

Mobile Solutions² high-temperature, low-loss cable



MS² is low-loss, high-temperature cable with superior electrical and environmental performance for the most demanding aerospace, wireless, and microwave applications.

The air-spaced PTFE dielectric provides low loss and saves weight, and the sophisticated double shielding virtually eliminates crosstalk. This dielectric construction, and the extruded FEP jacket, ensure consistent performance throughout MS²'s extended temperature range.

Construction Details

Center Conductor: Stranded SPC.

Dielectric: Air-spaced PTFE tape.

Inner Shield: Flat silver-plated copper braid, 95% coverage.

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

Jacket: Extruded FEP (yellow).

Options: Other jacket colors available.

Performance:

Temperature rating: 200° C.

Impedance: 50 ±2Ω.

Dimensions and Weights

Thermax P/N	Inner Conductor		Dielectric Diameter	Inner Shield Diameter	Outer Shield Diameter	Jacket Diameter	Weight	Min. Bend Radius
	Diameter	Stranding						
MS2-110	.024 (.61)	7/.008 SPC	.070 (1.78)	.076 (1.93)	.094 (2.39)	.111 (2.82)	14.4 (21.4)	.5 (12.7)
MS2-140	.034 (.86)	7/.0113 SPC	.098 (2.49)	.106 (2.69)	.124 (3.15)	.144 (3.66)	23.0 (34.2)	.75 (19.1)
MS2-190	.048 (1.22)	7/.0159 SPC	.136 (3.45)	.148 (3.76)	.166 (4.22)	.189 (4.80)	40.0 (59.5)	1.0 (25.4)
MS2-250	.066 (1.68)	7/.022 SPC	.186 (4.72)	.198 (5.03)	.218 (5.54)	.252 (6.40)	70.0 (104.1)	1.25 (31.8)
MS2-320	.089 (2.26)	7/.0296 SPC	.250 (6.35)	.262 (6.65)	.290 (7.37)	.322 (8.18)	109.0 (162.2)	1.5 (38.1)
MS2-480	.145 (3.68)	7/.0483 SPC	.408 (10.36)	.420 (10.67)	.448 (11.38)	.488 (12.40)	220.0 (327.4)	3.0 (76.2)

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

SPC: Silver-plated copper.

Electrical Performance

Thermax P/N	Velocity of Propagation	Capacitance (pF/ft)	Attenuation (dB/100 ft.)						Average Power (W), @ 1 GHz, 20° C
			500 MHz	1 GHz	3 GHz	5 GHz	10 GHz	18 GHz	
MS2-110	75%	26	14.3	20.7	36.4	47.0	69.0	96.5	299
MS2-140	75%	26	10.5	15.2	26.6	34.4	49.0	69.5	532
MS2-190	75%	26	7.0	10.1	17.6	23.8	34.4	49.0	1135
MS2-250	76%	26	5.5	7.6	13.5	17.7	26.0	38.5	2016
MS2-320	77%	26	3.7	5.3	9.5	12.5	18.4	—	3997
MS2-480	77%	26	2.4	3.3	6.1	8.0	12.3	—	8302

All values are nominal unless otherwise indicated.