Low level SWR-Bridge 1,8 MHz … 1.500 MHz

HA8ET-033C

Technical data:

Type:…….. HA8ET-033C

Nominal impedance:…. 50 Ω

Frequency range:…..…. 1,8 MHz….1.500 MHz

Min. measurable SWR:. 1:1,03

Optimal power:……. +10…13 dBm

Minimal power:…… +17 dBm (50 mW)

U_{DC}:…… 200 mV (adjustable)

Accurate:…… ± 5%

Connectors:……... N-Females

Accesories:…...……. N Short circuit (Cal.)

Dimensions:…….. 120 x 50 x 28 mm

Built-in zero bias Schottky detector

HOW to Use the Return Loss Bridge

1. Connect the RF port to the signal generator. Optimal output level is +10…+13 dBm.
2. Put the short circuit (calibrator built in the N-plug) onto the TEST port.
3. Connect a digital multimeter onto the DC output at an upper measuring limit of 200 mV.
4. Set a 200 mV value with the potentiometer.
5. Connect the test object to be measured (e.g. antenna) to the place of the short circuit.
6. Read the value of the reflected voltage (U_{REFL}) from the digital multimeter.
7. You can get the SWR value from the U_{REFL} by applying Diagram #1.
8. Diagram #2 shows the Return Loss in dB.

Do not overload the bridge!

I wish a great success for every user.

