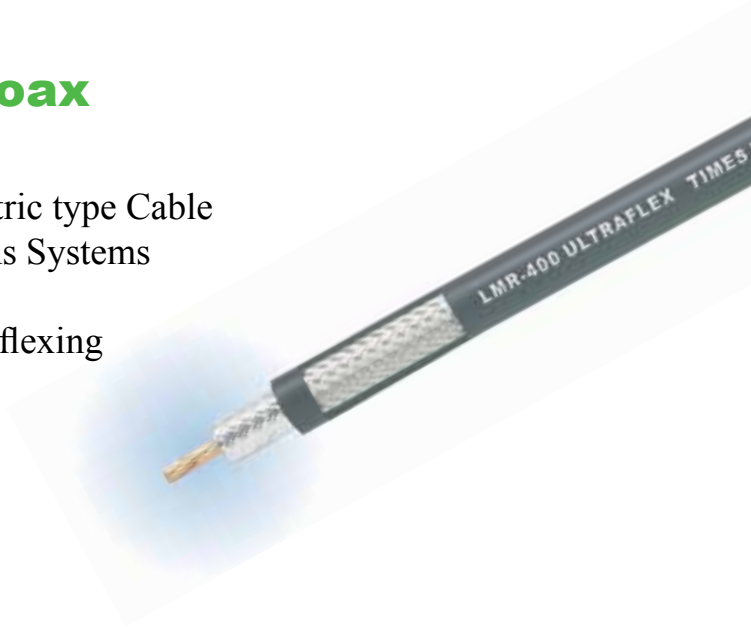
TIMES MICROWAVE SYSTEMS

LMR-®400-UF
UltraFlex Communications Coax

Ideal for...

- Drop-in replacement for RG-8/9913 Air-Dielectric type Cable
- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application that requires periodic/repeated flexing



• **LMR®- UltraFlex** has a stranded center conductor and rubber outer jacket designed for multiple bending/flexing cycles. It is used for both indoor and outdoor applications.

• **Flexibility** and bendability are hallmarks of the LMR-400-UF cable design. The flexible outer conductor enables the tightest bend radius available for any cable of similar size and performance.

• **Low Loss** is another hallmark feature of LMR-400-UF. Size for size LMR has the lowest loss of any flexible cable and comparable loss to semirigid hard-line cables.

• **RF Shielding** is 50 dB greater than typical single shielded coax (40 dB). The multi-ply bonded foil outer conductor is rated conservatively at > 90 dB (i.e. >180 dB between two adjacent cables).

• **Weatherability**: LMR-400-UF cables are designed for outdoor exposure and have a life expectancy in excess of 10 years.

• **Connectors**: A wide variety of connectors are available for LMR-400-UF cable, including all common interface types, reverse polarity, and solder-on center pins. Most LMR connectors employ crimp outer attachment using standard hex crimp sizes.

• **Cable Assemblies**: All LMR-400-UF cable types are available as pre-terminated cable assemblies. Refer to the section on FlexTech for further details.

Part Description				
Part Number	Application	Jacket	Color	Stock Code
LMR-400-UF	Indoor/Outdoor	TPE	Black	54040

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Stranded BC	0.108	(2.74)
Dielectric	Foam Polyethylene	0.285	(7.24)
Outer Conductor	Aluminum Tape	0.291	(7.39)
Overall Braid	Tinned Copper	0.320	(8.13)
Jacket	Black Thermoplastic Elastomer	0.405	(10.29)

Mechanical Specifications

Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.0	(25.4)
Bend Radius: repeated	in. (mm)	4.0	(101.6)
Bending Moment	ft-lb (N-m)	0.375	(0.51)
Weight	lb/ft (kg/m)	.088	(0.131)
Tensile Strength	lb (kg)	160	(72.6)
Flat Plate Crush	lb/in. (kg/mm)	20	(0.36)

