

KGEA-BFCWX

Keyless Go Emitter Antenna Low Profile Potted Unsealed & Sealed Connector

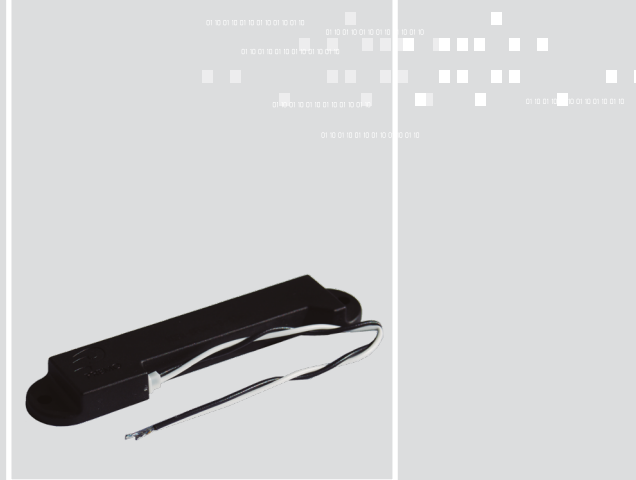
103x20x9mm (33 μ H – 500 μ H)

EMITTER ANTENNAS & SWITCHES / 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.



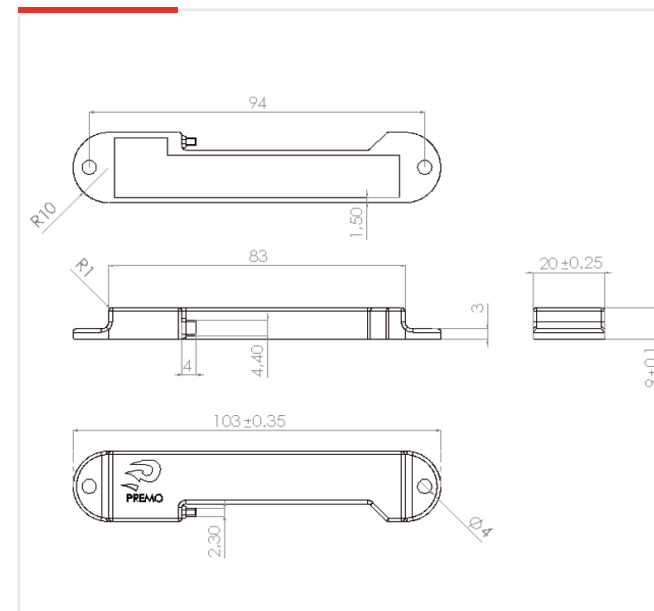
01 CHARACTERISTICS

- › Low profile size.
- › Low tolerances in the resonance frequency LC
- › High stability in temperature (-40°C up to +85°C).
- › Transmitting low frequency LF (20kHz, 125kHz and 134kHz).
- › Long reading distances and average current 2-4App.
- › Custom LCR value under demand.

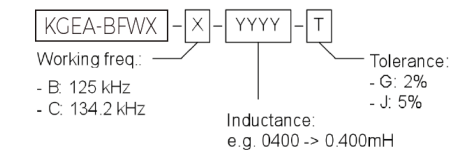
Ideally used access and start Hand Free subsystem for Passive Entry keyless Go System. Requirements for automotive application.

02 SPECIFICATIONS

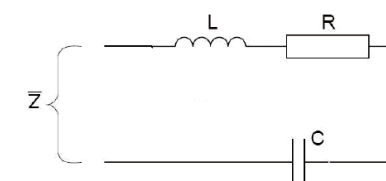
DIMENSIONS



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

ELECTRICAL SPECIFICATIONS

	L (mH)	Cres (nF)	Q	SRF (MHz)	Freq. (kHz)
KGEA-BFCWX-B-0500J	0.500	3.3	>115	>3	125@
KGEA-BFCWX-C-0426J	0.426	3.3	>100	>3	134,2@

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.

H-field KGEA-BFCWX

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H-field measurement LF Antenna KGEA-BFWX



03 PROCEDURE

- › Magnetic field probe measures 1,2,3meters in load $I_{pp}=2A_{pp}$.
- › Receiving the signal from the probe field with the spectrum analyzer.

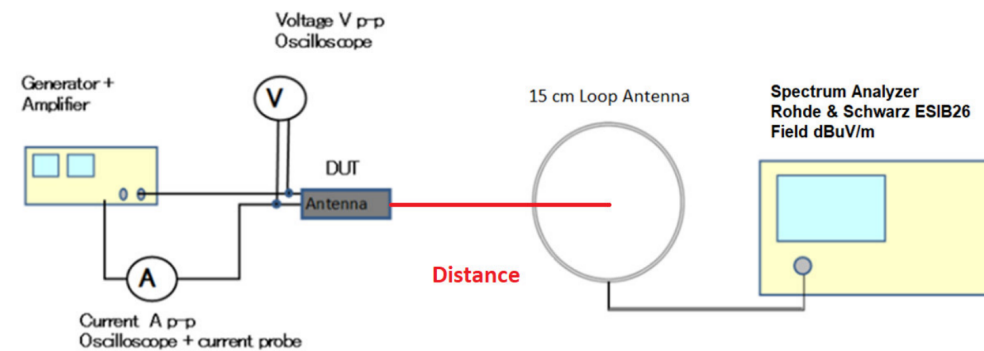
04 SAMPLE

- › LF Antenna KGEA-BFCWX-B-0500J @125 KHz ($L=500\mu H$; $C=3,3nF$). Ferrite Core 68x7x3mm

05 SET-UP

The sample (antenna under test), the current flowing through it and the EM-field at 1,2,3m measured with a loop antenna (15cm) are obtained at 125Khz frequency.

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



06 RESULT

	H-Field (1m) @125KHz (dBμV/m)	H-Field (2m) @125KHz (dBμV/m)	H-Field (3m) @125KHz (dBμV/m)
ANTENNA LF	$I_{pp} = 2A_{pp}$		
KGEA-BFCWX-B-0500J	136.2	119.75	109.7

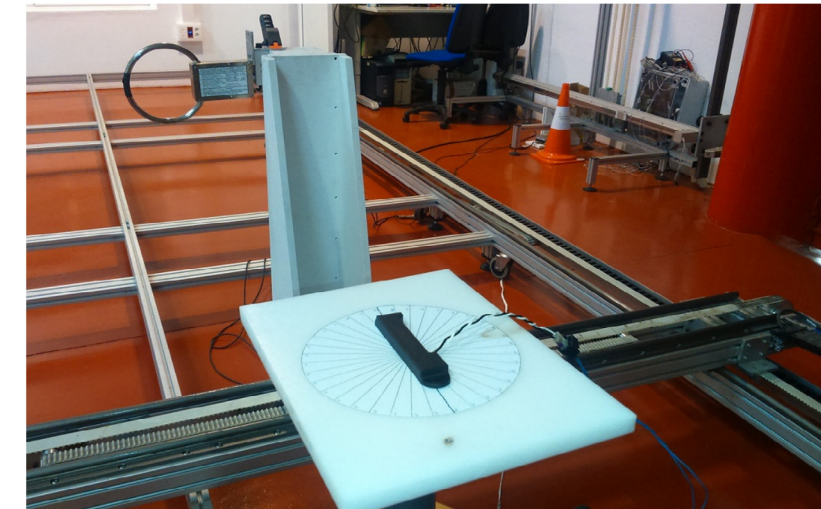


Fig1. LF Antenna KGEA-BFCWX series ASSY SMART KEY @125Khz