Nagy Gyula
HA8ET@freemail.hu

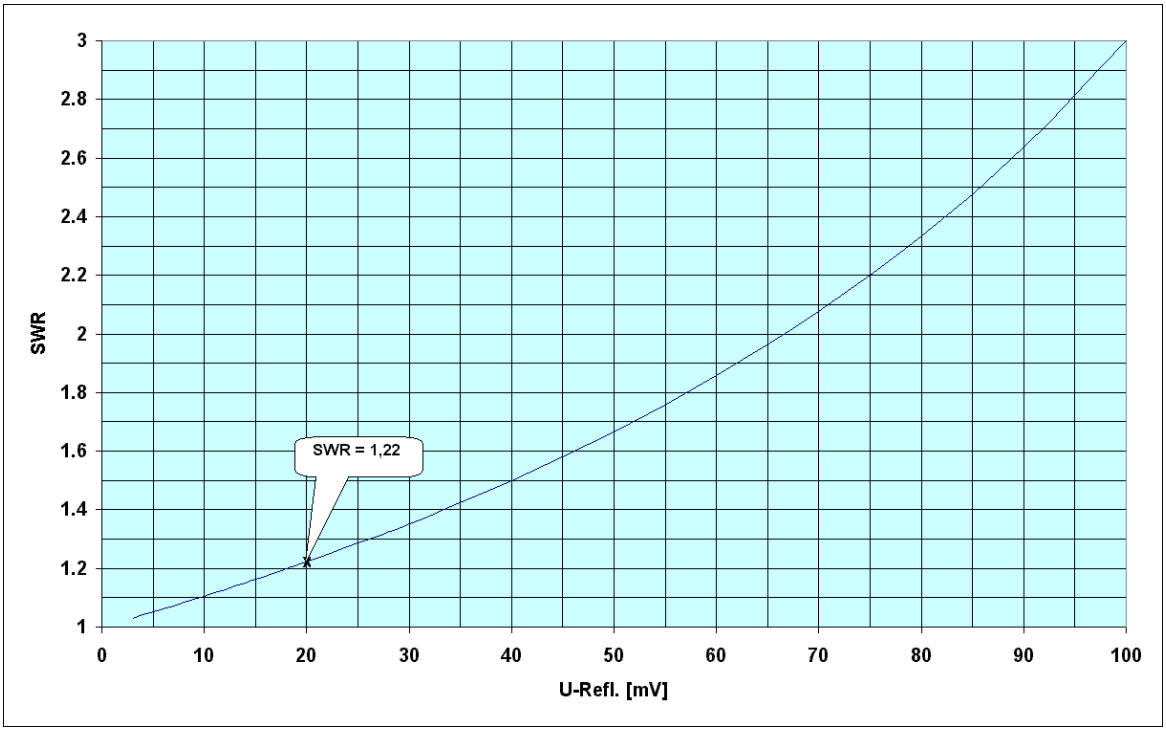


Diagram #1