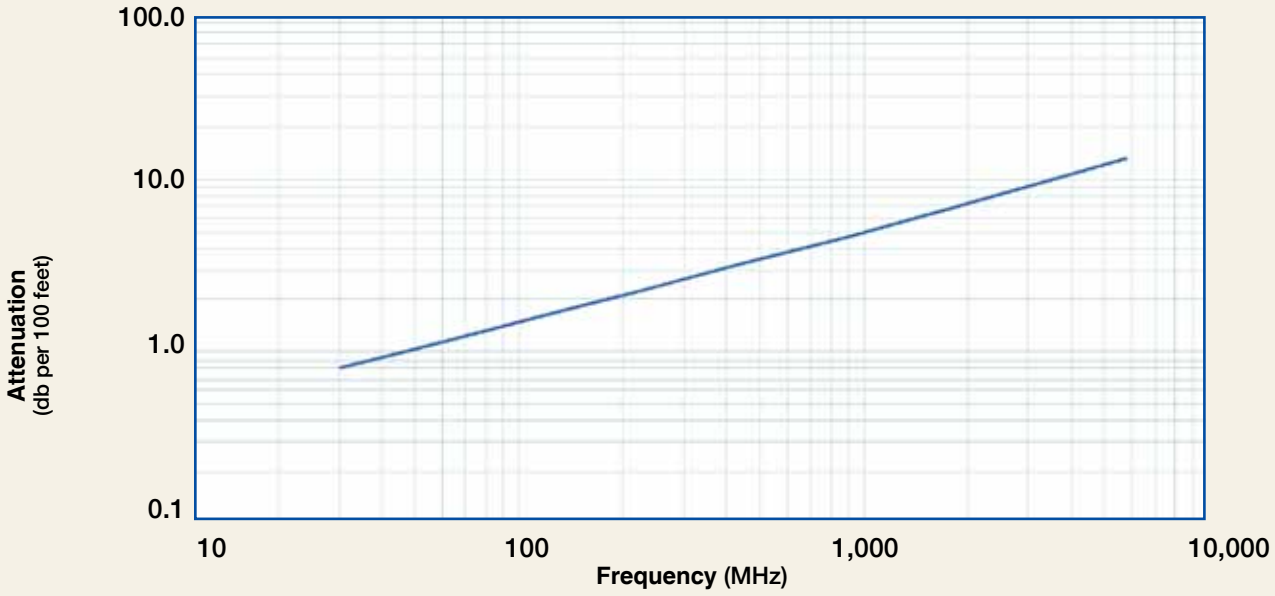
Environmental Specifications

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	%	85	
Dielectric Constant	NA	1.38	
Time Delay	nS/ft (nS/m)	1.20	(3.92)
Impedance	ohms	50	
Capacitance	pF/ft (pF/m)	23.9	(78.40)
Inductance	uH/ft (uH/m)	0.060	(0.21)
Shielding Effectiveness	dB	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	1.07	(3.51)
Outer Conductor	ohms/1000ft (/km)	1.65	(5.4)
Voltage Withstand	Volts DC	2500	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	16	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Attenuation dB/100 ft	0.8	1.1	1.8	2.2	3.3	4.7	6.2	6.8	7.2	8.1	13.0
Attenuation dB/100 m	2.7	3.5	6.1	7.4	10.7	15.4	20.2	22.3	23.6	26.6	42.6
Avg. Power kW	2.77	2.14	1.22	1.00	0.69	0.48	0.36	0.33	0.31	0.28	0.17

Calculate Attenuation = (0.146748) • $\sqrt{\text{FMHz}}$ + (0.000312) • 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

TIMES MICROWAVE SYSTEMS

LMR®-400-UF
UltraFlex Communications Coax

Connectors

Interface	Description	Part Number	Stock Code	VSWR** Freq. (GHz)		Coupling Nut	Inner Contact Attach	Outer Contact Attach	Finish* Body /Pin	Length in	Length (mm)	Width in	Width (mm)	Weight lb	Weight (g)
7-16 DIN Female	Straight Jack	TC-400-716-FC	3190-376	<1.25:1	(2.5)	NA	Solder	Clamp	S/S	1.6	(41)	1.13	(28.7)	0.281	(127.5)
7-16 DIN Male	Straight Plug	TC-400-716-MC	3190-279	<1.25:1	(2.5)	Hex	Solder	Clamp	S/S	1.4	(36)	1.40	(35.6)	0.268	(121.6)
BNC Male	Straight Plug	TC-400-BM	3190-318	<1.25:1	(2.5)	Knurl	Solder	Crimp	N/S	1.7	(43)	0.56	(14.2)	0.063	(28.6)
Mini-UHF	Straight Plug	TC-400-MUHF	3190-520	<1.25:1	(2.5)	Knurl	Solder	Crimp	N/G	1.1	(28)	0.50	(12.7)	0.020	(9.1)
N Female	Straight Jack	TC-400-NFC	3190-299	<1.25:1	(2.5)	NA	Solder	Clamp	N/S	1.6	(41)	0.75	(19.1)	0.119	(54.0)
N Male	Straight Plug	SC-400-NM	3190-1454	<1.25:1	(2.5)	Knurl	Solder	Crimp	N/G	1.5	(38)	0.75	(19.1)	0.090	(40.8)
	Straight Plug	TC-400-NM	3190-188	<1.25:1	(2.5)	Knurl	Solder	Crimp	N/G	1.5	(38)	0.75	(19.1)	0.090	(40.8)
	Straight Plug	TC-400-NMC	3190-277	<1.25:1	(2.5)	Knurl	Solder	Clamp	N/G	1.5	(38)	0.75	(19.1)	0.121	(54.9)
	Straight Plug	TC-400-NMH-D	3190-552	<1.25:1	(10)	Hex/Knurl	Solder	Crimp	A/G	1.5	(38)	0.89	(22.6)	0.113	(51.3)
	Right Angle	TC-400-NMH-RA	3190-422ǂ	<1.35:1	(6)	Hex	Solder	Crimp	S/G	1.8	(46)	1.25	(31.8)	0.130	(59.0)
	Right Angle	TC-400-NMH-RA-D	3190-2293ǂ	<1.35:1	(6)	Hex/Knurl	Solder	Crimp	A/G	1.8	(46)	1.25	(31.8)	0.130	(59.0)
SMA Male	Straight Plug	TC-400-SM	3190-439	<1.25:1	(8)	Hex	Solder	Crimp	N/G	1.2	(29)	0.50	(12.7)	0.032	(14.5)
TNC Male	Straight Plug	TC-400-TM	3190-260	<1.25:1	(2.5)	Knurl	Solder	Crimp	N/S	1.7	(43)	0.59	(15.0)	0.074	(33.6)
	Right Angle	TC-400-TM-RA	3190-442ǂ	<1.35:1	(2.5)	Knurl	Solder	Crimp	N/G	1.7	(43)	0.59	(15.0)	0.085	(38.6)

