TCOM®

Low Loss – High Performance Coax

- **Low Loss UHF/Microwave Interconnect**
- **Wireless Base Station Interconnect**
- **Low Passive Intermod**
- **Flexible For Easy Routing**

Features & Benefits

- **Lower Loss than RG/SF Versions**
- **Superior Shielding Effectiveness**
- **Low Passive Intermod (-155 dBc)**
- **Stable Loss & VSWR vs Flexing**
- **Excellent Connector Selection**

TCOM cables provide the ultimate performance in a flexible cable. The high velocity gas injected foam polyethylene dielectric provides the lowest dielectric loss of any practical dielectric and silver plated flat ribbon braid make TCOM the ideal choice for uhf/microwave applications and all other commercial and military interconnect systems.

The TCOM design make them the ideal choice for jumper cables in commercial wireless (PCS, Cellular, Paging, LMR) and military systems.

The Shielding system, pioneered by Times Microwave Systems in the mid-sixties, consists of an inner silver plated flat ribbon braid (FSC), a spirally applied and overlapped composite aluminum tape interlayer (Intl), and an overall tin plated round wire braid (TC). The flat ribbon shield affords approximately 15% lower loss and >95 dB shielding when compared with the typical M17/RG round wire braided shield (40 to 60 dB).

Standard M17/RG cables are shielded with high coverage single or double round wire braids. While these shields provide 40 dB and 60 dB shielding effectiveness respectively, they are not particularly stable (loss & vswr) nor is the shielding adequate for today's sensitive wireless communications and microwave military/defense applications.

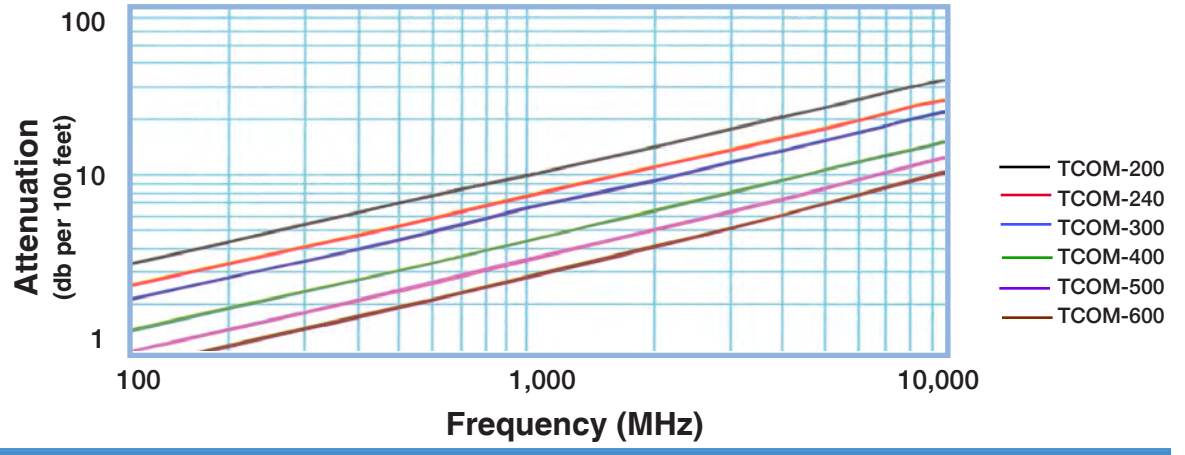
VSWR is lower since the flat ribbons can be applied over the dielectric much more uniformly than multi-end round wire braids. The VSWR and attenuation variation due to aging and flexure is substantially lower at all frequencies, and especially above 12 GHz. TCOM cables are also available from Times that have been sweep tested for broadband VSWR and attenuation performance. Please contact the factory with your specific requirements.

A full range of standard interface connectors (crimp or clamp style) are available. TCOM cables can be purchased in bulk reels or as preterminated and tested cable assemblies.

