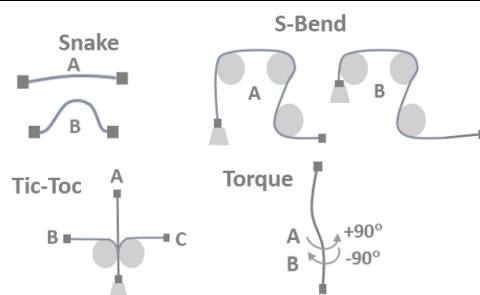
Center Conductor	Solid SPC
Dielectric	Low-Density PTFE
Flat Wire Helical Shield	SPC Flat Wire
INTERLAYER	PTFE
Braid	SPC Braid
Jacket	Orange FEP

MECHANICAL DATA

Max Outer Diameter	1.93 mm (0.076 inch)
Min. Static Bend Radius ¹	3.96 mm (0.156 inch)
Min. Dynamic Bend Radius	50.8 mm (2.000 inch)
Max. Weight (cable only)	10.5 g/m (0.113 oz/ft)
Pull Strength ²	3.17 kg (7 lbs)
Compression Resistance ³	263 N/100mm (15 lbs./inch)
Flex Life	
Snake ²	500,000 cycles
S-Bend ²	20,000 cycles
Tic-Toc ⁴	6,000 cycles
Torque Life ²	500,000 cycles

Mechanical Notes:

¹360-degree bend, $\leq 0.5 \Omega$ change in Z_0
²per IEC 60966-1:2019, paragraphs 9.1,9.3,9.5 & 9.6 as applicable,
 $\leq 10\% \Delta$ Insertion Loss

³per IEC 60966-1:2019, paragraph 9.4, $\leq 0.5 \Omega \Delta Z_0$
⁴per MIL-T-81490, paragraph 3.6.5.4, $\leq 10\% \Delta$ Insertion Loss

ENVIRONMENTAL DATA

Operating Temperature	-65°C to +125°C
Thermal Shock	20 cycles, -65°C to +125°C
Flammability	AS4373 Method 801

Series: LL095, Microwave Cable Assembly, 50 Ω

ELECTRICAL DATA⁶

Impedance	50 Ω
Frequency Range	DC - 95 GHz ⁷
Velocity of Propagation	76.5 %
Time Delay	4.36 ns/m (1.33 ns/ft)
Capacitance	87.1 pF/m (26.55 pF/ft)
Shielding Effectiveness ⁸	90 dB Minimum
Insulation Resistance	3650 MΩ/km (12,000 MΩ/1000 ft)
Insertion Loss ⁹	<i>See Graph</i>
VSWR	<i>See Connector Table</i>
Power Handling ¹⁰	<i>See Graph</i>
Phase vs. Temperature	<i>See Graph</i>
Phase vs. Bending ¹¹	< 1° to 5 GHz < 2° to 10 GHz < 3° to 18 GHz < 6° to 43.5 GHz < 9° to 71 GHz < 13° to 95 GHz
Insertion Loss vs. Bending ¹²	< 0.025 dB

Electrical Notes:
⁶Unless otherwise specified at Temperature=25°C

⁷may be further limited by connectors. See Connector Options.

⁸per IEC 61000-4-21 (Mode Stir, 2-18 GHz) Connector options can affect shielding performance.

⁹Insertion loss graph does not include connectors; loss for each connector $\approx 0.045\sqrt{f}$ (GHz)

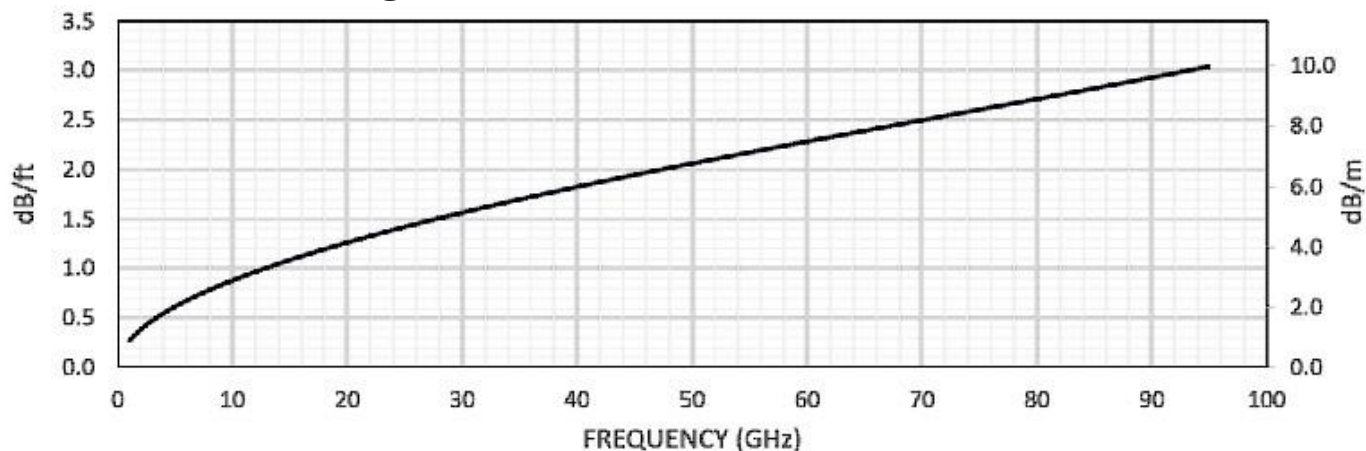
¹⁰Power Handling should be further derated for higher altitudes and temperatures.

