



MIL-DTL-17 PE/PVC RF Coaxial Cables

RG-223/U

Double-Shielded Coaxial Cable

MIL-DTL-17/84 · 50 Ω ± 2 Ω · Ø 5.38 mm · 19 AWG (Ø 0.89) solid SPC · Solid PE · Dual SPC



MIL-DTL-17/84 RG-223

50 Ω · DC-12.4 GHz

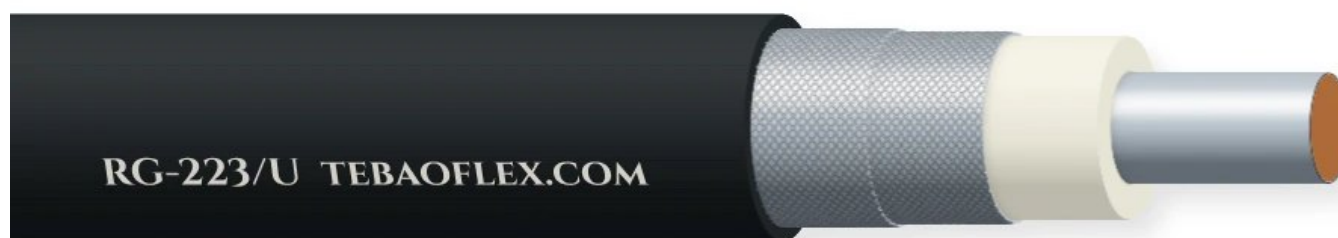
Dual SPC Braids > 90 dB

Application

RG-223/U (MIL-DTL-17/84-RG223 and M17/167-00001) is the precision 50 Ω double-shielded coaxial upgrade to RG-58, featuring a 19 AWG (Ø 0.89 mm) solid silver-plated copper center conductor, Ø 2.95 mm solid polyethylene dielectric, dual silver-plated copper

Typical uses: RF Test & Measurement Laboratories, Telecom Base Station & DAS Racks, 10 MHz Rubidium / GPS Timing Reference, Broadcast & Satellite IF Patch Panels, Defense C4ISR & Shelter Wiring

Construction



Cross-section, not to scale

1	Solid SPC center conductor (19 AWG)	MIL-DTL-17/84
2	Solid polyethylene (PE) dielectric	MIL-DTL-17/84
3	Inner silver-plated copper braid	MIL-DTL-17/84
4	Outer silver-plated copper braid	MIL-DTL-17/84
5	Non-contaminating PVC Type IIA jacket	MIL-DTL-17/84

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	$\leq 27.6 \Omega/\text{km} / \leq 8.2 \Omega/\text{km}$ at 20 °C
Max. operating voltage	1,900 V rms	Dielectric withstand test	5.0 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	Thermal upgrade alternative	RG-400 (-55 to +200 °C PTFE/FEP)
Center conductor diameter	0.89 mm solid SPC (19 AWG, 0.035 in)	Dielectric diameter	2.95 mm $\pm$ 0.08 mm (0.116 in)
Outer jacket diameter	5.38 mm $\pm$ 0.13 mm (0.212 in)	Min. bend radius (fixed / flex)	27 mm (5×D) / 54 mm (10×D)
Nominal cable weight	54.0 kg/km (36 lb/1000 ft)	Connector compatibility	BNC, TNC, Type N, SMA (RG-223/55 group)
Plasticizer non-contamination	MIL Type IIA non-migrating PVC	RF crosstalk & leakage	> 90 dB isolation (dual SPC braids)
Corrosion resistance	Silver-plated conductor & shields	UV & outdoor weather	Black UV-stabilised outer sheath
LSZH telecom option	IEC 60754-1/2 halogen-free version	RoHS / REACH status	RoHS 3 compliant
Standards	MIL-DTL-17/84-RG223 & M17/167-00001		

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-223/U variants 4 sizes						
☐ RG-223/U (M17/84-RG223) Type IIA PVC	50 Ω Dual SPC Braid (PVC)	19 AWG ($\varnothing$ 0.89 SPC)	5.38	36.5	54.0	27
☐ M17/167-00001 Swept 12.4 GHz RG-223	50 Ω Swept Dual SPC Braid (PVC)	19 AWG ($\varnothing$ 0.89 SPC)	5.38	36.5	54.0	27
☐ RG-223-LSZH Halogen-Free Telecom/Rail	50 Ω Dual SPC Braid (LSZH)	19 AWG ($\varnothing$ 0.89 SPC)	5.40	36.5	56.0	27
☐ RG-400/U +200 °C PTFE/FEP Sister Coax	50 Ω Dual SPC Braid (FEP)	20 AWG (19×0.20 SPC)	4.95	46.5	74.4	25

– Dimensions and weights are nominal production values subject to manufacturing tolerances per MIL-DTL-17/84-RG223 (M17/167-00001).

Attenuation & RF power handling

7 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 %
50 MHz	9.5	2.90	420	50	66.0
100 MHz	13.8	4.21	300	50	66.0
400 MHz	29.2	8.90	145	50	66.0
1000 MHz (1 GHz)	47.6	14.51	85	50	66.0
3000 MHz (3 GHz)	91.9	28.01	44	50	66.0
6000 MHz (6 GHz)	144.0	43.89	28	50	66.0
12400 MHz (12.4 GHz)	236.0	71.93	17	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-17/84-RG223
- ✓ 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-223-u-double-shielded-coaxial-cable



Typical values for this cable type, based on MIL-DTL-17/84-RG223 (M17/167-00001). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.