



## **CIP 9136A** **CURRENT INJECTION PROBE 4 kHz - 400 MHz**



The CIP 9136 probe has been manufactured to drawings and specifications laid down by QinetiQ. It meets the requirements for HIRF testing where conventional ferrite core material cannot handle the higher powers required (up to 1000 W), without changing characteristics when heated. Whilst having been initially designed to meet the specific requirements of Aircraft Testing from 10 kHz to 50 MHz, the CIP 9136's unique non-ferrite core allows wide band performance from 4 kHz - 400 MHz, and above.

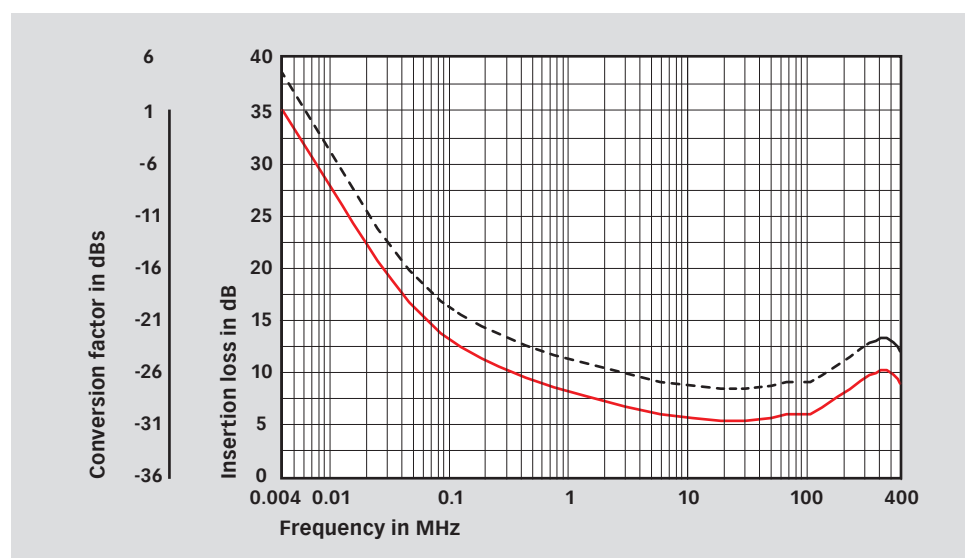
The CIP 9136 core material is highly efficient and thermally rugged, thus allowing very high injected levels to be achieved with lower RF input powers. The core material can withstand far higher powers than conventional ferrite (up to 1000 W), which change characteristics in relation to the temperature.

The probe material meets the requirements of ISO 11452-4, MIL-STD-461 CS114 and other standards. The probe performance can be measured using calibration jig PCJ 9201.

The model CIP 9136A received a mechanical improvement, in difference to the original CIP 9136, for a better core positioning. This is mandatory in the low frequency range and it improves the insertion loss.

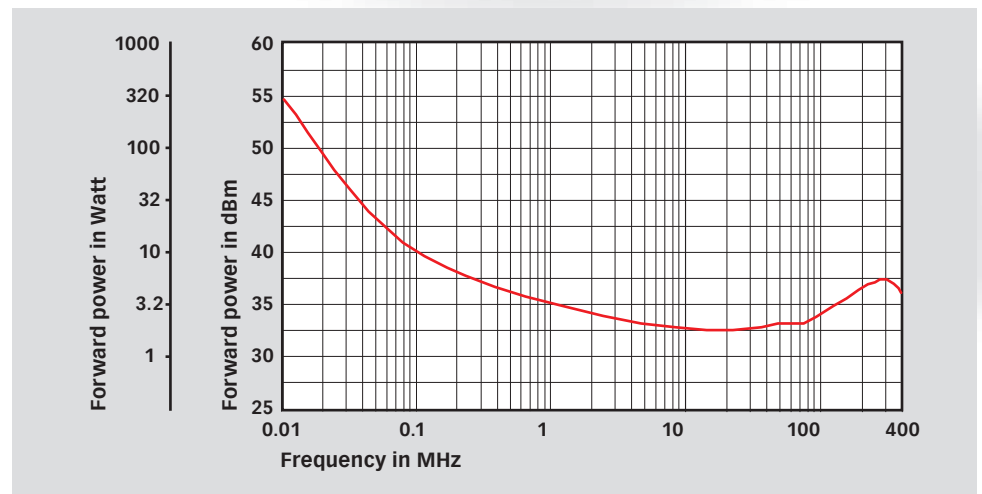
- Wide frequency range 4 kHz - 400 MHz
- High power handling (up to 1 kW)
- Ideal for automotive BCI testing e.g. ISO 11452-4, MIL-STD-461 CS114 and manufacture's requirements
- Meets IEC/EN 61000-4-6
- Replacement for CIP 36A & 37A as specified in Defence Standard 59-41