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

GK-S400TT

HG-400T

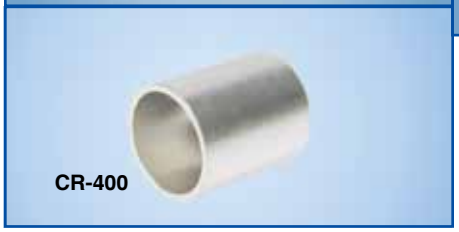
Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S400TT	GK-S400TT	Standard Grounding Kit (each)
Hoisting Grip	HG-400T	HG-400T	Laced Type (each)

HX-4

Y1719

CT-400/300



CR-400

CCT-01

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	HX-4	3190-200	Crimp Handle
Crimp Dies	Y1719	3190-202	.429" Hex Dies
Crimp Tool	CT-400/300	3190-666	Crimp tool for LMR 400 connectors
Crimp Rings	CR-400	3190-830	Crimp rings for TC/EZ-400 connectors (package of 10)
Cutting Tool	CCT-01	3190-1544	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool

TIMES MICROWAVE SYSTEMS

LMR®-600
Flexible Low Loss Communications Coax

Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application (e.g. WLL, GPS, LMR, WLAN, WISP, WiMax, SCADA, Mobile Antennas) requiring an easily routed, low loss RF cable

Part Description				Stock
Part Number	Application	Jacket	Color	Code
LMR-600	Outdoor	PE	Black	54003
LMR-600-DB	Outdoor/Watertight	PE	Black	54093
LMR-600-FR	Indoor/Outdoor Riser CMR	FRPE	Black	54032
LMR-600-FR-PVC	Indoor/Outdoor Riser CMR	FRPVC	Black	54074
LMR-600-PVC	General Purpose	PVC	Black	54219
LMR-600-PVC-W	General Purpose	PVC	White	54206

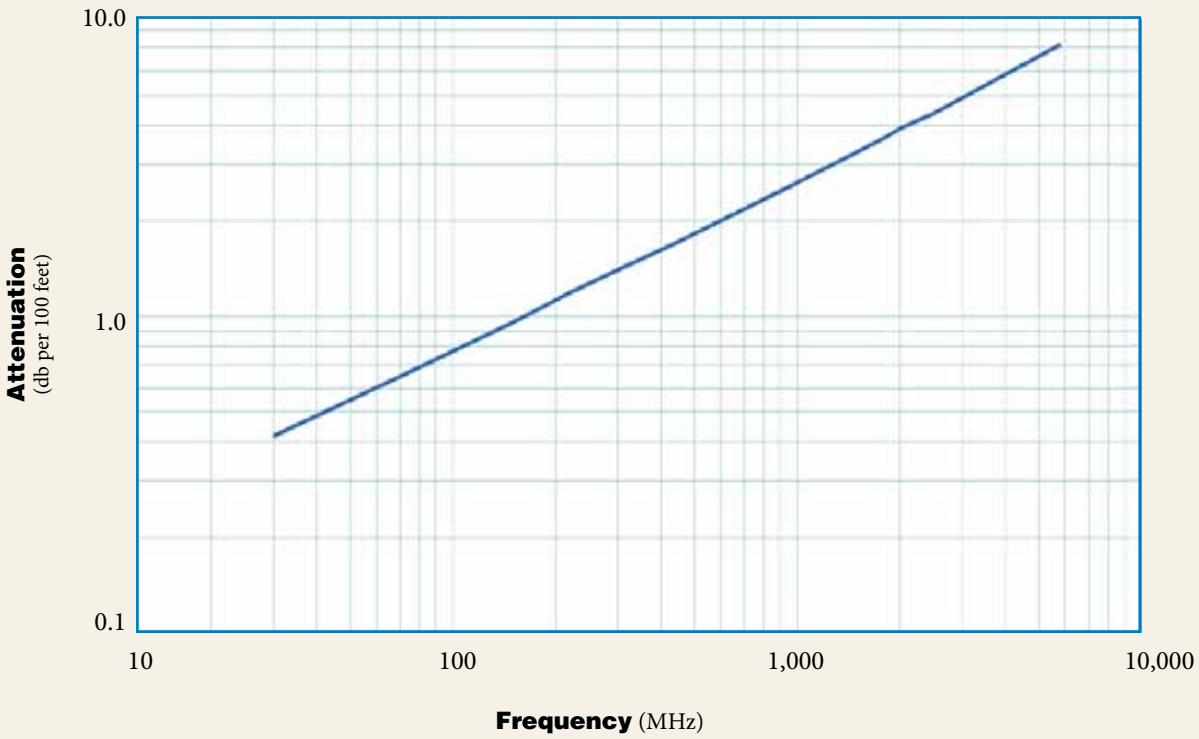
Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Solid BCCAl	0.176	(4.47)
Dielectric	Foam PE	0.455	(11.56)
Outer Conductor	Aluminum Tape	0.461	(11.71)
Overall Braid	Tinned Copper	0.490	(12.45)
Jacket	(see table)	0.590	(14.99)

