

RE: VAIS Technology  
FCC ID: 2BK5SEERECUA  
IC: 33061-SEERECUA

### **Antenna Specification Cover Sheet**

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Gain: LF coil. Radiated measurements were performed.

KGEA-BFCR

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

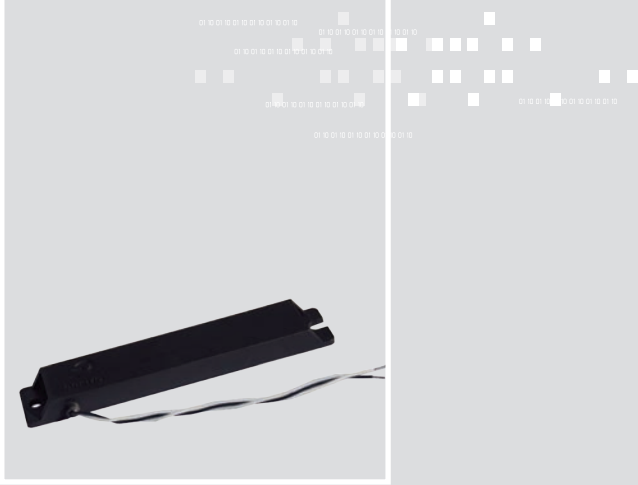
145x26x12mm (33μH - 500μH)

EMITTER ANTENNAS & SWITCHES / MIDDLE RANGE



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. This type antenna is 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 (materials PBT, PA-66 or ABS) assuring extreme conditions of humidity, liquids, substance and extreme environments. The connector (sealed and unsealed) is optional and it can be customized to required features. Designed to allow long emitting-reading distances in the smallest volume.

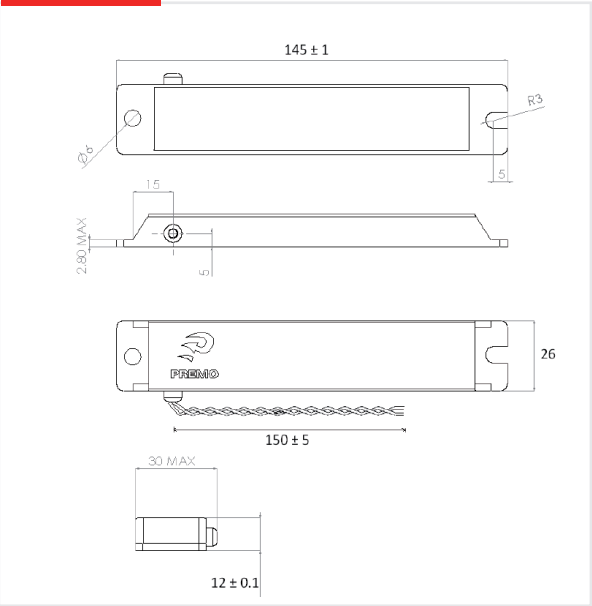


01 CHARACTERISTICS

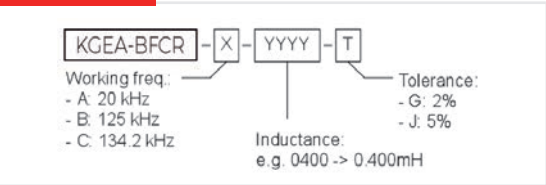
- › Ideally used in keyless smart entry system
- › Transmitting low frequency LF (20kHz, 125kHz and 134kHz).
- › Low tolerances in the resonance frequency LC
- › High stability in temperature (-40°C up to +85°C).
- › Connector located outside assembly housing plastic base (Optional).
- › Long reading distances and average current 4App.
- › Strong anchor points which provide an easy assembly and will ensure mechanical robustness.
- › Custom LCR value under demand.

02 SPECIFICATIONS

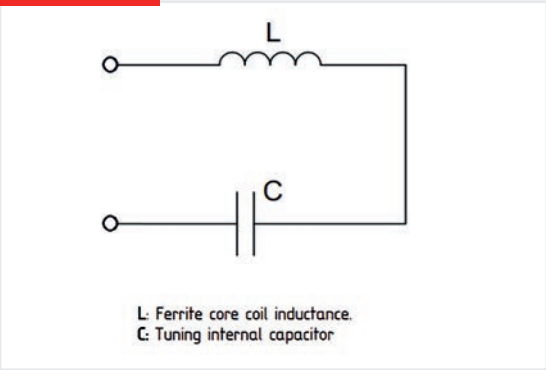
DIMENSIONS AND RECOMMENDED PAD-LAYOUT (mm)



NOMENCLATURE DESCRIPTION



ELECTRICAL DIAGRAM



ELECTRICAL SPECIFICATIONS

	L (mH)	Cres (nF)	Q	SRF (MHz)	Freq. (kHz)
KGEA-BFCR-B-0500J	0.500	3.3	>125	>3	125@
KGEA-BFCR-C-0426J	0.426	3,3	>125	>3	134,2@
KGEA-BFCR-A-0161J	0.161	330	>60	>1	20@

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.