Insertion loss and conversion factor, — typical values, - - - Limit

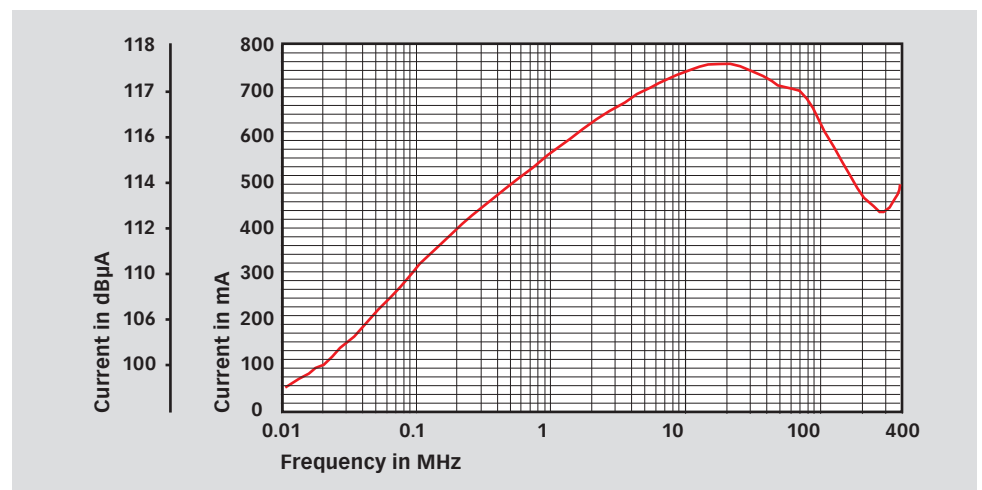


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BCI application: Typical required forward power to inject 100 mA (100 dB $\mu$ A)



BCI application: Typical injected current with 100 W forward power



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## **CURRENT INJECTION PROBE 4 kHz - 400 MHz**

### **Technical specifications**

Frequency range:	4 kHz - 400 MHz
Window diameter:	43 mm
Outside diameter:	113 mm
Width:	61 mm
Weight:	approx. 2 kg
Input connector:	Type N
Max. input power:	1000 W
Max. time for continuous operation:	related to the core temperature
Rating at 10 kHz / 1000 W:	approx. 10 min*
Rating at 100 kHz / 500 W:	approx. 7 min*
Rating at 150 kHz / 500 W:	approx. 5 min*
Rating at 1 MHz to 400 MHz / 400 W:	approx. 3 min*
Max core temperature:	90°C
Turns ratio:	1:1
Primary inductance @ 1 MHz:	4.7 µH typical
Self resonant frequency:	12 MHz typical
Impedance at resonance:	100 Ω typical
*) Time based on a core temperature rise from 23°C to max. 90°C	

### **Model no. and options**

Part number	Description
248525	CIP 9136A Current injection probe (BCI) 4 kHz-400 MHz
97-342-300	CIP-TC Traceable calibration (ISO17025), order only with CIP xxxx
252052	PCJ 9201B Calibration jig for current probes, meets RTCA/DO-160 section 20, MIL-STD-461 and IEC/EN 61000-4-6

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