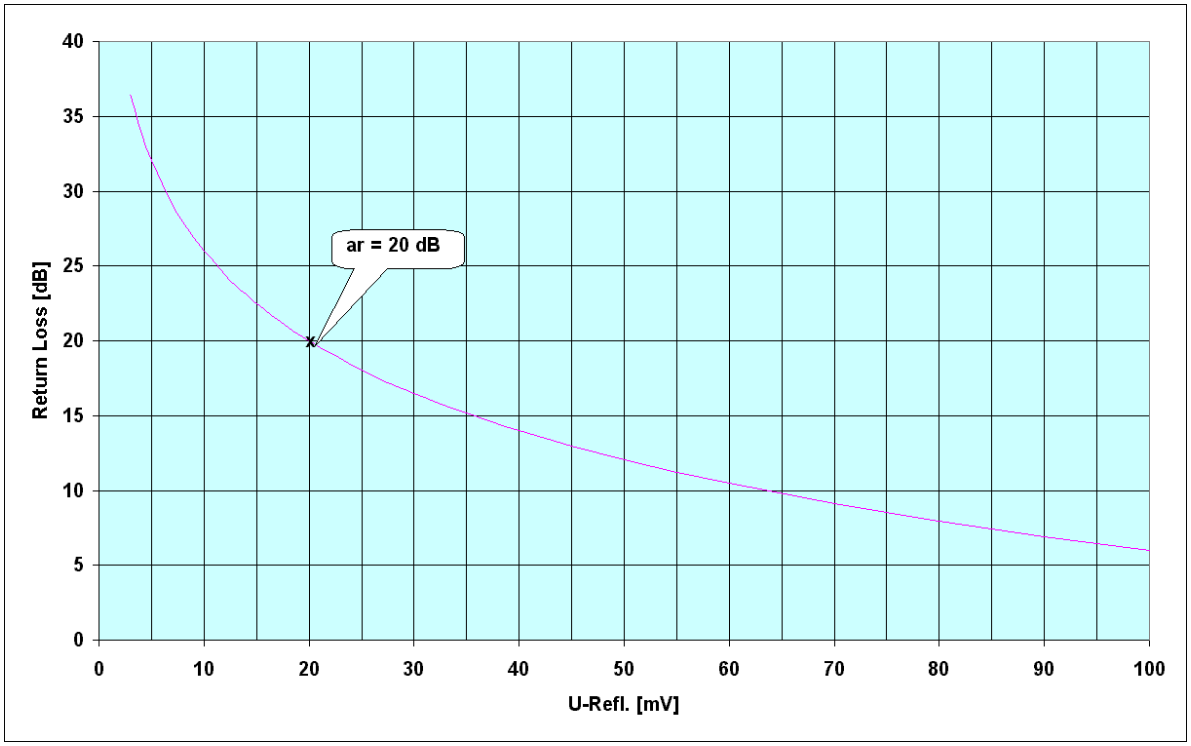
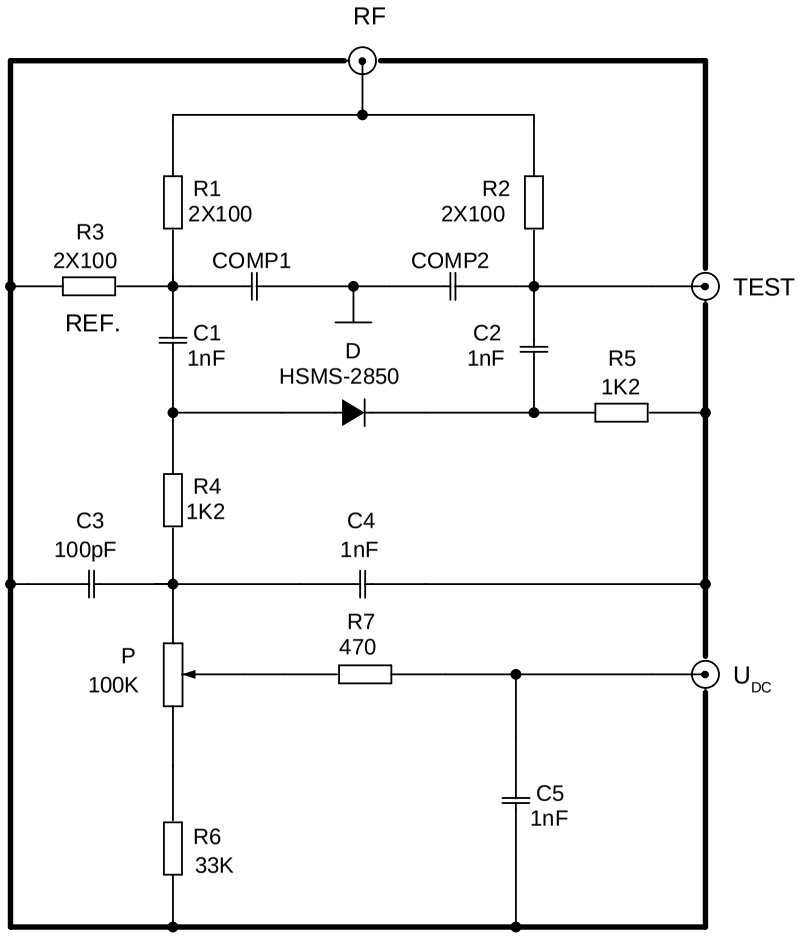
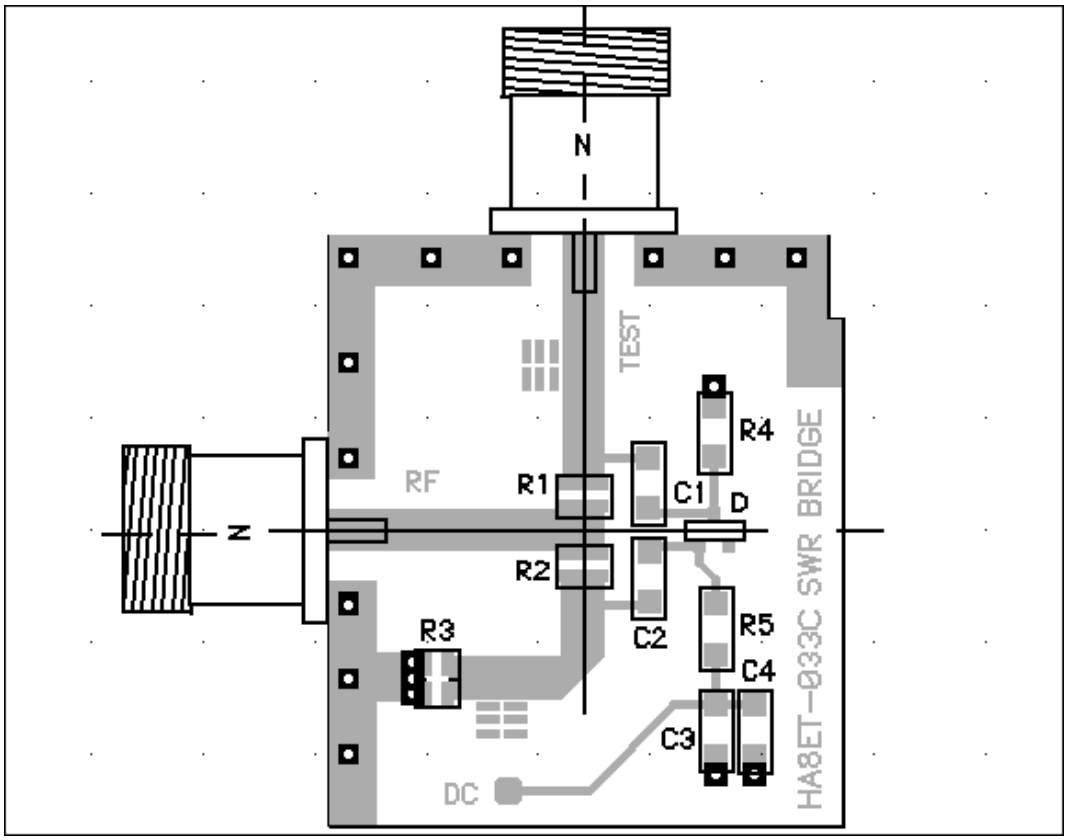


