

New

## LFAD-BF/BFC

Diabolo antenna shape for smart entry system

EMITTER ANTENNAS / SHORT RANGE



### FEATURES

This is a new low profile antenna specially designed to assembly in the aftermarket operation. Antenna concept is similar to those KGEA-BFC series, but smaller in size (ferrite + capacitor in a box potted) and easy to joint to anywhere by a simple adhesive tape. These kind of antennas provide a cable with a customized length without connector in its standard version (connector can be assembly under demand). Several combinations of inductance and capacitor values are offered as standard versions. Any other combination can be provided, together with the possibility of fully customized design, depending mainly of capacitor size available.

## 01 CHARACTERISTICS

Depending on the requirements and location of the antennas in the vehicle and taking into account its exposure to environmental conditions, grade IP waterproof, mechanical robustness, etc.. PREMO offers from LPM technology, to Polyurethane, mixed LPM-resin and HPM.

### New Diabolo with Low Pressure Technology (LPM)

- › LPM is a well know technology in PREMO
- › Vert fast to produce (No Curing needed)
- › IP56 grade Waterproof

### New Diabolo with PU-resin

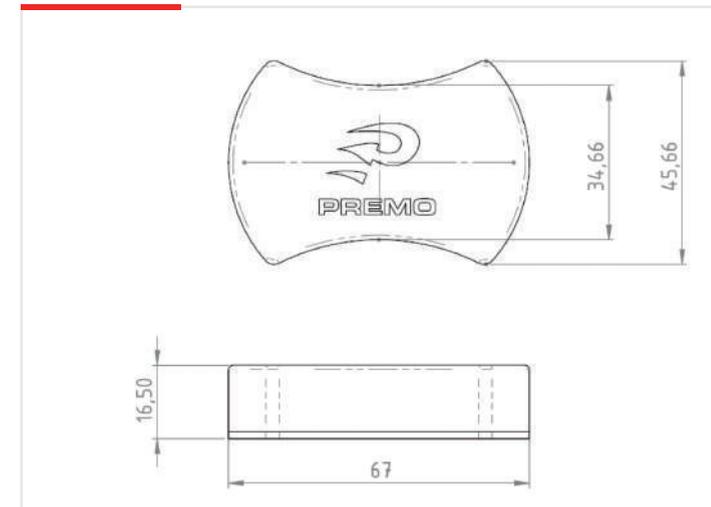
- › High mechanical robustness
- › IP68 grade Waterproof

### THE MAIN TECHNICAL AND ECONOMIC ADVANTAGE

- › Middle antenna (length until 70mm).
- › External housing shape flat Material PBT-GF30% or PA66-GF30%
- › High stability in temperature (-40°C up to +85°C).
- › Resonant frequency adjusting below +/- 2kHz.
- › Custom L-C value (F-Res: LFAD-BF) under demand
- › This antenna is designed based on AECQ-200.
- › Less length than classic ferrite rod antenna.

## 02 SPECIFICATIONS

### DIMENSIONS (mm)



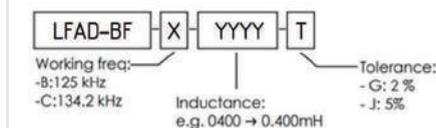
### SCHEMATIC DIAGRAM



- › L: inductance value
- › C: capacitor value

### NOMENCLATURE

› L+C in series:



### ELECTRICAL SPECIFICATIONS

Operating Frequency @125Khz @25°C @1Vac (L+C in series)

LFAD-BF-B-0500J

L(mH)	0.500
Cres (nF)	3.3
Q(L+C)	>100
Rac (Ω)	<2
Arms	1A
H-Field (dBμV/m) @1App@1m	108.3

› Antenna is measured in resonant mode.

› The specification chart is a reference guide for the most common required values at working frequencies of 125 kHz, 20 kHz and 134.2 kHz. Any other inductance value at LF or tighter tolerances can be provided. Please contact our sales department for any inquiry.

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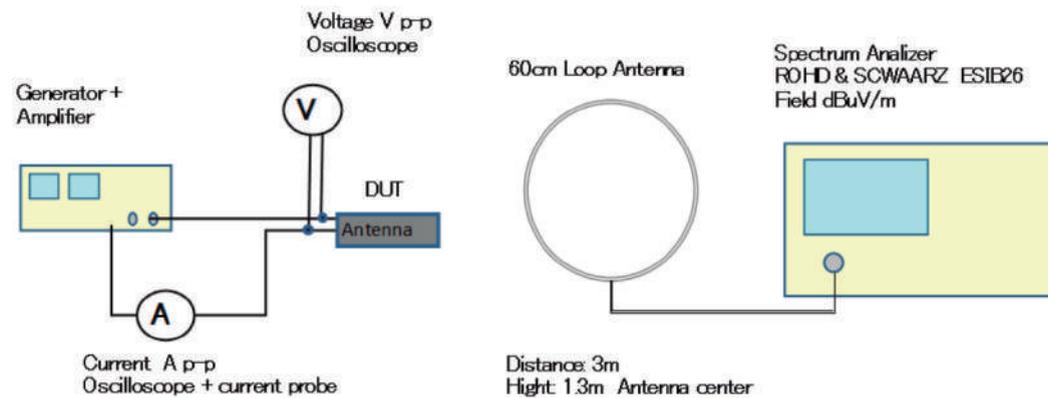


### RADIATED H-field (Ipp)@distance:

#### PROCEDURE

- › Magnetic field probe measures in load  $I_{pp}=1A_{pp}$  to 1 meters @  $f_0=125KHz$
- › Receiving the signal from the probe field with the spectrum analyzer.

#### SETUP



› The sample (antenna under test), the current flowing through it and the EM-field at 3m measured with a loop antenna (60cm) are obtained at 125Khz frequency.

› Note:  $I_{pp}$  is the current peak to peak measured with the oscilloscope

LFAD-BF-B-0500J ,1App,3m

