

Mobile Solutions low-loss coaxial cable

Mobile Solutions cable is low-loss, high-performance alternative to MIL-C-17 coaxial cables.

The extruded, expanded PTFE dielectric (solid PTFE for MS-100) gives Mobile Solutions cables enhanced power-handling capability, low loss, and consistent performance throughout its temperature range.

MS-195 cable can be used with connectors designed for RG-142 cable; MS-400 cable can be used with connectors designed for RG-213 cable.

Performance:

Temperature rating: 105° C.

Impedance: 50 ±2Ω.



Construction Details

Center Conductor: Solid silver-plated copper (SPC) or silver-plated copper-clad aluminum (SCCA)—see table.

Dielectric: All except MS-100: Extruded expanded PTFE; MS-100: Solid PTFE.

Inner Shield: Aluminum / Mylar / aluminum tape, 100% coverage.

Outer Shield: Tin-plated copper braid, 90% minimum coverage.

Jacket: Extruded PVC (black).

Dimensions and Weights

Thermax P/N	Inner Conductor Diameter	Dielectric Diameter	Inner Shield Diameter	Outer Shield Diameter	Jacket Diameter	Weight	Min. Bend Radius
MS-100	.0201 (.51) SPC	.063 (1.60)	.068 (1.73)	.085 (2.16)	.105 (2.67)	10.3 (15.3)	.5 (12.7)
MS-195	.037 (.94) SPC	.110 (2.79)	.115 (2.92)	.138 (3.50)	.195 (4.95)	26.7 (39.7)	1.0 (25.4)
MS-200	.044 (1.12) SPC	.116 (2.95)	.121 (3.07)	.144 (3.66)	.195 (4.95)	27.2 (40.5)	1.0 (25.4)
MS-240	.056 (1.42) SPC	.150 (3.81)	.155 (3.94)	.178 (4.52)	.240 (6.10)	40.7 (60.6)	1.25 (31.8)
MS-400	.109 (2.77) SCCA	.285 (7.24)	.291 (7.39)	.320 (8.13)	.405 (10.29)	90.6 (134.8)	2.0 (50.8)

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 M).

SPC: Silver-plated copper. **SCCA:** Silver-plated copper-clad aluminum.

All values are nominal unless otherwise indicated.

Electrical Performance

Thermax P/N	Velocity of Propagation	Capacitance (pF/ft)	Attenuation (dB/100 ft.)				Average Power (W), 900 MHz	
			450 MHz	900 MHz	1.5 GHz	2 GHz	20° C	80° C
MS-100	69.5%	29	15.7	22.3	29.1	33.8	130	90
MS-195	80%	25	7.5	10.7	13.9	16.1	150	110
MS-200	83%	25	7.0	9.9	12.9	15.0	180	130
MS-240	84%	25	5.3	7.6	9.9	11.5	260	190
MS-400	85%	25	2.7	3.9	5.1	6.0	580	430

All values are nominal unless otherwise indicated.