

**MIL-DTL-17 50 Ω & 75 Ω RF Coaxial Cables**

RG-58

Coaxial Cable

MIL-DTL-17 M17/28-RG058 (RG-58C/U) 50 $\Omega \pm 2 \Omega$ 19 $\times$ 0.18 mm tinned Cu + PE $\varnothing$ 4.95 mm RF



MIL-DTL-17 · M17/28-RG058

50 $\Omega \pm 2 \Omega$ · $\varnothing$ 4.95 mm19 $\times$ 0.18 mm Tinned Cu · 66% VoP

Application

RG-58 Coaxial Cable (MIL-DTL-17 M17/28-RG058 / RG-58C/U) is the industry-standard 50 $\Omega \pm 2 \Omega$ flexible RF coaxial cable featuring a $\varnothing$ 0.90 mm (19 $\times$ 0.18 mm, 20 AWG) stranded tinned copper centre conductor, $\varnothing$ 2.95 mm solid polyethylene (PE) dielectric (101

Typical uses: Industrial ISM (433/868/915 MHz) & LoRa, Marine VHF, AIS & GPS/GNSS antennas, Test & measurement BNC/SMA jumpers, SCADA radio & cellular cabinet pigtails

Construction



Cross-section, not to scale

1	19-strand tinned copper centre conductor	MIL-DTL-17 M17/28-RG058
2	Solid polyethylene (PE) dielectric	MIL-DTL-17 Type A-1
3	95 % tinned copper outer shield	MIL-DTL-17
4	Outer jacket ($\varnothing$ 4.95 mm)	MIL-DTL-17 Type IIA

Technical data

Typical values

Characteristic impedance Z0	50 Ω ± 2 Ω	Mutual capacitance	101 pF/m (30.8 pF/ft)
Velocity of propagation (VoP)	66 % (0.66 c) · time delay 5.05 ns/m	Attenuation (50 / 100 / 400 / 1000	10.5 / 16.1 / 34.5 / 60.0 dB/100m
Max. DC resistance @ 20 °C	Centre: ≤ 38.5 Ω/km · Outer braid: ≤ 14.2 Ω/km	Max. operating / test voltage	1,900 V RMS working · 5,000 V RMS
Operating temperature range	-40 °C to +85 °C (PVC Type IIA / LSZH / PUR)	Max. RF power @ 40 °C (100 / 400	300 W / 135 W / 78 W CW
Nominal dimensions (Core / PE	0.90 mm / 2.95 mm / 4.95 mm ± 0.10 mm	Min. bending radius	5 × D (25 mm) static · 10 × D (50 mm)
UV & non-contaminating jacket	MIL-DTL-17 Type IIA non-migrating	Flame & halogen-free options	IEC 60332-1-2 · UL VW-1 · IEC 60754 LSZH
Standards	MIL-DTL-17 / M17/28-RG058 (RG-58C/U) &		

Sizes

5 standard constructions

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

Order designation	Configuration	Conductor size	Outer Ø ≈ mm	Copper kg/km	Weight ≈ kg/km	Min. bend R fixed mm
Standard RG-58 configurations 5 sizes						
☐ RG-58C/U (M17/28-RG058) PVC Type IIA 50 Ω	19×0.18 tinned Cu + PE (RG-58C/U)	0.48 mm ² (20 AWG)	5.0	19	38	25
☐ RG-58C/U Halogen-Free LSZH (SHF1) 50 Ω	19×0.18 tinned Cu + PE (LSZH)	0.48 mm ² (20 AWG)	5.0	19	40	25
☐ RG-58C/U Industrial Flex PUR 50 Ω	19×0.18 tinned Cu + PE (PUR)	0.48 mm ² (20 AWG)	5.0	19	37	25
☐ RG-58A/U Solid Bare Cu 1×0.81 mm 50 Ω	1×0.81 solid Cu + PE (RG-58A/U)	0.52 mm ² (20 AWG)	5.0	19	37	25
☐ RG-58 Low-Loss Foil+Braid Foam-PE (195-Series) 50 Ω	1×0.94 Cu + Foam PE + Foil/Braid	0.69 mm ² (19 AWG)	5.0	21	35	25

– Outer diameters and weights are nominal factory values subject to ±5 % manufacturing tolerance per MIL-DTL-17 (M17/28-RG058 / RG-58C/U / M17/183-00001).

Impedance, capacitance & attenuation

5 sizes

Configuration	Impedance Z0	Max. DC R @ 20 °C Ω/km	Mutual C pF/m ≈	VoP %	Attenuation @ 20 °C dB/100m	Dielectric test V
19×0.18 tinned Cu + PE (RG-58C/U)	50 Ω	38.5	101.0	66	10.5 @ 50 · 16.1 @ 100 · 34.5 @ 400 · 60.0 @ 1000 MHz	5,000
19×0.18 tinned Cu + PE (LSZH)	50 Ω	38.5	101.0	66	10.5 @ 50 · 16.1 @ 100 · 34.5 @ 400 · 60.0 @ 1000 MHz	5,000
19×0.18 tinned Cu + PE (PUR)	50 Ω	38.5	101.0	66	10.5 @ 50 · 16.1 @ 100 · 34.5 @ 400 · 60.0 @ 1000 MHz	5,000
1×0.81 solid Cu + PE (RG-58A/U)	50 Ω	33.2	101.0	66	9.2 @ 50 · 14.0 @ 100 · 30.5 @ 400 · 53.0 @ 1000 MHz	5,000
1×0.94 Cu + Foam PE + Foil/Braid	50 Ω	24.9	83.3	80	6.5 @ 50 · 9.5 @ 100 · 19.2 @ 400 · 31.2 @ 1000 MHz	3,000

– Transmission values (characteristic impedance Z0, mutual capacitance, VoP, and attenuation) are measured at +20 °C per MIL-DTL-17 (M17/28-RG058 / RG-58C/U / M17/183-00001).

Standards and approvals

- ✓ MIL-DTL-17 (M17/28-RG058)
- ✓ IEC 60096 / EN 50117
- ✓ CE / RoHS / REACH

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-58-coaxial-cable



Typical values for this cable type, based on MIL-DTL-17 (M17/28-RG058 / RG-58C/U / M17/183-00001). Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.