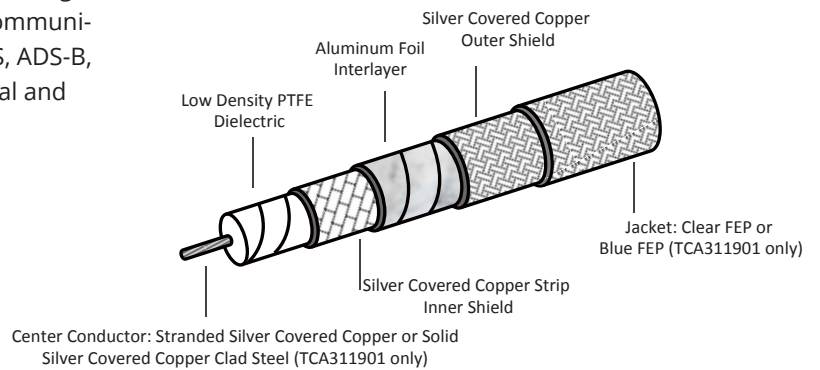


TCA

Times Commercial Air (TCA) is a low-loss, high-temperature, high flexibility cable for navigation, collision avoidance, and communications systems. TCA is ideal for applications such as GPS, ADS-B, SATCOM, and ATG, especially when facing critical electrical and mechanical performance requirements.

Features:

- Excellent temperature performance (-55°C to +200°C)
- Significantly lighter than MIL-DTL-17 cables with superior loss characteristics
- High flexibility to enable routing through tight runs
- Wide connector availability and simple installation
- Available as fully tested, custom cable assemblies
- Multiple shielding layers to reduce interference



Key Applications:

Communications

- HF/VHF/UHF
- Emergency Locator Transmitter
- ATG Cellular
- SATCOM (L and Ku)

Collision Avoidance

- ADS-B/TCAS/Mode-S/TAS

Sensing

- Onboard surveillance camera
- External EO/IR Camera

Navigation

- GPS
- Radar Altimeter
- ILS/Marker Beacon/GS/LOC
- VOR/DME
- NDB/ADF

	TCA311201	TCA311501	TCA311601	TCA311901	TCA352001
Stock Code	510-0155	510-0163	510-0158	510-0167	510-0159
Physical Specifications					
Description	in (mm)	in (mm)	in (mm)	in (mm)	in (mm)
Inner Conductor	0.089 (2.26)	0.057 (1.44)	0.056 (1.42)	0.037 (0.93)	0.043 (1.09)
Dielectric	0.233 (5.91)	0.159 (4.03)	0.149 (3.78)	0.117 (2.97)	0.108 (2.74)
Inner Shield	0.241 (6.12)	0.167 (4.24)	0.157 (3.98)	0.127 (3.22)	0.122 (3.09)
Interlayer	0.246 (6.24)	0.174 (4.90)	0.163 (4.14)	0.133 (3.37)	-
Outer Shield	0.267 (6.78)	0.193 (5.81)	0.183 (4.64)	0.153 (3.88)	0.138 (3.50)
Jacket	0.317 (8.05)	0.229 (5.81)	0.229 (5.81)	0.195 (4.95)	0.162 (4.11)

	TCA311201	TCA311501	TCA311601	TCA311901	TCA352001
Mechanical and Environmental Specifications					
Bend Radius: Installation (in. / (mm))	1.59 (40.3)	1.20 (30.4)	1.15 (29.2)	1.0 (25.4)	0.8 (20.3)
Weight (lb/ft / (kg/m))	0.0086 (0.06)	0.05 (0.36)	0.05 (0.36)	0.043 (0.31)	0.027 (0.19)
Operating Temperature Range	-55°C to +200°C	-55°C to +200°C	-55°C to +200°C	-55°C to +200°C	-55°C to +200°C

	TCA311201	TCA311501	TCA311601	TCA311901	TCA352001
Electrical Specifications					
Velocity of Propagation (Nom.)	80%	80%	80%	70%	80%
Time Delay (nS/ft / (nS/m), Nom.)	1.27 (4.16)	1.27 (4.16)	1.27 (4.16)	1.46 (4.79)	1.25 (4.10)
Impedance (Ohms, Nom.)	50	50	50	50	50
Capacitance (pF/ft / (pF/m), Nom.)	25.5 (83.6)	25.5 (83.6)	25.5 (83.6)	29.3 (96.1)	25.5 (83.6)
Shielding Effectiveness (dB)	90	90	90	90	80

	TCA311201	TCA311501	TCA311601	TCA311901	TCA352001
Attenuation: dB / 100ft (100m) (+25°C ambient)					
150 MHz	2.1 (6.8)	2.7 (8.8)	3.3 (10.8)	4.3 (14.1)	4.5 (14.7)
1000 MHz	5.6 (18.3)	7.1 (23.2)	8.7 (28.5)	12.2 (40.0)	12.2 (40.0)
1600 MHz	6.7 (21.9)	9.1 (29.8)	10.9 (35.7)	15.8 (51.8)	14.8 (48.5)
2400 MHz	8.9 (29.1)	10.7 (35.1)	13.3 (43.6)	18.6 (61.0)	20.4 (66.9)
5000 MHz	12.7 (41.6)	16.1 (52.8)	20.0 (65.6)	30.0 (98.4)	26.4 (86.6)

Calculate attenuation and power handling at any frequency using the calculator on the www.TimesMicrowave.com homepage

Connectors:

	TCA311201	TCA311501	TCA311601	TCA311901	TCA352001
TNC Male Straight	TC-201-TM-X (3190-8073)	TC-501-TM-X (3190-8075)	TC-601-TM-X (3190-8077)	TC-901-TM-X (3190-8079)	TC-001-TM-X (3190-8071)
TNC Male Right Angle	TC-201-TM-RA-X (3190-8074)	TC-501-TM-RA-X (3190-8076)	TC-601-TM-RA-X (3190-8078)	TC-901-TM-RA-X (3190-8080)	TC-001-TM-RA-X (3190-8072)
N Male Straight	TC-201-NM-X (3190-8063)	TC-501-NM-X (3190-8065)	TC-601-NM-X (3190-8067)	TC-901-NM-X (3190-8069)	TC-001-NM-X (3190-8061)
N Male Right Angle	TC-201-NM-RA-X (3190-8064)	TC-501-NM-RA-X (3190-8066)	TC-601-NM-RA-X (3190-8068)	TC-901-NM-RA-X (3190-8070)	TC-001-NM-RA-X (3190-8062)
BNC Male Straight	TC-201-BM-X (3190-8083)	TC-501-BM-X (3190-8085)	TC-601-BM-X (3190-8087)	TC-901-BM-X (3190-8089)	TC-001-BM-X (3190-8081)
BNC Male Right Angle	TC-201-BM-RA-X (3190-8084)	TC-501-BM-RA-X (3190-8086)	TC-601-BM-RA-X (3190-8088)	TC-901-BM-RA-X (3190-8090)	TC-001-BM-RA-X (3190-8082)
SMA Male Straight	TC-201-SM-X (3190-8053)	TC-501-SM-X (3190-8055)	TC-601-SM-X (3190-8057)	TC-901-SM-X (3190-8059)	TC-001-SM-X (3190-8051)
SMA Male Right Angle	TC-201-SM-RA-X (3190-8054)	TC-501-SM-RA-X (3190-8056)	TC-601-SM-RA-X (3190-8058)	TC-901-SM-RA-X (3190-8060)	TC-001-SM-RA-X (3190-8052)