TCOM Low Loss High Performance Coaxial Cables

TMS Number	Conductor inches (mm)	Dielectric inches (mm)	Shields inches (mm)	Jacket inches (mm)	Weight lbs/foot (kg/m)	Impedance ohms Vp(%)	Capacitance pF/foot (pF/m)	DC Resistance ohms/1kft (/km) Cent. Cond	DC Resistance ohms/1kft (/km) Shield (s)	Oper. Voltage kvrms	Temp. Range F (C)	Min. Bend Radius in. (mm)	Test Freq.
TCOM-200	BC 0.044 (1.12)	Foam PE 0.116 (2.95)	FSC Intl: TC 0.154 (3.91)	PE+lvs 0.195 (4.95)	0.040 (0.060)	50 +/- 1 83	24.5 (80.4)	5.4 (17.6)	3.54 (10.7)	1.0	-40 +185 (-40 +85)	0.5 (12.7)	.03-10 GHz
TCOM-240	BC 0.058 (1.42)	Foam PE 0.150 (3.81)	FSC Intl: TC 0.188(4.78)	PE+lvs 0.240 (6.10)	0.045 (0.067)	50 +/- 1 84	24.2 (79.4)	3.2 (10.5)	1.91 (6.26)	1.5	-40 +185 (-40 +85)	1 (25.4)	.03-10 GHz
TCOM-300	BC 0.070 (1.78)	Foam PE 0.190 (4.83)	FSC Intl: TC 0.225 (5.72)	PE+ lvs 0.300 (7.62)	0.055 (0.082)	50+/-1 85	23.9 (78.4)	2.1 (7.0)	1.96 (5.4)	2.0	-40+185 (_40+85)	1.5 (38.1)	.03-10 GHz
TCOM-400	BCCAl 0.108 (2.74)	Foam PE 0.285 (9.40)	FSC Intl: TC 0.330 (8.38)	PE+lvs 0.405 (10.29)	0.080 (0.119)	50+/-1 85	23.9 (78)	1.4 (4.6)	1.37 (3.8)	2.5	-40+185 (-40+85)	2 (50.8)	.03-10 GHz
TCOM-500	BCCAl 0.142 (3.61)	Foam PE 0.370 (9.40)	FSC Intl: TC 0.415 (10.54)	PE+lvs 0.500 (12.70)	0.120 (0.179)	50+/-1 86	23.6 (77.4)	0.81 (2.7)	1.21 (4.3)	3.0	-40+185 (-40+85)	2.5 (63.5)	03-10 GHz
TCOM-600	BCCAl 0.176 (4.47)	Foam PE 0.455 (11.56)	FSC Intl: TC 0.500 (12.70)	PE+lvs 0.590 (14.99)	0.160 (0.238)	50+/-1 87	23.4 (76.8)	0.524 (1.7)	1.02 (3.7)	4.0	-40+185 (-40+85)	3 (76.2)	.03-10 GHz

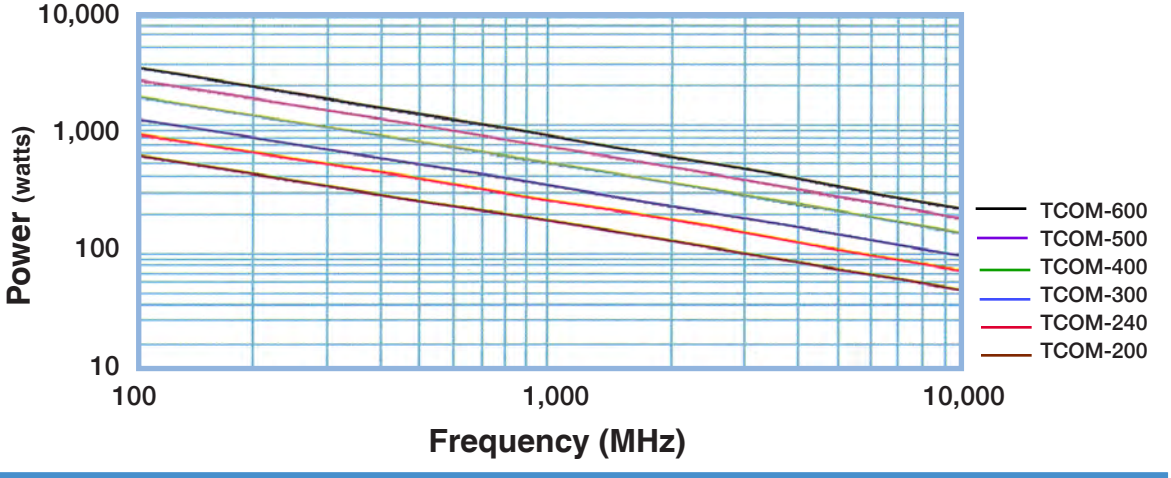
Attenuation vs. Frequency (Typical)



Frequency (MHz)	30	50	150	450	900	2,000	3,000	4,000	5,000	8,000	10,000	k1	k2
TCOM-200	1.7	2.2	3.8	6.6	9	14	18	21	23	30	34	0.30367	0.00033
TCOM-240	1.3	1.6	2.9	5.0	7.2	11	14	16	18	23	26	0.22915	0.00033
TCOM-300	1.1	1.4	2.4	4.3	6.1	9.3	12	14	15	20	23	0.19434	0.00033
TCOM-400	0.7	0.9	1.5	2.9	4.2	6.4	7.9	9	11	14	16	0.13056	0.00026
TCOM-500	0.6	0.7	1.3	2.3	3.3	5.0	6	7	8	11	13	0.10097	0.00026
TCOM-600	0.4	0.6	1.0	1.8	2.6	4.1	5	6	7	9	11	0.08008	0.00026

Attenuation at Any Frequency = [k1 x SQRT [fMHZ] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	30	50	150	450	900	2,000	3,000	4,000	5,000	8,000	10,000
TCOM-600	5201	4008	2276	1277	879	564	448	378	332	249	217
TCOM-500	4225	3259	1856	1046	723	467	372	316	278	210	183
TCOM-400	3121	2409	1375	779	541	352	282	240	211	161	141
TCOM-300	2068	1597	913	518	360	235	188	161	142	108	95
TCOM-240	1575	1217	696	396	276	180	145	124	109	84	74
TCOM-200	1080	835	478	272	190	125	100	86	75	58	51

Watts; Sea Level; Ambient +40C; VSWR 1:1