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)	0.131	(0.20)
Tensile Strength	lb (kg)	350	(158.9)
Flat Plate Crush	lb/in. (kg/mm)	60	(1.07)

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	%	85	
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	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.53	(1.7)
Outer Conductor	ohms/1000ft (/km)	1.2	(3.9)
Voltage Withstand	Volts DC	4000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	40	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800	8000
Attenuation dB/100 ft	0.4	0.5	1.0	1.2	1.7	2.5	3.3	3.7	3.9	4.4	7.3	8.8
Attenuation dB/100 m	1.4	1.8	3.2	3.9	5.6	8.2	10.9	12.1	12.8	14.5	23.8	29.0
Avg. Power kW	5.51	4.24	2.41	1.97	1.35	0.93	0.70	0.63	0.59	0.52	0.32	0.26

Calculate Attenuation =
(0.075550) • $\sqrt{\text{FMHz}}$ + (0.000260) • 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

TIMES MICROWAVE SYSTEMS

LMR®-600
Flexible Low Loss Communications Coax

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. 7/8 EIA	Flange	EZ-600-78EIA	3190-1373	<1.25:1	(2.5)	NA	Spring Finger	Clamp	S/S	2.3	(58)	2.60	(66.0)	0.873	(396.0)
2. 7-16 DIN Female	Straight Jack	TC-600-716FC	3190-375	<1.25:1	(2.5)	NA	Solder	Clamp	S/S	1.1	(28)	1.00	(25.4)	0.249	(112.9)
3. 7-16 DIN	Straight Plug	EZ-600-716M-X	3190-2643	<1.30:1	(6)	Hex	Spring Finger	Crimp	A/S	1.6	(42)	1.38	(35.0)	0.209	(94.80
4. 7-16 DIN	Straight Plug	TC-600-716M-X	3190-2642	<1.30:1	(6)	Hex	Solder	Crimp	A/S	1.6	(40)	1.38	(35.0)	0.191	(86.6
5. 7-16 DIN	Straight Plug	TC-600-716MC	3190-502	<1.25:1	(2.5)	Hex	Solder	Clamp	S/S	2.0	(51)	1.30	(33.0)	0.347	(157.4)
6. 7/16 Male	Right Angle	EZ-600-716M-RA-X	3190-2546	<1.35:1	(6)	Hex	Spring Finger	Crimp	A/G	1.6	(40)	1.38	(35.0)	0.462	(210.0)
7. 7-16 DIN	Right Angle	TC-600-716M-RA-D	3190-2599	<1.35:1	(6)	Hex	Solder	Crimp	A/S	1.7	(44)	2.00	(50.9)	0.362	(164.2)
8. 7-16 DIN	Straight Jack	EZ-600-716F	3190-2447	<1.25:1	(6)	Hex	Spring Finger	Crimp	A/G	1.8	(45)	1.32	(33.6)	0.158	(71.7)
9. HN Male	Straight Plug	TC-600-HNMC	3190-1429	<1.25:1	(<1)	Knurl	Solder	Clamp	S/g	2.3	(59.2)	0.88	(22.4)	0.25	(113)
10. LC Male	Straight Plug	TC-600-LCM	3190-1406	<1.25:1	(<1)	Hex	Solder	Clamp	N/S	3.1	(78.0)	1.62	(41.1)	1.20	(544)
11. N Female	Straight Jack	TC-600-NF-X	3190-2816	<1.30:1	(6)	NA	Solder	Crimp	A/G	1.7	(43)	0.69	(17.6)	0.076	(34.6)
12. N Female	Straight Jack	EZ-600-NF-X	3190-2817	<1.30:1	(6)	NA	Spring Finger	Crimp	A/G	1.7	(43)	0.69	(17.6)	0.090	(40.6)
