TIMES MICROWAVE SYSTEMS

TCOM®-500
Low Loss Low Passive Intermod Coax

Ideal for...

- -155 dBc Intermodulation Distortion
- Low Loss UHF/Microwave Interconnect
- Wireless Base Station Interconnect
- Flexible for Easy Routing

Part Description				Stock
Part Number	Application	Jacket	Color	Code
TCOM-500	Outdoor	PE	Black	55004
TCOM-500-FR	Indoor-Riser CMR	FRPE	Black	55025

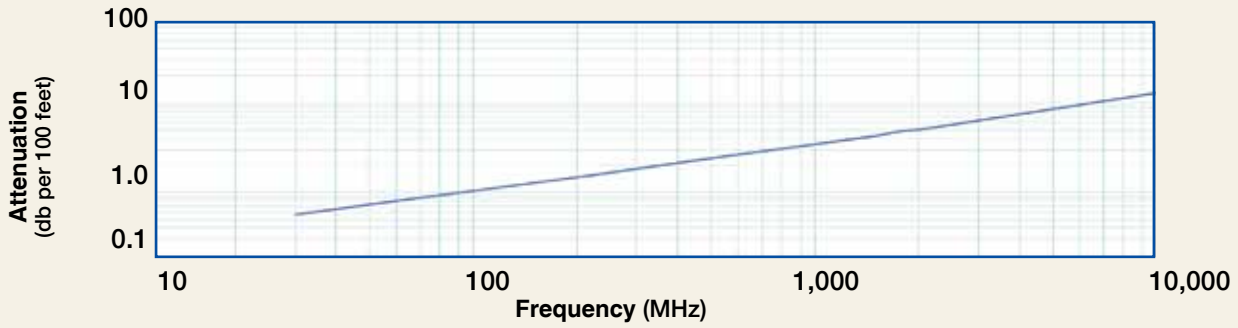
Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	86	
Dielectric Constant	NA	1.35	
Time Delay	nS/ft (nS/m)	1.18	(3.88)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.6	(77.5)
Inductance	uH/ft (uH/m)	0.059	(0.19)
Shielding Effectiveness	dB	>100	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.82	(2.7)
Outer Conductor	ohms/1000ft (/km)	1.32	(4.3)
Voltage Withstand	Volts DC	3000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	22	
Passive Intermod	dBc	-155	

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAl	0.142	(3.61)
Dielectric	Foam PE	0.370	(9.40)
Outer Conductor	SPC Strip Braid	0.380	(9.65)
Overall Braid	TC Braid over Al tape	0.415	(10.54)
Jacket	(see table)	0.500	(12.70)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.25	(31.8)
Bend Radius: repeated	in. (mm)	5.0	(127.0)
Bending Moment	ft-lb (N-m)	1.75	(2.37)
Weight	lb/ft (kg/m)	0.120	(0.179)
Tensile Strength	lb (kg)	260	(118.0)
Flat Plate Crush	lb/in. (kg/mm)	50	(0.89)

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	10,000
Attenuation dB/100 ft	0.6	0.7	1.3	1.6	2.3	3.3	4.3	4.8	5.0	5.7	9.2	12.7
Attenuation dB/100 m	1.8	2.4	4.2	5.1	7.4	10.7	14.1	15.6	16.5	18.7	30.2	41.7
Avg. Power kW	4.21	3.25	1.85	1.52	1.04	0.72	0.55	0.49	0.47	0.41	0.25	0.18

Calculate Attenuation = (0.100972) • $\sqrt{FMHz}$ + (0.000262) • FMHz (interactive calculator available at http://www.timesmicrowave.com/cable_calculators)
Attenuation: VSWR=1.0 ; Ambient = +25°C (77°F) **Power:** VSWR=1.0; Ambient = +40°C; Inner Conductor = 100°C (212°F);
Sea Level; dry air; atmospheric pressure; no solar loading

