

New

LFAD-MR
INTEGRATED CONNECTOR

Middle Range Antenna LF for smart entry system

EMITTER ANTENNAS / MIDDLE RANGE



FEATURES

The Middle range alternative has been designed to reduce the number of antennas respect the number of shorts antennas, keeping the same reading distance.

Rooming an antenna in the car sometime becomes a very hard task.

This kind of antennas keep the performance saving space, little bit wider, but very reduced length in the total space.

This shape design has been developed & patented by PREMO

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

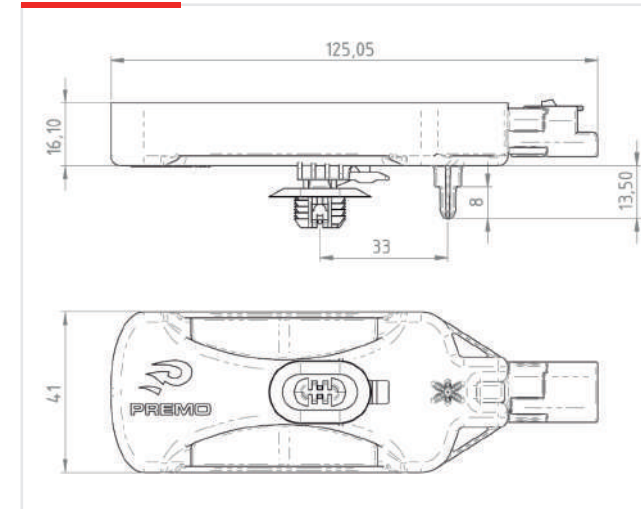
- › High mechanical robustness
- › IP68 grade Waterproof

THE MAIN TECHNICAL AND ECONOMIC ADVANTAGE

- › Middle antenna (length until 120mm).
- › 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)



ELECTRICAL SPECIFICATIONS

Operating Frequency @125Khz @25°C @1Vac (L+C in series)
LFAD-MR-B-0500J

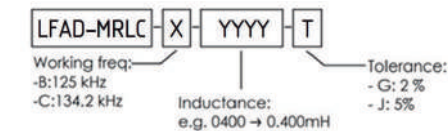
L(mH)	0.500
Cres (nF)	3.3
Q(L+C)	>100
Rac (Ω)	<2
Arms	1A
H-Field (dBμV/m) @1App@1m	113.11

› 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.

NOMENCLATURE

› L+C in series:

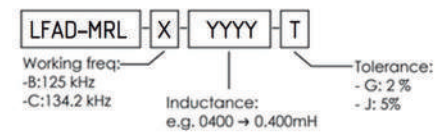


SCHEMATIC DIAGRAM



NOMENCLATURE

› L:



SCHEMATIC DIAGRAM



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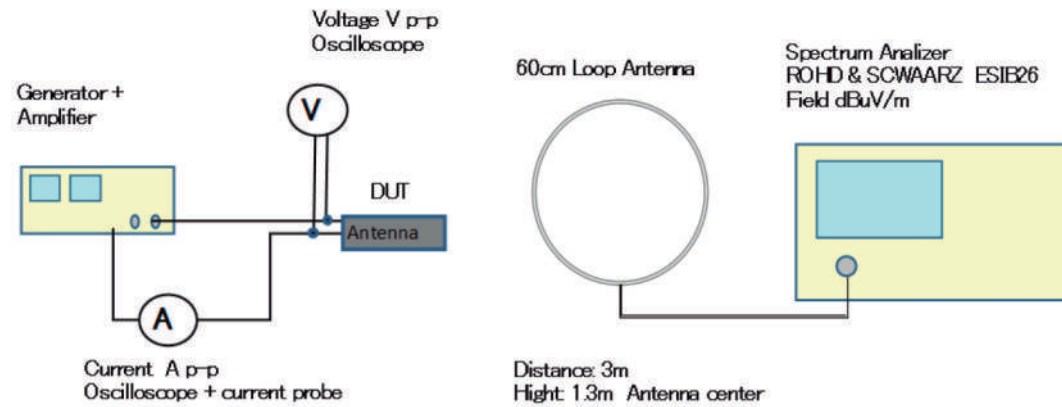


RADIATED H-field (Ipp)@distance:

PROCEDURE

- › Magnetic field probe measures in load $I_{pp}=1A_{pp}$ to 41meters @ $f_0=125KHz$
- › Receiving the signal from the probe field with the spectrum analyzer.

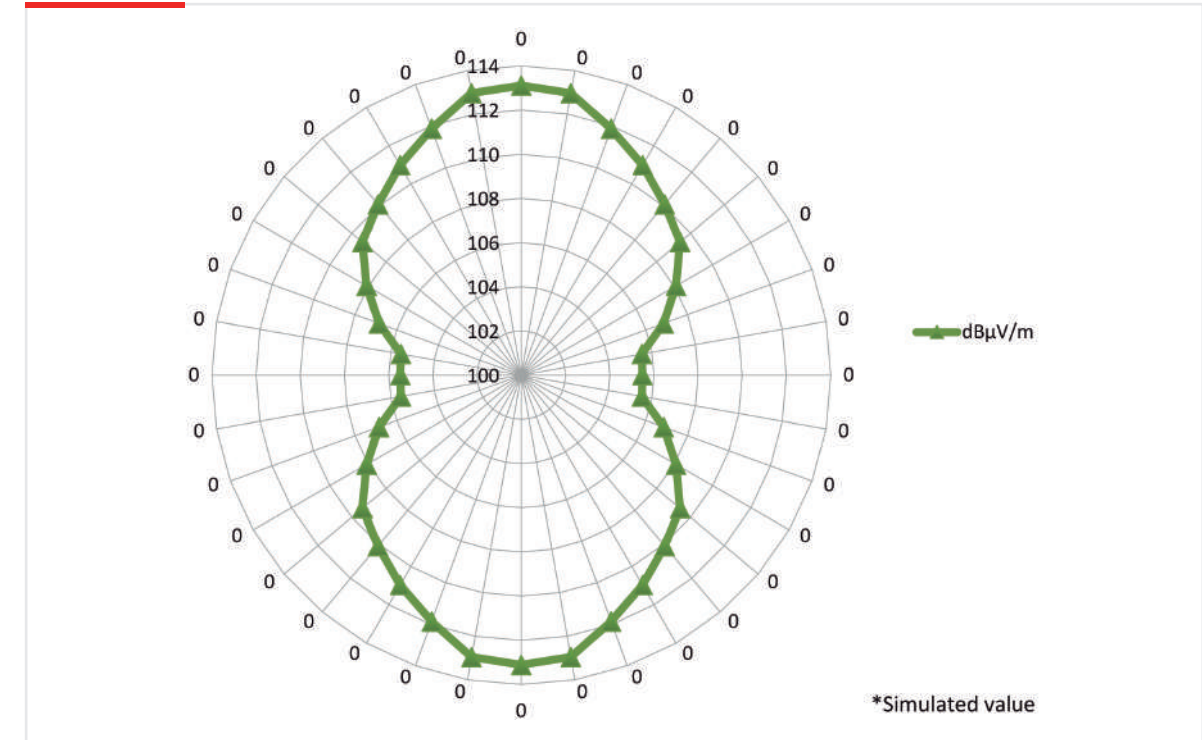
SETUP



› 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: Ipp is the current peak to peak measured with the oscilloscope

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



SIZE COMPARISON WITH OTHER MID-RANGE ANTENNA

› Same performance – less size.