13. N Female	Bulkhead Jack	EZ-600-NF-BH	3190-616	<1.25:1	(2.5)	NA	Spring Finger	Crimp	S/G	2.4	(61)	0.88	(22.4)	0.195	(88.5)
14. N Female	Bulkhead Jack	TC-600-NF-BH	3190-589	<1.25:1	(2.5)	NA	Solder	Crimp	S/G	2.4	(61)	0.88	(22.4)	0.195	(88.5)
15. N Female	Bulkhead Jack	TC-600-NFC-BH	3190-466	<1.25:1	(2.5)	NA	Solder	Clamp	S/G	2.2	(56)	0.94	(23.9)	0.214	(97.1)
16. N Male	Straight Plug	EZ-600-NMK	3190-669	<1.25:1	(2.5)	Knurl	Spring Finger	Crimp	S/G	2.1	(53)	0.92	(23.4)	0.164	(74.4)
17. N Male	Straight Plug	EZ-600-NMC-2-D	3190-2641	<1.25:1	(6)	Hex/Knurl	Spring Finger	Clamp	A/G	2.1	(53)	0.92	(23.4)	0.202	(91.6)
18. N Male	Straight Plug	EZ-600-NMH-X	3190-2627	<1.25:1	(8)	Hex/Knurl	Spring Finger	Crimp	A/G	2.1	(53)	0.92	(23.4)	0.164	(74.4)
19. N Male	Straight Plug	TC-600-NMH-X	3190-2628	<1.25:1	(8)	Hex/Knurl	Solder	Crimp	A/G	2.1	(53)	0.92	(23.4)	0.166	(75.3)
20. N Male	Right Angle	EZ-600-NMH-RA-X	3190-2639	<1.35:1	(6)	Hex	Spring Finger	Crimp	A/G	2.0	(50)	1.42	(36.0)	0.224	(101.7)
21. N Male	Right Angle	TC-600-NMH-RA-D	3190-2427	<1.35:1	(6)	Hex	Solder	Crimp	A/G	1.8	(46.5)	1.62	(41.2)	0.185	(84.3)
22. N Male	Straight Plug	TC-600-NMH-75-50	3190-1610	<1.35:1	(6)	Hex	Solder	Crimp	N/G	2.1	(52.8)	0.91	(23.1)	0.130	(59.0)
23. BNC Male	Right Angle	TC-600-BM-RA	3190-2734	1.30:1	(4)	Knurl	Solder	Crimp	A/G	1.8	(45.5)	1.54	(39.0)	0.164	(74.3)
24. TNC Male	Straight Plug	TC-600-TM-X	3190-2530	<1.25:1	(6)	Hex/Knurl	Solder	Crimp	A/G	2.3	(57.6)	0.75	(19.0)	0.100	(45.6)
25. TNC Male	Straight Plug	EZ-600-TM-X	3190-2531	<1.25:1	(6)	Hex/Knurl	Spring Finger	Crimp	A/G	2.3	(57.6	0.75	(19.0)	0.100	(45.6)
26. TNC Male	Reverse Polarity	EZ-600-TM-RP	3190-796	<1.25:1	(2.5)	Knurl	Spring Finger	Crimp	A/G	2.2	(56)	0.87	(22.0)	0.112	(50.8)
27. TNC Male	Reverse Polarity	TC-600-TM-RP	3190-1064	<1.25:1	(6)	Knurl	Solder	Crimp	N/G	2.1	(53.3)	0.68	(17.3)	0.112	(50.8)
28. TNC Male	Right Angle	TC-600-TM-RA-D	3190-2707	<1.35:1	(6)	Hex/Knurl	Solder	Crimp	A/G	1.6	(41)	1.75	(44.5)	0.164	(74.3)
29. TNC Female	Reverse Polarity	EZ-600-TF-RP	3190-797	<1.25:1	(2.5)	NA	Spring Finger	Crimp	A/G	2.3	(58)	0.87	(22.0)	0.100	(45.4)
30. TNC Female	Reverse Polarity	TC-600-TF-RP	3190-1065	<1.35:1	(6)	Knurl	Solder	Crimp	N/G	2.2	(55.8)	0.68	(17.3)	0.100	(45.4)
31. UHF Male	Straight Plug	EZ-600-UM	3190-615	<1.25:1	(2.5)	Knurl	Spring Finger	Crimp	S/G	1.7	(43)	0.88	(22.4)	0.164	(74.4)
32. UHF Male	Straight Plug	TC-600-UMC	3190-213	<1.25:1	(2.5)	Knurl	Solder	Clamp	S/G	1.7	(43)	0.88	(22.4)	0.198	(89.8)

