

# KGEA-BFCR

145x26x12mm (33  $\mu$ H - 500  $\mu$ H)

## Emitter antenna housing plastic base with resin and outside connector unsealed & sealed

### Features

The antenna KGEA-BFCR is designed for emission of a LF field to allow hands free access towards the Customer Device Identification for automotive application. These type antenna are inserted in the vehicle being integrated into the Access and Start Hand Free subsystem for requirements Passive Entry and Remote keyless Go System.

Housing plastic base Polyamide (ABS optional) assuring extreme conditions of humidity, liquids, substance and extreme environments.

The connector is optional and it can be customized to required features. It can be sealed or unsealed with 2P, 3P,...,6P male or female and located outside the assembly of the antenna with 2 cables type CSA 105°C.

Inside of the housing plastic base the serial inductance, capacitance and resistance can be customized to required values.

Designed to allow long emitting-reading distances in the smallest volume.

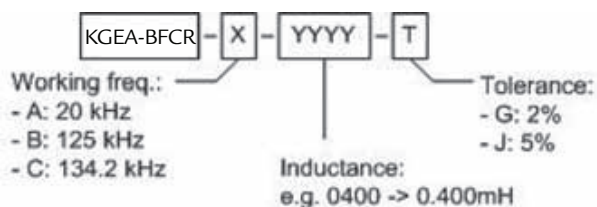
Variety of mounting requirements and solutions which to incorporate features to accommodate different fastening anchors and mechanical robustness.



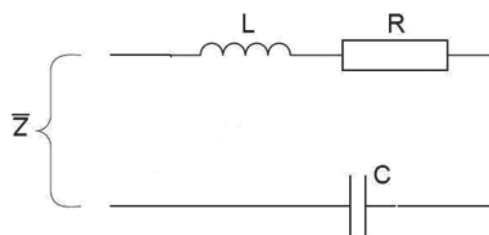
### Characteristics

- Transmitting low frequency LF
- High stability in temperature (-40°C up to +85°C)
- Ideally used in keyless smart entry system.
- Connector located outside assembly housing plastic base.
- Low tolerances in the resonance frequency LC
- Long reading distances and average current 2-4App
- Strong anchor points which provide an easy assembly and will ensure mechanical robustness.
- Custom LCR value under demand

### Nomenclature description



### Electrical diagram



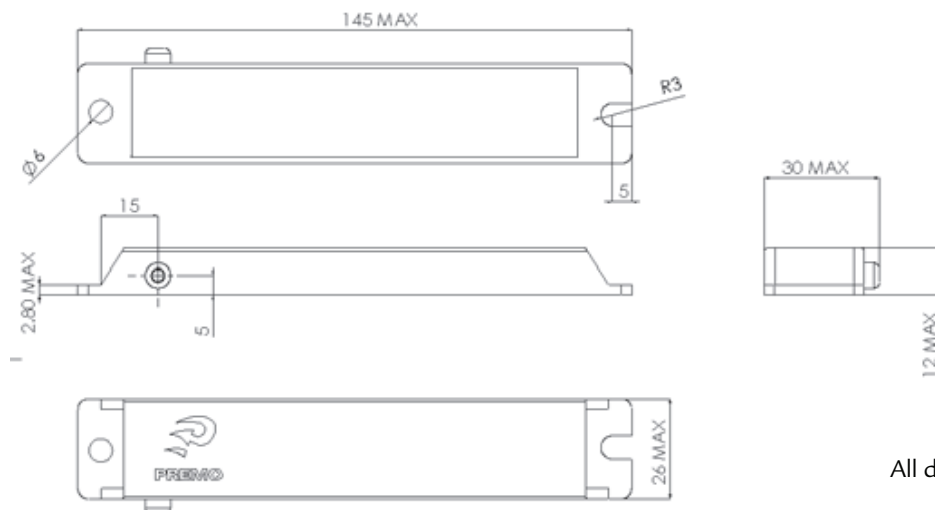
- L: Ferrite core coil inductance
- R: Copper resistance and connection
- C: Tuning internal capacitor NPO
- Rdc: Optional parallel resistor
- Z: External impedance

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## Mechanical dimensions



All dimensions are in mm

## Electrical specifications

### Operating Frequency@125kHz

P/N	L (mH)	Cres (nF)	Q	SRF (MHz)
KGEA-BFCR-B-0108J	0.108	15,00	>110	>3
KGEA-BFCR-B-0345J	0.345	4,7	>125	>3
KGEA-BFCR-B-0500J	0.500	3.3	>125	>3

## Operating Frequency@134,2kHz

P/N	L (mH)	Cres (nF)	Q	SRF (MHz)
KGEA-BFCR-C-0207J	0.207	6,8	>125	>3
KGEA-BFCR-C-0426J	0.426	3,3	>125	>3

### Operating Frequency@20kHz

P/N	L (mH)	Cres (nF)	Q	SRF (MHz)
KGEA-BFCR-A-0161J	0.161	330	>60	>1
KGEA-BFCR-A-0422J	0.422	150	>65	>1

This chart is a reference guide for the most common required values at working frequency of 125 kHz. Any other inductance value at LF or tighter tolerances can be provided. Please contact our sales department for any inquiry. Sensitivity measured with Helmholtz coils  $H=8.36$  App/m @125 kHz. Contact us for measurement specification

Description nomenclature emitter antenna KGEA-WT XYZØ-LLLL+

X=Length ferrite core.

$$Y = \text{Width ferrite core}$$

Z=Height ferrite core

D=wire diameter (0.1 mm)

LLLL= Inductance value mH.

(+) = Tolerance