

Introduction



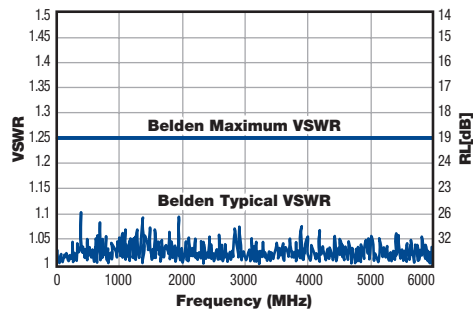
50 Ohm Wireless

Belden's 50 Ohm RF cables provide best-in-class transmission performance and superior EMI/RFI shielding for greater noise reduction. They are ruggedly constructed and designed to be flexible for easy installation and routing.

Features include:

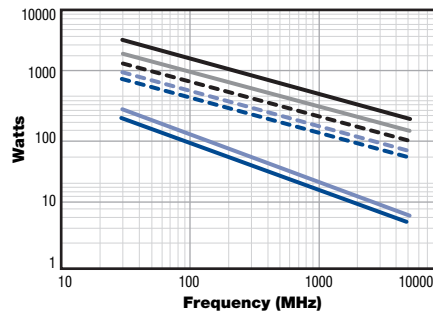
- Lowest Loss**
 Belden's 50 Ohm RF cables provide the lowest loss of any land mobile radio-type coaxial cables on the market (from 5% to 10% lower, depending on the design and frequency). The result is better signal transmission at the same distance, or longer transmission distance with less attenuation. All cables are 100% sweep tested to 6 GHz to assure performance in future high frequency applications.
- Low VSWR**
 VSWR is guaranteed to be 1.25:1 maximum over all frequencies (RL = -19 dB).
- High Velocity of Propagation**
 The foamed high-density polyethylene insulation provides the highest velocity of any land mobile radio-type flexible coaxial product on the market. The high-density material properties provide superior crush resistance to minimise impedance variations and return loss, ensuring high performance both before and after installation. (Part number 7805 utilizes a solid PE dielectric).
- Excellent Phase Stability**
 Belden's 50 Ohm RF cables exhibit excellent phase stability over both temperature changes and flexing, resulting in improved signal integrity and reliability.
- Superior RF Shielding**
 The combination foil/braid shield provides in excess of 100 dB of effective EMI/RFI shielding.
- Unbonded Foil Shields (on smaller constructions prevent connector shorting)**
 In the smaller designs – RF200 and under – the spacing between the foil shield and the centre pin of the connector is extremely small. During the cable stripping process, bonded foil shields tend to tear if not cleanly cut, leaving very small foil “stringers” that can short the shield to the center conductor. Unbonded shields allow for the tape to be cut back from the dielectric, thereby eliminating the potential shorting problem. The unbonded shields are featured on RF100A, RF100LL, RF195 and RF200. Larger constructions – including the new water-blocked (WB) versions – have sufficient spacing between the shield and centre pin, and therefore feature bonded foil shields.
- Unique Design**
 Belden's RF100LL is the only design of its type. It features a slightly larger center conductor and foamed polyethylene insulation, while maintaining the dimensions of the MIL-Spec cable, eliminating the need for special connectors. These two features combined produce an attenuation that is approximately 7% lower than the standard solid polyethylene RF100 design.
- Connector Compatibility**
 The RF series cables are compatible with all standard land mobile radio-type connectors, including Times Microwave, RF Industries, Amphenol, Trompeter, EF Johnson and others.
- Conformable Coax**
 For applications requiring low VSWR and high shield effectiveness, Belden's complete product range of 50 Ohm conformable coax cables offers unequalled performance. These patented cables serve as a replacement for semi-rigid cables and, unlike semi-rigid, they are hand formable.

Guaranteed VSWR



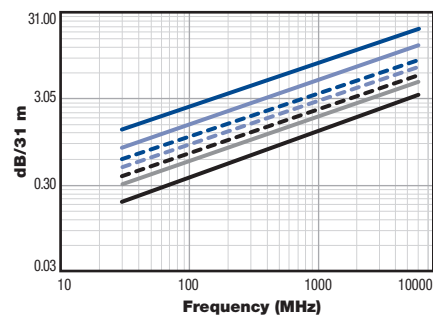
Note: Voltage Standing Wave Ratio (VSWR) is a measurement of the reflected power in a cable or instrument. The higher the VSWR the poorer the transmission characteristics of the cable.

Power Rating



Legend:
 — RF100A
 — RF100LL
 - - - RF195
 - - - RF200
 - - - RF240
 — RF300
 — RF400

Attenuation



Phase Stability

Phase Attribute	Typical Range (0.45 GHz to 6.0 GHz)	
	ppm/°C	Degree/GHz/m
Temperature (-40°C to +55°C) ¹	± 9	± 0.6
Bending & Flexing (25 cycles) ²	NA	± 1.1

1: Per IEC 60965-1 clause 8.8
 2: Per IEC 60965-1 clause 8.6