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

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-U	3192-181	Crimp Handle
Crimp Dies	Y1720	3190-203	.610" Hex Dies
Crimp Rings	CR-600	3190-831	Crimp Rings for TC/EZ-600 connectors (pkg of 10)
Strip Tool	CST-600	3192-052	Combination prep tool for LMR-600 crimp and clamp style connectors
Crimp Tool	CT-600	3192-170	Crimp tool for LMR 600 connectors
Replacement Blades	RB-456	3190-421	Replacement Blades for Strip Tools
Deburr Tool	DBT-U	3192-001	Removes center conductor rough edges
Midspan Strip Tool	GST-600A	3190-1051	For ground strap attachment
Wrench	WR-600	3190-1435	15/16" Box Wrench (2 required for EZ-600-NMC-2)
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Replacement Blade	RB-02	3192-166	Replacement blade for cutting tool
Replacement Blade Kit	RB-CST	3192-086	Replacement blade kit for all CST strip tools
Tool Kit	TK-600EZ	3190-1602	Tool kit for LMR crimp/clamp connectors (includes CCT-02, CST-600, CT-600, Tool Pouch)

Hardware Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S600TT	GK-S600TT	Standard Grounding Kit (each)
Hoisting Grip	HG-600T	HG-600T	Split/Laced Type (each)
Cold Shrink	CS-A600T	CS-A600T	Cable to Antenna Junction (each)
Cold Shrink	CS-60120T	CS-60120T	LMR-600 to -1200 Junction (each)
Cold Shrink	CS-60170T	CS-60170T	LMR-600 to -1700 Junction (each)
Hanger Blocks	CB-600T	CB-600T	Dual Cable Support Block (kit of 10)
Stand. Entry Port Cushion		SC-600T-3	Three cables (each)
Snap-In Hangers	SH-U600T	SH-U600T	Snap-In Hangers (Kit of 10)
Hanger Block Supporting Hardware			Complete Range of Supporting Hardware & Adapters Available
Weather Proof Boot	IPB-600-NM	3109-600-NM	LMR-600 Male IP boot suitable for type N, TNC, BNC, 4310, 4195
Weather Proof Boot	IPB-600-NF	3109-600-NF	LMR-600 Female IP boot suitable for type N, TNC, BNC, 4310, 4195
Weather seal boots	WSB-600	3109-401	Weather seal strain relief boot (10 pk) for use with most popular LMR-600-X series connectors

TIMES MICROWAVE SYSTEMS

LMR®-600-UF
UltraFlex Communications Coax

Ideal for...

- Jumper Assemblies in Wireless Communications Systems
- Short Antenna Feeder runs
- Any application that requires periodic/repeated flexing

Part Description				
Part Number	Application	Jacket	Color	Stock Code
LMR-600-UF	Indoor/Outdoor	TPE	Black	54044

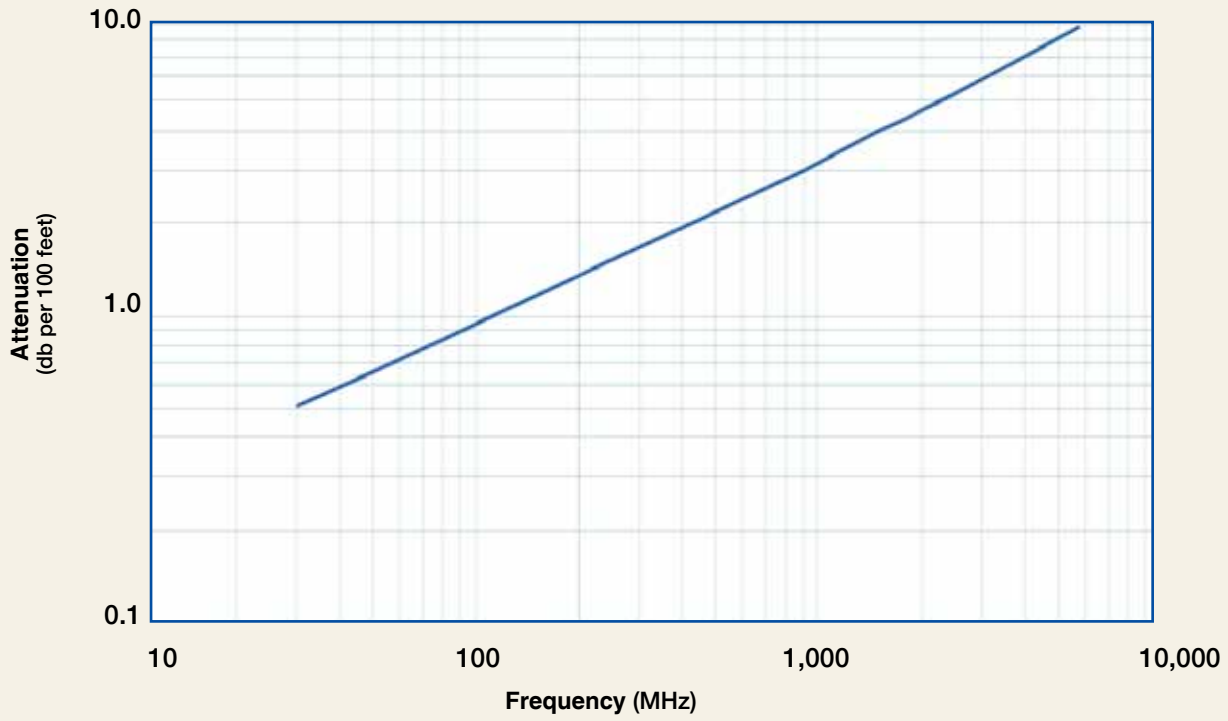
Environmental Specifications		
Performance Property	°F	°C
Installation Temperature Range	-40/+185	-40/+85
Storage Temperature Range	-94/+185	-70/+85
Operating Temperature Range	-40/+185	-40/+85

