



MIL-DTL-17 PE/PVC RF Coaxial Cables

RG-214

Double-Shielded RF Cable

MIL-DTL-17/75 · 50 Ω ± 2 Ω · Ø 10.80 mm · 13 AWG (7×0.75) SPC · Solid PE · Dual SPC braids



MIL-DTL-17/75 RG-214

50 Ω · DC-11 GHz

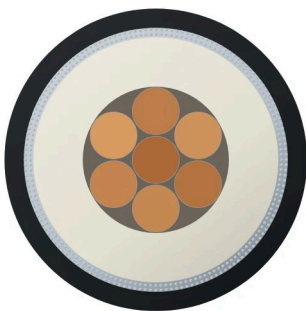
Dual SPC Braids > 90 dB

Application

RG-214 (RG-214/U, MIL-DTL-17/75-RG214 and M17/164-00001) is a heavy-duty 50 Ω double-shielded coaxial cable (Ø 10.80 mm) engineered for high-power RF transmission and low-leakage receiver feeds from DC to 11 GHz, combining a 13 AWG silver-plated copper

Typical uses: Naval Shipboard Radar & SATCOM, Air Traffic Control (ATC) & DME Towers, EMC / Anechoic Chamber Feedthroughs, High-Power Broadcast & Defense Comms, Particle Accelerator RF Cavities

Construction



Cross-section, not to scale

1	Stranded SPC center conductor (13 AWG)	MIL-DTL-17/75
2	Solid polyethylene (PE) dielectric	MIL-DTL-17/75
3	Inner silver-plated copper braid	MIL-DTL-17/75
4	Outer silver-plated copper braid	MIL-DTL-17/75
5	Non-contaminating PVC Type IIA jacket	MIL-DTL-17/75

Technical data

Typical values

Characteristic impedance Z_0	50 Ω $\pm$ 2 Ω	Nominal capacitance	101.0 pF/m (30.8 pF/ft)
Velocity of propagation (VoP)	66.0 %	Shielding effectiveness	> 90 dB (dual silver-plated braids)
Max. operating voltage	3,700 V rms	Dielectric withstand test	10.0 kV rms at 60 Hz
Operating temperature range	-40 $^{\circ}$ C to +80 $^{\circ}$ C	Installation temperature range	-20 $^{\circ}$ C to +70 $^{\circ}$ C
Dielectric softening temperature	+85 $^{\circ}$ C (solid PE)	Flame retardance	IEC 60332-1-2 (IEC 60332-3 on LSZH)
Cold-bend rating	-40 $^{\circ}$ C per MIL-DTL-17	Continuous CW power @ 400 MHz	650 W (@ +40 $^{\circ}$ C ambient)
Center conductor stranding	7 $\times$ 0.75 mm (13 AWG, $\varnothing$ 2.26 mm)	Dielectric diameter	7.24 mm $\pm$ 0.18 mm (0.285 in)
Outer jacket diameter	10.80 mm $\pm$ 0.18 mm (0.425 in)	Min. bend radius (fixed / flex)	55 mm (5 $\times$ D) / 110 mm (10 $\times$ D)
Nominal cable weight	195.0 kg/km (131 lb/1000 ft)	Connector compatibility	Type N, TNC, BNC, 7/16 DIN, SC (RG-214 group)
Plasticizer non-contamination	Type IIA non-migrating PVC	Corrosion & salt-spray resistance	Silver-plated copper resists oxidation
UV & outdoor weather	Black UV-stabilised outer sheath	RF interference immunity	Dual SPC braids eliminate ingress/egress
LSZH naval option	IEC 60754-1/2 & IEC 61034	RoHS / REACH status	RoHS 3 compliant
Standards	MIL-DTL-17/75-RG214 & M17/164-00001		

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-214 variants 4 sizes						
☐ RG-214/U (M17/75-RG214) Type IIA PVC	50 Ω Dual SPC Braid (PVC)	13 AWG (7 $\times$ 0.75 SPC)	10.80	112.0	195.0	54
☐ RG-214-LSZH Naval Halogen-Free	50 Ω Dual SPC Braid (LSZH)	13 AWG (7 $\times$ 0.75 SPC)	10.80	112.0	202.0	54
☐ RG-214-PUR Tactical Abrasion-Resistant	50 Ω Dual SPC Braid (PUR)	13 AWG (7 $\times$ 0.75 SPC)	10.80	112.0	188.0	54
☐ RG-213/U Single-Braid Bare Copper Sister	50 Ω Single Bare Cu Braid (PVC)	13 AWG (7 $\times$ 0.75 Cu)	10.30	74.0	156.0	52

- Dimensions and weights are nominal production values subject to manufacturing tolerances per MIL-DTL-17/75-RG214 (M17/164-00001).

Attenuation & RF power handling

7 sizes

Frequency	Nominal attenuation dB / 100 m	Nominal attenuation dB / 100 ft	Max. CW RF power W (@ 40 $^{\circ}$ C)	Impedance Z_0 Ω	Velocity VoP %
50 MHz	4.3	1.31	2,100	50	66.0
100 MHz	6.6	2.01	1,450	50	66.0
400 MHz	14.8	4.51	650	50	66.0
1000 MHz (1 GHz)	25.6	7.80	370	50	66.0
3000 MHz (3 GHz)	52.5	16.00	180	50	66.0
6000 MHz (6 GHz)	85.3	26.00	110	50	66.0
11000 MHz (11 GHz)	135.0	41.15	65	50	66.0

- Attenuation values apply at +20 $^{\circ}$ C ambient into a matched 50 Ω load; CW power ratings assume VSWR 1.0:1 at +40 $^{\circ}$ C ambient.

Standards and approvals

- ✓ MIL-DTL-17/75-RG214
- ✓ IEC 60332-1-2
- ✓ 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-214-double-shielded-rf-cable



Typical values for this cable type, based on MIL-DTL-17/75-RG214 (M17/164-00001). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.