



MIL-DTL-17 Fluoropolymer & RF Coaxial Cables

RG-196A/U

Miniature Coaxial Cable

MIL-C-17 · 50 Ω ± 2 Ω · Ø 2.03 mm · 30 AWG (7×0.10) SCCS · Solid PTFE · SPC braid · +250



MIL-C-17 RG-196A/U

50 Ω · Ø 2.03 mm

30 AWG Subminiature +250 °C

Application

RG-196A/U (MIL-C-17 / M17/69 and M17/139) is a 50 Ω subminiature fluoropolymer coaxial cable with a 2.03 mm outer diameter rated from -55 °C to +250 °C. Engineered with a 30 AWG (7×0.10 mm) silver-plated copper-clad steel center, Ø 0.86 mm solid PTFE

Typical uses: High-Density Avionics & EW Modules, Phased-Array Radar & SATCOM Backplanes, Medical Diagnostic & RF Ablation Probes, Miniature MMCX / SSMB / U.FL Jumpers, Cryogenic & High-Temp Sensor Feeds

Construction



Cross-section, not to scale

1	Stranded SCCS center conductor (30 AWG)	MIL-C-17
2	Solid virgin PTFE dielectric	MIL-C-17
3	Silver-plated copper wire braid	MIL-C-17
4	Sintered white PTFE outer jacket	MIL-C-17

Technical data

Typical values

Characteristic impedance Z_0	50 $\Omega \pm 2 \Omega$
Velocity of propagation (VoP)	69.5 %
Max. operating voltage	750 V rms (1,000 V rms peak)
Operating temperature range	-55 °C to +250 °C continuous
Soldering heat immunity	+260 °C without core deformation
Cold-bend rating	-55 °C per MIL-DTL-17
Center conductor stranding	7 × 0.102 mm (30 AWG, Ø 0.30 mm)
Outer jacket diameter	2.03 mm max (0.080 in)
Nominal cable weight	8.9 kg/km (6.0 lb/1000 ft)
Chemical & solvent immunity	Inert to aviation fuels, solvents & acids
High-temperature aging	Zero melt or embrittlement at +250 °C
Radiation & UV stability	Fluoropolymer jacket resists UV
Standards	MIL-C-17 (RG-196A/U) & M17/139

Nominal capacitance	96.5 pF/m (29.4 pF/ft)
Conductor DC resistance	≤ 800 Ω /km at 20 °C (30 AWG SCCS)
Dielectric withstand test	1.5 kV rms at 60 Hz
FEP variant temperature (RG-178)	-55 °C to +200 °C continuous
Flammability rating	UL 94 V-0 / FAR 25.853 non-flammable
Continuous CW power @ 400 MHz	110 W (@ +40 °C ambient)
Dielectric diameter	0.86 mm ± 0.05 mm (0.034 in)
Min. bend radius (fixed / flex)	10 mm (5×D) / 20 mm (10×D)
Connector compatibility	MMCX, MCX, SSMB,SSMC, SMB, SMA
Moisture absorption	< 0.01 % water uptake
Tensile pull strength	High-strength 40 % CCS core
RoHS / REACH status	RoHS 3 compliant

Sizes

4 standard constructions

Tick the sizes you need and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

Order designation	Construction / Variant	Conductor	Outer Ø ≈ mm	Metal kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard RG-196A/U variants 4 sizes						
☐ RG-196A/U White PTFE Jacket (+250 °C)	50 Ω Single SPC Braid (PTFE)	30 AWG (7×0.10 SCCS)	2.03	4.2	8.9	10
☐ RG-178B/U (M17/93) Brown FEP (+200 °C)	50 Ω Single SPC Braid (FEP)	30 AWG (7×0.10 SCCS)	1.80	4.2	8.2	9
☐ M17/139-00001 PFA Jacket (+250 °C)	50 Ω Single SPC Braid (PFA)	30 AWG (7×0.10 SCCS)	1.90	4.2	8.6	10
☐ RG-316/U Larger 26 AWG Sister Coax	50 Ω Single SPC Braid (FEP)	26 AWG (7×0.17 SCCS)	2.50	7.8	15.6	12

- Dimensions and weights are nominal production values subject to manufacturing tolerances per MIL-DTL-17 (RG-196A/U / M17/69).

Attenuation & RF power handling

6 sizes

Frequency	Nominal attenuation dB / 100m	Nominal attenuation dB / 100ft	Max. CW RF power W (@ 40 °C)	Impedance $Z_0 \Omega$	Velocity VoP %
50 MHz	42.7	13.01	300	50	69.5
100 MHz	52.5	16.00	210	50	69.5
400 MHz	108.3	33.01	110	50	69.5
1000 MHz (1 GHz)	170.6	52.00	68	50	69.5
2400 MHz (2.4 GHz)	275.6	84.00	42	50	69.5
3000 MHz (3 GHz)	315.0	96.01	36	50	69.5

- Attenuation values apply at +20 °C ambient into a matched 50 Ω load; CW power ratings assume VSWR 1.0:1 at +40 °C ambient.

Standards and approvals

- ✓ MIL-C-17 (RG-196A/U)
- ✓ MIL-DTL-17/93 (RG-178)
- ✓ RoHS 3 / CE

Certifications



Management systems: ISO 9001, ISO 14001, ISO 45001

Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone

+86 185 9591 3361

Email

info@tebaoflex.com

Web

tebaoflex.com/cables/rg-196a-u-miniature-coaxial-cable



Typical values for this cable type, based on MIL-DTL-17 (RG-196A/U / M17/69). Values for your order are confirmed in the quotation. Subject to change without notice.
Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.