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Connectors

Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)	Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in (mm)	Width in (mm)	Weight lb (g)
1. 7-16 DIN Female	Straight Jack	TC-500-716F-X	3190-2906	<1.30:1 (6)	NA	Solder	Crimp	A/S	1.8 (45.9)	1.14 (29.0)	0.298 (135.0)
2. 7-16 DIN Male	Right Angle	TC-500-716M-RA-D	3190-6079	<1.30:1 (6)	Hex	Solder	Crimp	A/S	1.8 (44.9)	1.60 (41.6)	0.370 (168.0)
3. N Male	Straight Plug	TC-500-NMH-X	3190-2514	<1.35:5 (6)	Hex/Knurl	Solder	Crimp	A/G	1.8 (45)	0.87 (22.0)	0.099 (45.0)
4. N Male	Right Angle	TC-500-NMH-RA-D	3190-2513	<1.25:1 (6)	Hex/Knurl	Solder	Crimp	A/G	1.5 (39)	1.6 (42.0)	0.279 (127.0)
5. N Male	Straight Plug	TC-500-NMC	3190-377	<1.25:1 (2.5)	Hex	Solder	Clamp	S/G	2.1 (53)	0.92 (23.4)	0.228 (103.4)
6. N Male	Right Angle	TC-500-NMC-RA	3190-227	<1.35:1 (2.5)	Hex	Solder	Clamp	S/G	2.4 (61)	1.5 (38.1)	0.275 (124.7)
7. N Female	Straight Jack	TC-500-NFC	3190-215	<1.25:1 (2.5)	NA	Solder	Clamp	S/G	2.2 (56)	0.94 (23.9)	0.215 (97.5)
8. N Female	Bulkhead Kit	BHA-KIT	3190-223	<1.25:1 (2.5)	NA	NA	NA	NA	NA NA	NA NA	0.014 (6.4)
9. TNC Female	Straight Jack	TC-500-TF-X	3190-6010	<1.30:1 (6)	NA	Solder	Crimp	A/G	1.8 (44.5)	0.87 22.0	0.077 (35.0)
10. TNC Male	Straight Plug	TC-500-TM	3190-464	<1.25:1 (2.5)	Hex	Solder	Crimp	N/G	1.5 (38)	0.62 (15.7)	0.082 (28.1)
11. UHF Male	Straight Plug	TC-500-UMC	3190-354	<1.25:1 (2.5)	Knurl	Solder	Clamp	S/G	2.1 (53)	0.88 (22.4)	0.215 (97.5)

* Finish metals: N=Nickel, S=Silver, G=Gold, SS=Stainless Steel, A=Alballoy **VSWR spec based on 3 foot cable with a connector **pair**

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-U	3192-181	Crimp Handle
Crimp Dies	Y151	3190-465	.532" Hex Dies
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Prep Tool	CST-500	3192-075	Prep tool for LMR-500 crimp/clamp connectors
Replacement Blade	RB-02	3192-166	Replacement blade for cutting tool
Replacement Blade Kit	RB-CST	3192-086	Replacement blade kit for all CST tools

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Part Description				Stock
Part Number	Application	Jacket	Color	Code
TCOM-600	Outdoor	PE	Black	55005
TCOM-600-FR	Indoor-Riser CMR	FRPE	Black	55018
TCOM-600-PUR	Indoor/Outdoor	PUR	Black	55006
TCOM-600-PUR-DB	Outdoor/ Watertight	PUR	Black	55041

Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAl	0.176	(4.47)
Dielectric	Foam PE	0.455	(11.56)
Outer Conductor	SPC Strip Braid	0.465	(11.81)
Overall Braid	TC Braid over Al tape	0.500	(12.70)
Jacket	(see table)	0.590	(14.99)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.50	(38.1)
Bend Radius: repeated	in. (mm)	6.0	(152.4)
Bending Moment	ft-lb (N-m)	2.75	(3.73)
Weight	lb/ft (kg/m)	0.160	(0.24)
Tensile Strength	lb (kg)	350	(158.9)
Flat Plate Crush	lb/in. (kg/mm)	60	(1.07)

Electrical Specifications			
Performance Property	Units	US	(metric)
Velocity of Propagation	%	87	
Dielectric Constant	NA	1.32	
Time Delay	nS/ft (nS/m)	1.17	(3.83)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.4	(76.6)
Inductance	uH/ft (uH/m)	0.058	(0.19)
Shielding Effectiveness	dB	>100	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.53	(1.74)
Outer Conductor	ohms/1000ft (/km)	1.52	(5.0)
Voltage Withstand	Volts DC	4000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	40	
Passive Intermod	dBc	-155	