Construction Specifications			
Description	Material	In.	(mm)
Inner Conductor	Stranded BC	0.176	(4.47)
Dielectric	Foam Polyethylene	0.455	(11.56)
Outer Conductor	Aluminum Tape	0.461	(11.71)
Overall Braid	Tinned Copper	0.490	(12.45)
Jacket	Black Thermoplastic Elastomer	0.590	(14.99)

Mechanical Specifications			
Performance Property	Units	US	(metric)
Bend Radius: installation	in. (mm)	1.5	(38.1)
Bend Radius: repeated	in. (mm)	6.0	(152.4)
Bending Moment	ft-lb (N-m)	1.75	(2.37)
Weight	lb/ft (kg/m)	0.165	(0.25)
Tensile Strength	lb (kg)	350	(158.9)
Flat Plate Crush	lb/in. (kg/mm)	40	(0.71)

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	>90	
DC Resistance			
Inner Conductor	ohms/1000ft (/km)	0.43	(1.42)
Outer Conductor	ohms/1000ft (/km)	1.2	(3.9)
Voltage Withstand	Volts DC	4000	
Jacket Spark	Volts RMS	8000	
Peak Power	kW	40	

Attenuation vs. Frequency (typical)



Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Attenuation dB/100 ft	0.5	0.7	1.2	1.4	2.1	3.0	4.0	4.4	4.7	5.3	8.7
Attenuation dB/100 m	1.7	2.2	3.8	4.6	6.8	9.8	13.1	14.5	15.3	17.4	28.6
Avg. Power kW	4.59	3.53	2.00	1.64	1.12	0.77	0.58	0.52	0.49	0.43	0.26

Calculate Attenuation =
$(0.090660) \cdot \sqrt{FMHz} + (0.000312) \cdot FMHz$ (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

TIMES MICROWAVE SYSTEMS

LMR®-600-UF
UltraFlex Communications Coax

Connectors		Part	Stock	VSWR**		Coupling	Inner Contact	Outer Contact	Finish* Body	Length		Width		Weight	
Interface	Description	Number	Code	Freq.	(GHz)	Nut	Attach	Attach	/Pin	in	(mm)	in	(mm)	lb	(g)
1. 7-16 DIN Female	Straight Jack	TC-600-716-FC	3190-375	<1.25:1	(2.5)	NA	Solder	Clamp	S/S	1.1	(28)	1.00	(25.4)	0.249	(112.9)
2. 7-16 DIN Male	Straight Plug	TC-600-716-MC	3190-502	<1.25:1	(2.5)	Hex	Solder	Clamp	S/S	2.0	(51)	1.30	(33.0)	0.347	(157.4)
3. 7-16 DIN Male	Right Angle	TC-600-716M-RA	3190-395	<1.35:1	(2.5)	Hex	Solder	Crimp	S/S	1.4	(36)	1.40	(35.6)	0.354	(160.8)
4. N Male	Straight Plug	TC-600-NMC	3190-357*	<1.25:1	(2.5)	Hex	Solder	Clamp	S/G	2.1	(53)	0.92	(23.4)	0.208	(93.4)
5. N Male	Right Angle	TC-600-NMC-RA	3190-233	<1.35:1	(2.5)	Hex	Solder	Clamp	S/G	2.1	(53)	0.92	(23.4)	0.280	(117.9)
6. N Male	Right Angle	TC-600-NMH-RA-D	3190-2427	<1.35:1	(6)	Hex	Solder	Crimp	A/G	1.8	(46.5)	1.62	(41.2)	0.185	(84.3)
7. N Male	Straight Plug	TC-600-NMH-75/50	3190-1610	<1.35:1	(6)	Hex	Solder	Crimp	N/G	2.1	(52.8)	0.91	(23.1)	0.130	(59.0)
8. TNC	Straight Plug	TC-600-TM-RP	3190-1064	<<1.35:1	(6)	Knurl	Solder	Crimp	N/G	1.6	(40.2)	0.68	(17.0)	0.090	(40.8)
9. TNC	Straight Plug	TC-600-TM-X	3190-2530	<1.25:1	(6)	Hex/Knurl	Solder	Crimp	A/G	2.3	(57.6)	0.75	(19.0)	0.100	(45.6)
10. BNC Male	Right Angle	TC-600-BM-RA	3190-2734	<1.30:1	(4)	Knurl	Solder	Crimp	A/G	1.8	(45.5)	1.54	(39.0)	0.164	(74.3)
11. N Female	Bulkhead Jack	TC-600-NF-BH	3190-589*	<1.25:1	(2.5)	NA	Solder	Crimp	S/G	2.4	(61)	0.88	(22.4)	0.195	(88.5)
12. N Female	Bulkhead Jack	TC-600-NFC-BH	3190-466	<1.25:1	(2.5)	NA	Solder	Clamp	S/G	2.2	(56)	0.94	(23.9)	0.214	(97.1)
13. UHF Male	Straight Plug	TC-600-UMC	3190-213	<1.25:1	(2.5)	Knurl	Solder	Clamp	S/G	1.7	(43)	0.88	(22.4)	0.198	(89.8)
14. N Male	Straight Plug	TC-600-NMH-X	3190-2628	<1.25:1	(8)	Hex/Knurl	Solder	Crimp	A/G	2.1	(53)	0.92	(23.4)	0.166	(75.3)
15. BNC Male	Right Angle	TC-600-BM-RA	3190-2734	<1.30:1	(4)	Knurl	Solder	Crimp	A/G	1.8	(45.5)	1.54	(39.0)	0.164	(74.3)

