BUMP-138174

Features

- Antenna for covert applications
- 138-174 MHz, 3-14 MHz bandwidth
- Field tunable for optimal VSWR and bandwidth
- Flexible radiating element
- Easy to deploy
- Can be installed in Bumper area
- Compatible with any vehicle model or manufacturer

BUMP-138174

Description

Comprod Bumper Antenna BUMP-138174 is designed for covert operations which require effectively invisible antenna hidden inside the bumper of a vehicle. The bumper covers must be plastic, and the vehicle frame is used by the antenna as a ground plane.

Featuring a unique and compact design that integrates radiating elements on flexible polymer substrate, this antenna can be easily deployed on uneven surfaces, allowing simplicity and versatility for installation. It is an ideal all-round antenna solution for fitting into narrow spaces in applications where completely discrete antenna is required.

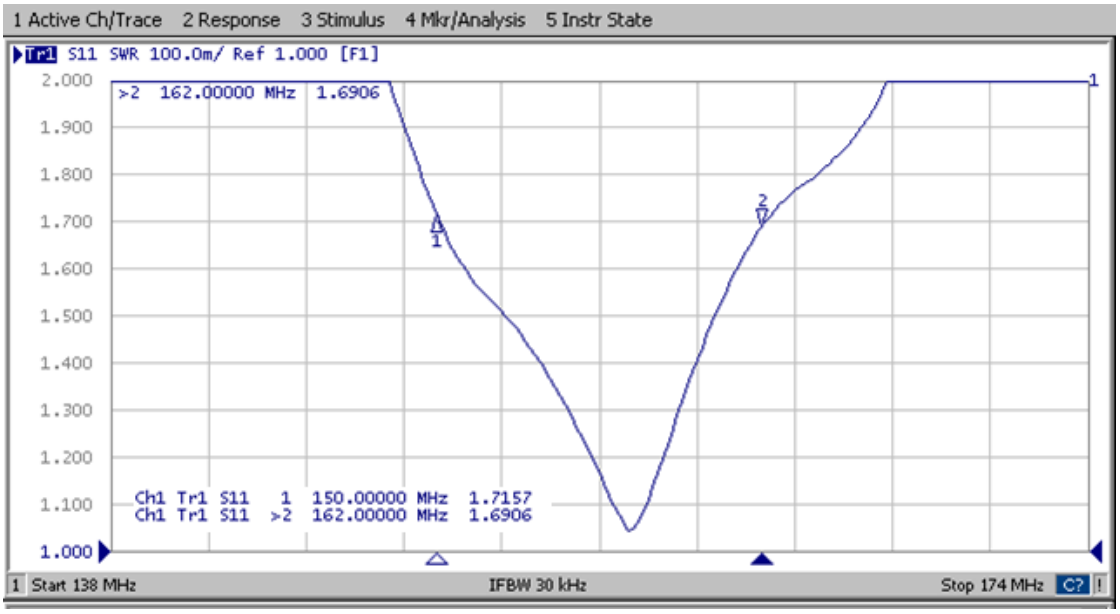
The antenna is supplied with tunable matching impedance network integrated into a waterproof housing. The antenna can be fined tuned to the required band after installed and flitted by adjusting the tuning screws to ensure that a good VSWR match is achieved.

The antenna is integrated with a 24 feet RG58U feed cable.

Note: the connector is provided but not installed for ease of cable running inside the vehicle. The connector will need to be installed on the cable by the customer. Other connectors and cable configuration options are available.

Bumper Antenna BUMP-138174 — 138-174 MHz

Electrical Specifications	
Frequency Range, MHz	138-174
Bandwidth: 2:1 VSWR, MHz	3-14
Nominal Gain (dBd)	Unity
VSWR	2:1
Polarization	Vertical
Nominal Impedance, Ohms	50
Pattern	Omnidirectional
Power Handling (max), Watts	50
Standard Termination	Mini-UHF (other connectors available)
Mechanical & Environmental Specifications	
Length/Height, in (mm)	21.5 (546.1)
Width, in (mm)	2.2 (56)
Depth, in (mm)	1.2 (30.5)
Mounting Hardware	#8-32 screws (4) provided
Operating Temperature range	-40 to +140 (-40 to +60)



VSWR Curve of BUMP-138174 (antenna tuned to around 155 MHz central frequency)

