RF current probe EM5011

（20 Hz to 200 MHz）

Shenzhen Zhiyong Electronics Co., Ltd

1. Summary

EM5011 RF current probe is a type of EMI/EMS RF current probe. It can be used as RF injection probe (EMS function), or it can connected with 50Ω through load and used as standard RF interference current receiving probe (EMI function).

EMI receiving probe is mainly used for the EMI interference testing and shield effect testing from 20Hz to 200MHz. EM5011 has flat frequency responding curve from 300kHz to 100MHz, usually used for the power cable or the control line of the device under test, testing the interference signal current. The RF output voltage is in direct proportion to the interference signal current. EMI receiving probe can clamp on the cable under test, used on those EMI testing cases when LISN cannot be applied. EM5011 is in accordance with CISPR 16-1-2 standard requirement.

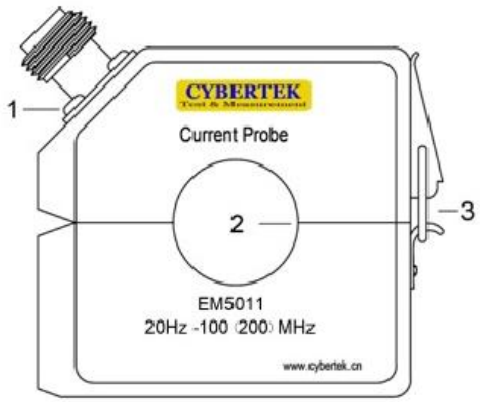
EMS injection probe is mainly used for the experimental test about large current injection, EMS testing cases.

2. Characteristics

- ✧ Bandwidth frequency (20Hz-200MHz)
- ✧ High sensitivity
- ✧ Can act as standard EMI interference current receiving probe with external 50Ω through load.
- ✧ For both EMI/EMS
- ✧ Fulfill the requirement for large load testing. (Around 200A, DC/AC)
- ✧ The jaw diameter is about 22mm, easy to use.

3. Product and Accessories

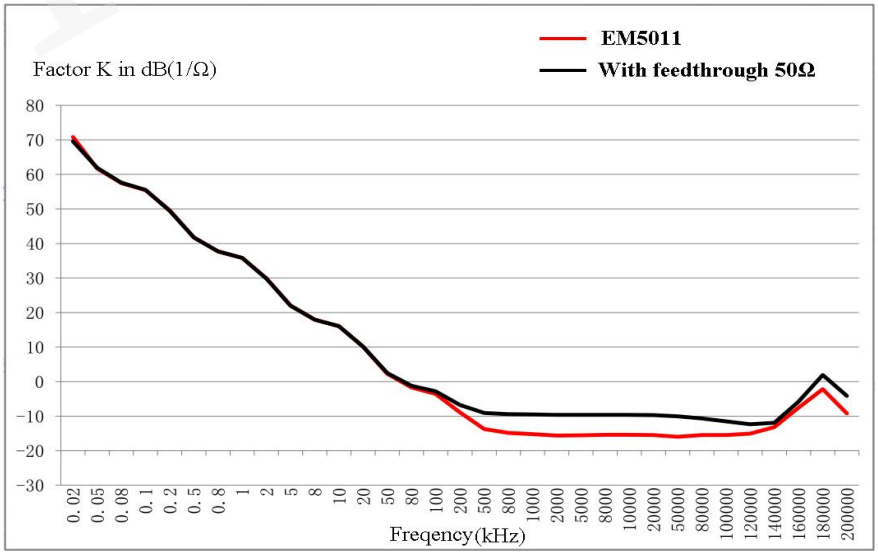
◆ Product instruction



1. **Output Port:** N female
2. **Current Probe Jaw:** diameter around 22mm
3. **Switch:** open or close the jaw

4. Product Specification

	RF current testing (external 50Ω through load)	RF current injection
Available frequency range	20 Hz to 200 MHz	
Range with constant transducer factor（-3dB）	300kHz to 100 MHz	
Transducer factor reduced by 20 dB/decade in range(-3dB)	20 Hz to 300 kHz	
RF connector	N female	
Output impedance	50Ω (f ≥ 10 MHz)	N/A
VSWR	<2 (f > 10 MHz)	N/A
Insertion impedance	≤0.8Ω	≤1Ω
Transfer impedance In range with constant transducer factor Z_T	3.16Ω	7.1Ω
Transducer factor k1) in range with flat frequency response (Figure 1)	-10dB (1/Ω)	-17dB (1/Ω)
Effect by external magnetic fields Suppression of indication from current-carrying conductors next to probe	>40 dB	
Max. DC current or peak AC current	200 A (f < 1 kHz)	
RMS value of RF current	1 A (f > 1 MHz)	
AC (RMS value)	6A (f < 1 kHz)	
Load capacity dropping to	0.2A (f < 1MHz）	0.45A (f < 1MHz)
	2W (f > 1 MHz)	10W (f > 1 MHz) 50W (15min)
Operating temperature range	–10 °C to +55 °C	
Storage temperature range	–25 °C to 70 °C	
Permissible core temperature	80 °C	
Dimensions L × W × H	78x26x71 mm	
Inner diameter	22 mm	
Weight	260g	



Factor K curve versus Frequency

5. Packing List

Packing List	
Name	**Amount**
EM5011	1
N to BNC	1
50Ω through load CK-50	1
RF connecting cable (BNC connector)	1
Instruction manual and warranty card	1
Test report	1

CYBERTEK

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