



MIL-DTL-17 PE/PVC RF Coaxial Cables

RG-217/U

RF Coaxial Cable

MIL-DTL-17/78 · 50 Ω ± 2 Ω · Ø 13.84 mm · 10 AWG (Ø 2.70) solid Cu · Solid PE · Dual Cu



MIL-DTL-17/78 RG-217

50 Ω · 5200 V rms

Ø 13.84 mm High-Power Coax

Application

RG-217/U (MIL-DTL-17/78-RG217) is a heavy-wall 50 Ω high-power RF coaxial cable with a 13.84 mm (0.545 in) outer diameter and 5,200 V rms operating voltage. Engineered with a Ø 2.70 mm (10 AWG) solid bare copper center conductor, Ø 9.40 mm solid PE

Typical uses: 13.56 MHz Semiconductor Plasma & CVD, High-Power HF / VHF / UHF Transmitters, Naval & Coastal Defense Radar Feeders, MRI RF Power Amplifier Interconnects, Linear Accelerator & RF Heating Systems

Construction



Cross-section, not to scale

1	Solid bare copper center conductor (10	MIL-DTL-17/78
2	Heavy-wall solid PE dielectric	MIL-DTL-17/78
3	Inner bare copper wire braid	MIL-DTL-17/78
4	Outer bare copper wire braid	MIL-DTL-17/78
5	Non-contaminating PVC Type IIA jacket	MIL-DTL-17/78

Technical data

Typical values

Characteristic impedance Z_0	50 $\Omega \pm 2 \Omega$	Nominal capacitance	101.0 pF/m (30.8 pF/ft)
Velocity of propagation (VoP)	66.0 %	Center / shield DC resistance	$\leq 3.1 \Omega/\text{km} / \leq 2.4 \Omega/\text{km}$ at 20 °C
Max. operating voltage	5,200 V rms (7,000 V rms peak)	Dielectric withstand test	15.0 kV rms at 60 Hz
Operating temperature range	-40 °C to +80 °C	Installation temperature range	-20 °C to +70 °C
Dielectric softening temperature	+85 °C (solid PE)	Flame retardance	IEC 60332-1-2 / UL VW-1
Cold-bend rating	-40 °C per MIL-DTL-17	Continuous CW power @ 13.56 MHz	6,800 W (@ +40 °C ambient)
Center conductor diameter	2.70 mm solid Cu (10 AWG, 0.106 in)	Dielectric diameter	9.40 mm $\pm$ 0.20 mm (0.370 in)
Outer jacket diameter	13.84 mm $\pm$ 0.25 mm (0.545 in)	Min. bend radius (fixed / install)	85 mm (6×D) / 140 mm (10×D)
Nominal cable weight	305.0 kg/km (205 lb/1000 ft)	Connector compatibility	Type N, 7/16 DIN, HN, LC, SC (RG-217 size)
Plasticizer non-contamination	Type IIA non-migrating PVC	High-voltage corona resistance	Void-free extruded $\varnothing$ 9.40 mm PE core
RF leakage suppression	Dual counter-woven copper braids	UV & outdoor weather	Black UV-stabilised outer sheath
Cleanroom LSZH option	Halogen-free low-outgassing sheath	RoHS / REACH status	RoHS 3 compliant
Standards	MIL-DTL-17/78-RG217 (M17/78)		

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 $\varnothing \approx$ mm	Metal kg/km	Weight $\approx$ kg/km	Min. bend R fixed mm
Standard RG-217/U variants 4 sizes						
☐ RG-217/U (M17/78-RG217) Type IIA PVC	50 Ω Dual Bare Cu Braid (PVC)	10 AWG ($\varnothing$ 2.70 Cu)	13.84	168.0	305.0	83
☐ M17/165-00001 Swept RG-217 Grade	50 Ω Swept Dual Cu Braid (PVC)	10 AWG ($\varnothing$ 2.70 Cu)	13.84	168.0	305.0	83
☐ RG-217-LSZH Cleanroom / Shipboard	50 Ω Dual Bare Cu Braid (LSZH)	10 AWG ($\varnothing$ 2.70 Cu)	13.84	168.0	315.0	83
☐ RG-214/U Flexible 13 AWG Sister Coax	50 Ω Dual SPC Braid (PVC)	13 AWG (7×0.75 SPC)	10.80	112.0	195.0	65

– Dimensions and weights are nominal production values subject to manufacturing tolerances per MIL-DTL-17/78-RG217 (M17/78-RG217).

Attenuation & RF power handling

6 sizes

Frequency	Nominal attenuation dB / 100 m	Nominal attenuation dB / 100 ft	Max. CW RF power W (@ 40 °C)	Impedance $Z_0 \Omega$	Velocity VoP %
13.56 MHz (ISM Plasma)	1.5	0.46	6,800	50	66.0
50 MHz	3.1	0.94	3,400	50	66.0
100 MHz	4.6	1.40	2,200	50	66.0
200 MHz	7.2	2.19	1,450	50	66.0
400 MHz	10.8	3.29	950	50	66.0
1000 MHz (1 GHz)	19.0	5.79	520	50	66.0

– 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-DTL-17/78-RG217
- ✓ MIL-DTL-17/165
- ✓ 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-217-u-rf-coaxial-cable



Typical values for this cable type, based on MIL-DTL-17/78-RG217 (M17/78-RG217). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.