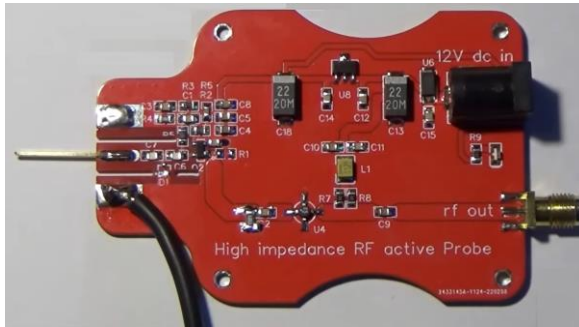


- High Input impedance 1 Mohm, 2pF
- Output impedance 50 ohm
- Wide Frequency Band up to 2 GHz
- Active probe with 12V supply
- Gain: 0dB +/- 2dB
- DC blocking input



DESCRIPTION

The High Impedance RF Active Probe has been designed in order to sense high frequency signals with a high impedance coupling and therefore avoid the direct coupling with the input impedance of a Spectrum Analyzer, that typically is 50 ohm and therefore loads the circuit under test. This signal probe is composed by an input stage with very high impedance of 1 Mohm and very low capacitance down to 2pF and an active buffered output matched at 50 ohm. This solution allows the probe to work in a wide frequency range without distortion and a very flat frequency response.

TECHNICAL DATA

PARAMETER	DESCRIPTION	VALUE			UNIT
		MIN	TYP	MAX	
f_t	Frequency Band	0.5		2000	MHz
G	Gain	-2	0	2	dB
R_o	Output resistance		50		Ohm
V_{OUT}	Maximum Signal Output		16		dBm
V_{IN}	Power Supply Voltage		12		V
I_{IN}	Power Supply Current		100		mA
P	Power Consumption approx.		120		mW

PCB DATA

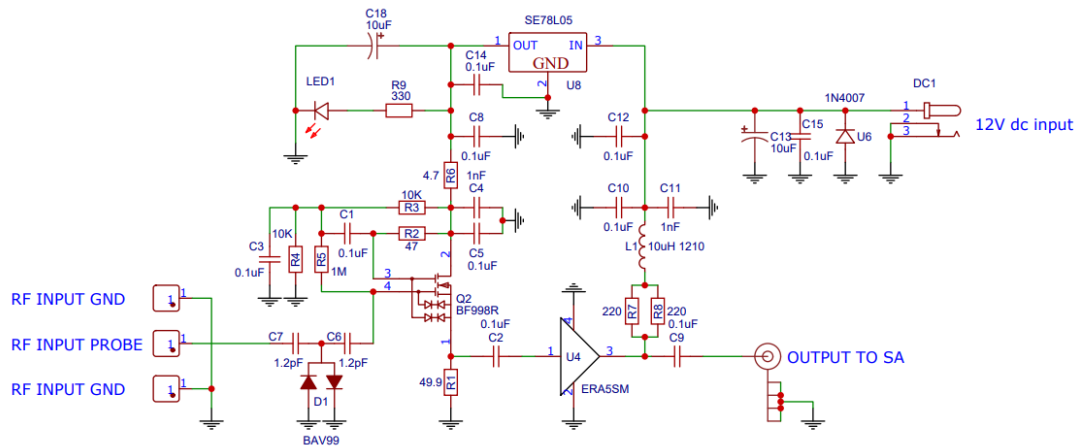
PARAMETER	VALUE	UNIT
Dimensions Length x Width	74x51	mm
Colors	RED	
PCB thickness (RED, YELLOW)	1.6	mm
Layers	2	
Surface finish	HASL	
Copper Weight	1	oz
Material Details	FR4-Standard Tg 130-140C	