# KGEA-HB

LF interior antenna shape h bridge  
116,75x20x23mm (100uH - 500uH)  
EMITTER ANTENNAS / SHORT RANGE



## FEATURES

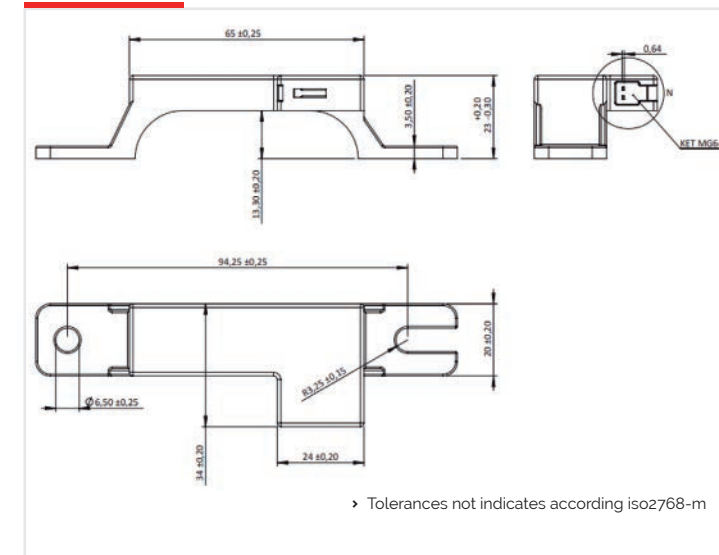
- › Transmitting low frequency.
- › LF emitter antenna assembly by external housing + LPM process.
- › The connector integrated in the external housing plastic.
- › Shape H bridge (best performance electrical on metal surfaces).
- › Strong anchor points which provide an easy assembly and will ensure mechanical robustness
- › IP56 grade waterproff.

## 01 ELECTRICAL PARAMETERS

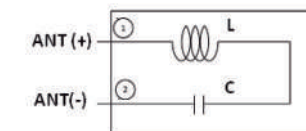
- › Resonant frequency LF (L+C in serial). Custom LC value under demand
- › Capacitor type SMD NPO/COG 630Vdc
- › Fine adjust the tank resonant frequency L+C. Max tolerance Vs fres: ± 2kHz @ [-40°C to 85°C].
- › Ipp max= 2 App
- › High stability in temperature (-40°C up to +85°C).
- › Reliability test: This part is according to AEC-Q200 Revision C.

## 02 SPECIFICATIONS

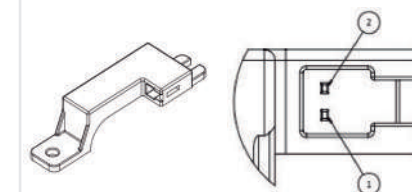
### DIMENSIONS (mm)



### SCHEMATIC DIAGRAM



### CONNECTOR PIN LAYOUT



**NOTE:** Using as referenced the nut model indicated below figure, we recommend screwing torque on anchor of the box of 8Nm maximum.

› **Measuring Equipment:** Tonichi DB25N Range: 3-25Nm. Accuracy:

› 3% S/N 329485D Ds: 0.5Nm

› **Materials used:**

- › Support: Aluminum sheet
- › Nut: M6 DIN 6923 galvanized
- › Screw: M6x20-25 DIN 6923 - 8.8



### ELECTRICAL SPECIFICATIONS

PART NUMBER	L Inductance ± 5%	C Capacitor ±5%	Freq. (kHz)	Zimp@fo (Ω)
KGEA-HB-B-0240J	240uH	6.8nF	125,0	< 1,5
KGEA-HB-C-0205J	205uH	6.8nF	134	<1,5

#### Mechanical notes

1. All dimensions are in mm.
2. The external housing and cover is closed-sealed by ultrasonic welding.
3. Plastic Material PBT-GF30%.