¹¹per IEC 60966-1:2019, paragraph 8.6, Method 2 (360° Bend, ϕ 101.6 mm (4.00 in) mandrel

¹²per IEC 60966-1:2019, paragraph 8.6, Method 1 ($\pm 180^\circ$ Bend, ϕ 101.6 mm (4.00 in) mandrel

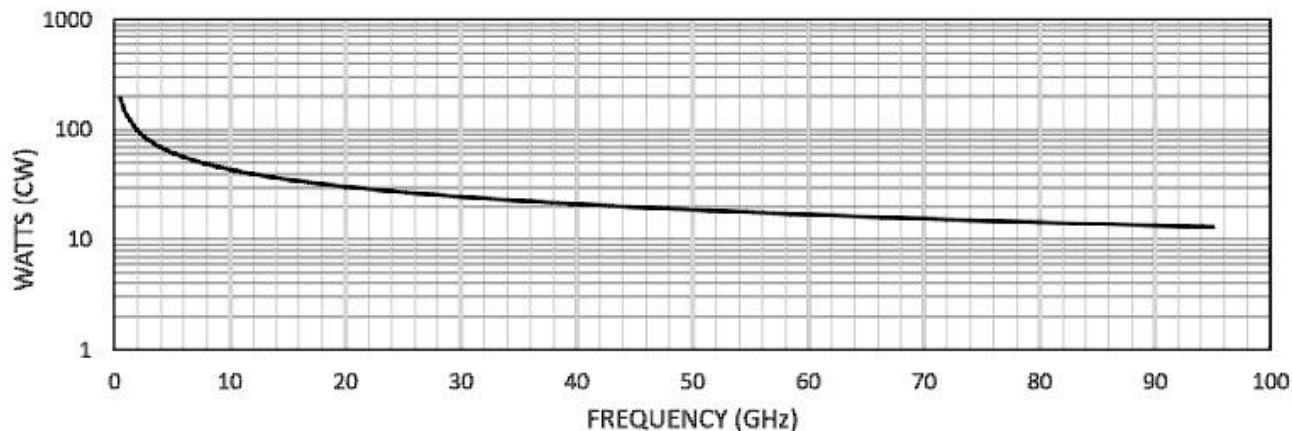
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MAXIMUM INSERTION LOSS @ T=25°C⁹

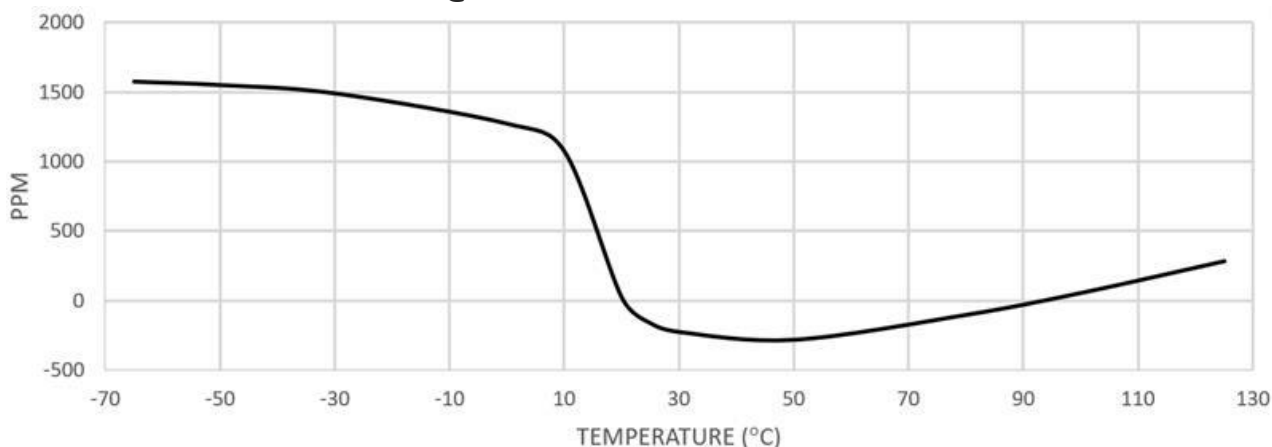


$$IL_{dB/ft} = \frac{27.0469 \times \sqrt{F_{GHz}} + 0.2771 \times F_{GHz} + 1.72 \times 10^{-7} \times F_{GHz}^4}{100}$$

TYPICAL POWER HANDLING @ T=25°C, SEA LEVEL¹⁰



TYPICAL PHASE VS. TEMPERATURE @ 5GHz





Series: LL095, Microwave Cable Assembly, 50 Ω

CONNECTOR OPTIONS

End Option	Description	Max. VSWR per Connector	Drawing
10SP	1.0mm Plug	1.183:1 @ DC – 90 GHz 1.225:1 @ 90 – 95 GHz	<u>PRF10-P-C-VP-095B-SS</u>

ADDITIONAL INFORMATION

Description	Link
Cable Assembly Drawing	<u>LL095-XXXX-XXXXXX-XXXX</u>

USE OF PRODUCT SPECIFICATION SHEET

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