BILL OF MATERIALS

- C1,C2,C3,C5,C8,C9,C10,C12,C14,C15: 0.1uF 16V 0805 [10]
- C4,C11: 1nF 0805 [2]
- C6,C7: 1.2pF [2]
- C13,C18: 10uF tantalum 16V [2]
- D1: BAV99 SOT-323 [1]
- DC1: DC Plug 12V [1]
- L1: 10uH 1210 [1]
- LED1: LED 0805 [1]
- Q2: MOSFET BF998 [1]
- R1: 49.9 ohm 0805 [1]
- R2: 47 ohm 0805 [1]
- R3, R4: 10 Kohm 0805 [2]
- R5: 1 Mohm 0805 [1]
- R6: 4.7 ohm 0805 [1]
- R7,R8: 220 ohm 0805 [2]
- R9: 330 ohm 0805 [1]
- U4: ERA5SM [1]
- U6 :1N4007 [1]
- U8: SE78L05 [1]



ELECTRICAL SCHEMATIC



USER INFORMATION

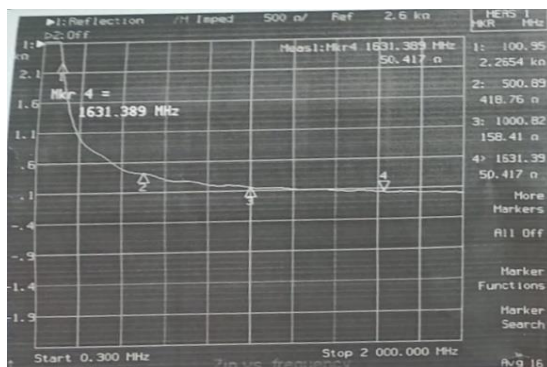


Do not touch the probe, it can be damaged due to electrostatic charge.

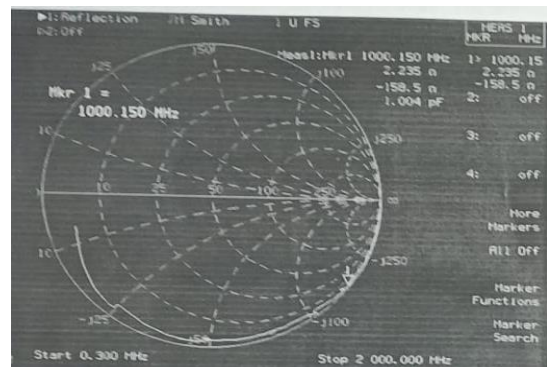
POWER UP

- Connect the probe to the input of the Spectrum Analyzer with 50 ohm input impedance coupling
- Connect a +12V power supply on the DC plug

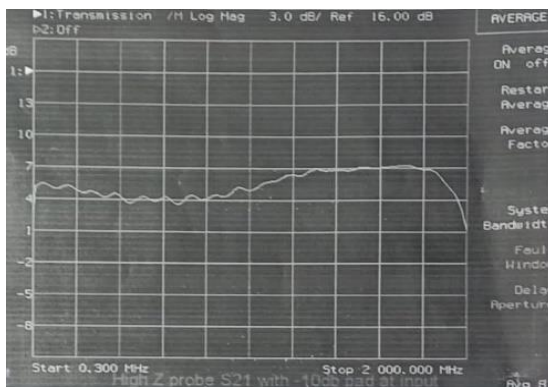
ADDITIONAL INFORMATION



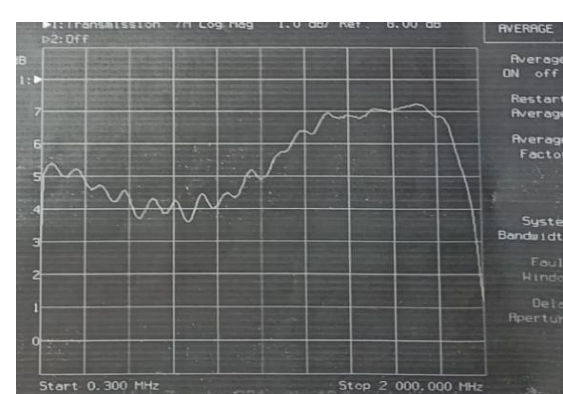
Z_{IN} - Input impedance



C_{IN} - Input Capacitance



P_{OUT} - Ouput Power (3dB resolution)



P_{OUT} - Ouput Power (1dB resolution)

ORDERING INFORMATION

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