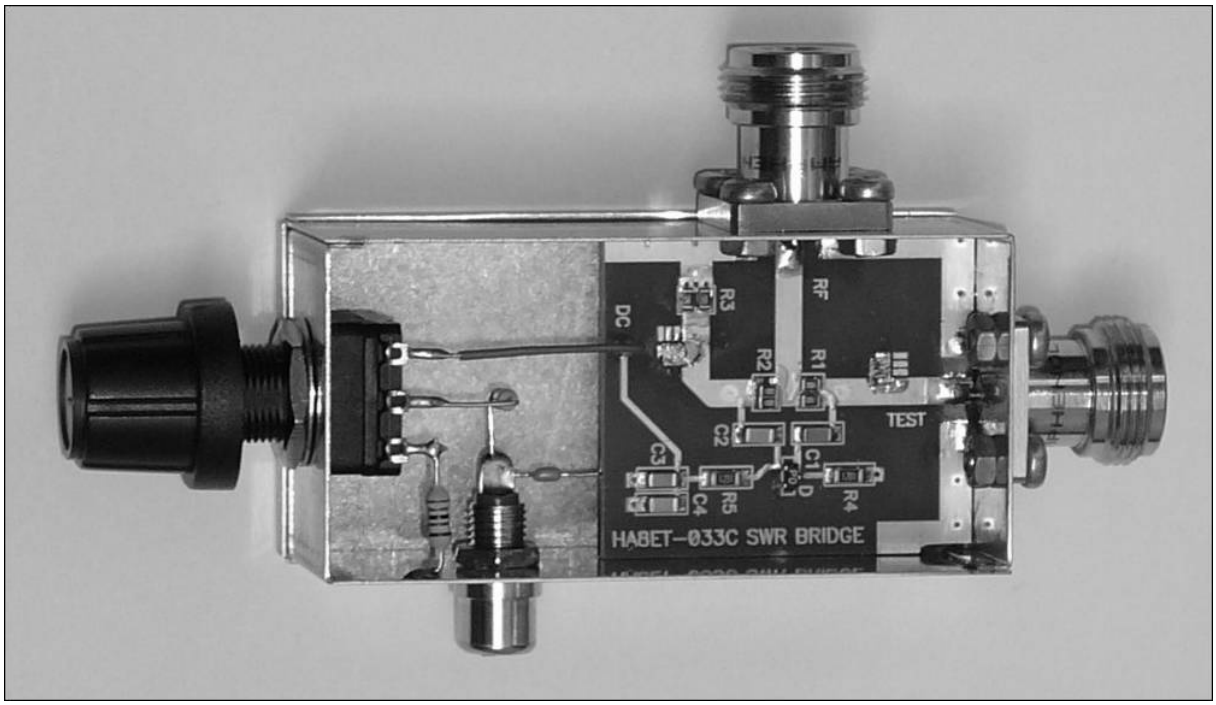
Diagram #2



Title	SWR-BRIDGE 1,8 MHZ...1,5 GHZ		
Size A4	Number HA8ET-033C		Rev
Date	07. 10. 2008.	Drawn by	HA8ET
Filename	8ET_33C	Sheet	1 of 1



Layout of the low level Return Loss Bridge



Inside of the low level Return Loss Bridge

Bill of material

Designator	Value	Package
R1, R2, R3	2 x 100 Ω 1% parallel	0805 SMD
R4, R5	1k2	1206 SMD
R6	33k 5%	0,25W metal film
R7	470 Ω 5%	0,25W metal film
C1, C2, C4,	1nF 50V	1206
C3	100 pF 50V	1206
C5	1nF 50V	Monolit
D	HSMS 2850 Zero Bias Schottky	SOT-23
P	100K Lin.	Piher PC16HLE6
Test connector	N female	N6551E1-004-NT3G-50
RF connector	N female	N6551E1-004-NT3G-50
DC connector	RCA female	
BOX	74 x 37 x 30 mm	