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


CT-U
3192-181


CT-600
3192-600


CCT-02
3192-165


Y1720
3190-203

Install Tools

Type	Part Number	Stock Code	Description
Crimp Tool	CT-U	3192-181	Crimp Handle (Dies Required)
Crimp Dies	Y1720	3190-203	.610" Hex Dies
Crimp Tool	CT-600	3192-170	Crimp tool for LMR-600 connectors
Cutting Tool	CCT-02	3192-165	Cable end flush cut tool
Replacement Blade	RB-01	3190-1609	Replacement blade for cutting tool


GK-S600TT


CS-A600T,
CS-60120T, CS-60170T


Hanger Block Supporting Hardware


SC-600T


Standard Entry Panels


HG-600T


CB-600T

Accessories

Type	Part Number	Stock Code	Description
Ground Kit	GK-S600TT	GK-S600TT	Standard Grounding Kit (each)
Hoisting Grip	HG-600T	HG-600T	Split/Laced Type (each)
Cold Shrink	CS-A600T	CS-A600T	Cable to Antenna Junction (each)
Cold Shrink	CS-60120T	CS-60120T	LMR-600 to -1200 Junction (each)
Cold Shrink	CS-60170T	CS-60170T	LMR-600 to -1700 Junction (each)
Standard Entry Port Cushion	SC-600T-3	SC-600T-3	Three Cables (each)
Standard Entry Panels	Full Range of Port Styles/Combinations Available		
Hanger Blocks	CB-600T	CB-600T	Dual Cable Support Block (kit of 10)
Hanger Block Supporting Hardware	Complete Range of Supporting Hardware & Adapters Available		

CABLE DRAWING

Habia Cable

Article Number/Doc Number	Revision No	Status	Phase
3000014200	**05**	**Released**	**Production**

Description	Habia Inspection Plan (HIP)	Page
RG 142 B/U (M)	HIP-G-302	1 of 1

Customer Product Number	Created by	Approved by
	H. Jeschke	M. Oseloff

Customer Product Description	Creation Date	Approval Date
	2018-09-14	2018-09-17

Intended Use	Primarily as transmission line in high frequency applications	CE

Technical Data	Values at +20° C	Unit
Conductor Resistance	max 63,9	Ω/km
Insulation Resistance	>5000	MΩ x km
Test Voltage	Core: 1 min: 5 kV AC; jacket 2	KV AC
Voltage Rating	600	V AC
Capacitance	nom 94; max 105	nF / km
Impedance	50 ± 2	Ω
Attenuation	max 38,3	dB / 100m @ 400 MHz
Weight	max 83,3	g / m
Temperature Rating	-65 / +200	°C

All dimensions in mm, unless otherwise stated.

Pos	Description	Dimension	Overall Diameter	Remarks
1.	Silver plated copper-covered steel conductor, hard	SCWH	0,940 ± 0,025	1 x 0,940
2.	Dielectric of solid PTFE, natural		2,95 ± 0,13	
3.	Braid of silver plated copper wire	d = 0,127	3,50 ± 0,15	
4.	Braid of silver plated copper wire	d = 0,127	4,10 ± 0,15	
5.	Jacket of FEP, Brown-transparent	t = 0,43	4,95 ± 0,13	

Jacket marking in contrasting colour (every 250mm):
RG 142 – Habia Cable – 30000-142-00 – YYYY-Www – Batchcode
YYYY-Www to be replaced with year and week of production
Batchcode to be replaced with manufacturers traceability code

Design generally in accordance with M17/158-00001 acc to MIL-DTL-17

Flame retardant acc to IEC 60332-1 and UL 1581 VW-1