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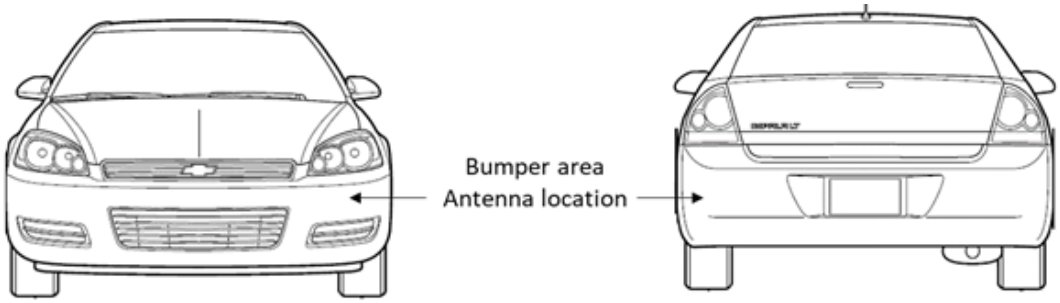
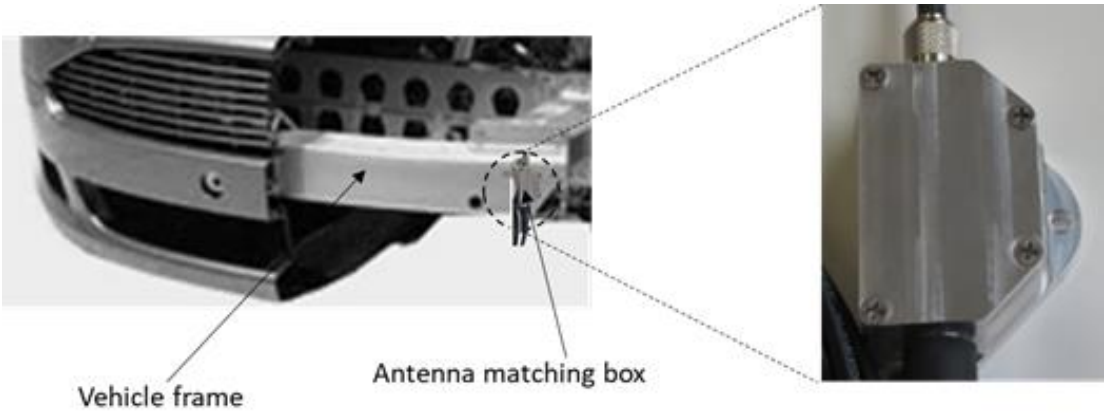
Universal installation guide

Step 1: Antenna installation on vehicle

1.1 An appropriate location for the antenna is the front or rear bumper area of the vehicle. Remove any obstructions on this area to access to vehicle frame located behind bumper covers (shield, covers, etc…)

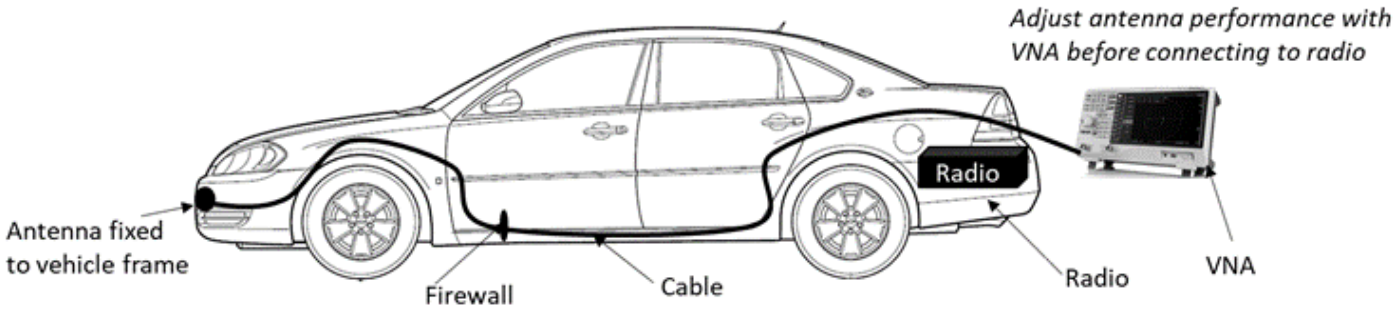


1.2 Place and fasten the antenna tuning box on the vehicle frame with the 4 provided screws so that the vehicle body is connected to antenna ground plane. Keep radiating element vertical and away from metallic objects. The flexible patch of the antenna can be attached to the plastic bumper with non conducting adhesive tape.



Step 2: Cable routing & Antenna tuning

2.1 Route the cable through the vehicle where the radio is located. Make sure cables are away from any moving parts, then secured all cables with tie wraps.



2.2 After cable installation, use a VNA (or Vector analyzer) and a tuning tool (Ex: screwdriver) to adjust antenna performance (central frequency, operating bandwidth & VSWR) by turning the screws located on the matching box.