



HC 3 – 100

3 dB Coupler
1 ... 100 MHz
100 W max.





Performance Data

- Frequency Range 1 ... 100 MHz / -1 dB / 50 Ω
- Input / Output [1] 0 ... 100 W max.
- Inputs / Outputs [2/3] 2 x 0 ... 50 W max.
- Insertion Loss ≤ 0.5 dB 2 ... 50 MHz
- Isolation 20 ... 30 dB
- Dynamic IP₃ +60 dBm / 50 W PEP

Connector Types

- Input / Output [1] TNC / SMA[®]
- Outputs / Inputs [2/3] TNC / SMA[®]

[®] optional

Ambient Temperatures

- Operating -20 ... +60 °C / external SWR ≤ 3 / Outputs
- Storage -40 ... +80 °C



Functional Description

- Transformer 3 dB Coupler
- 4-Port Coupler with internal Refl. Port – Load Resistor 50 Ω / 30 W

Scope of Applications

- Power Splitter 1:2 for Input Power of 0 ... 100 W
- Cascadable 1/n
- TX Signal Splitter / Driver Power for 2x Power Amplifier
- Overload protected RX Signal Splitter for 2x Receiver at 1x Antenna ($IP_3 +60$ dBm)

Housing

- | | |
|--------------|--|
| - Material | Aluminum Alloy / transparent chromate
Base: Solid Material, milled
Cover: Sheet Metal 1.5 mm |
| - Dimensions | 107.5 x 73 x 25 mm (W x D x H)
(121.5 x 101 x 25 mm overall / TNC) |
| - Mounting | 4-Hole Mounting 70 x 60 mm / $\varnothing 3,5$ mm |
| - Weight | 275 g |

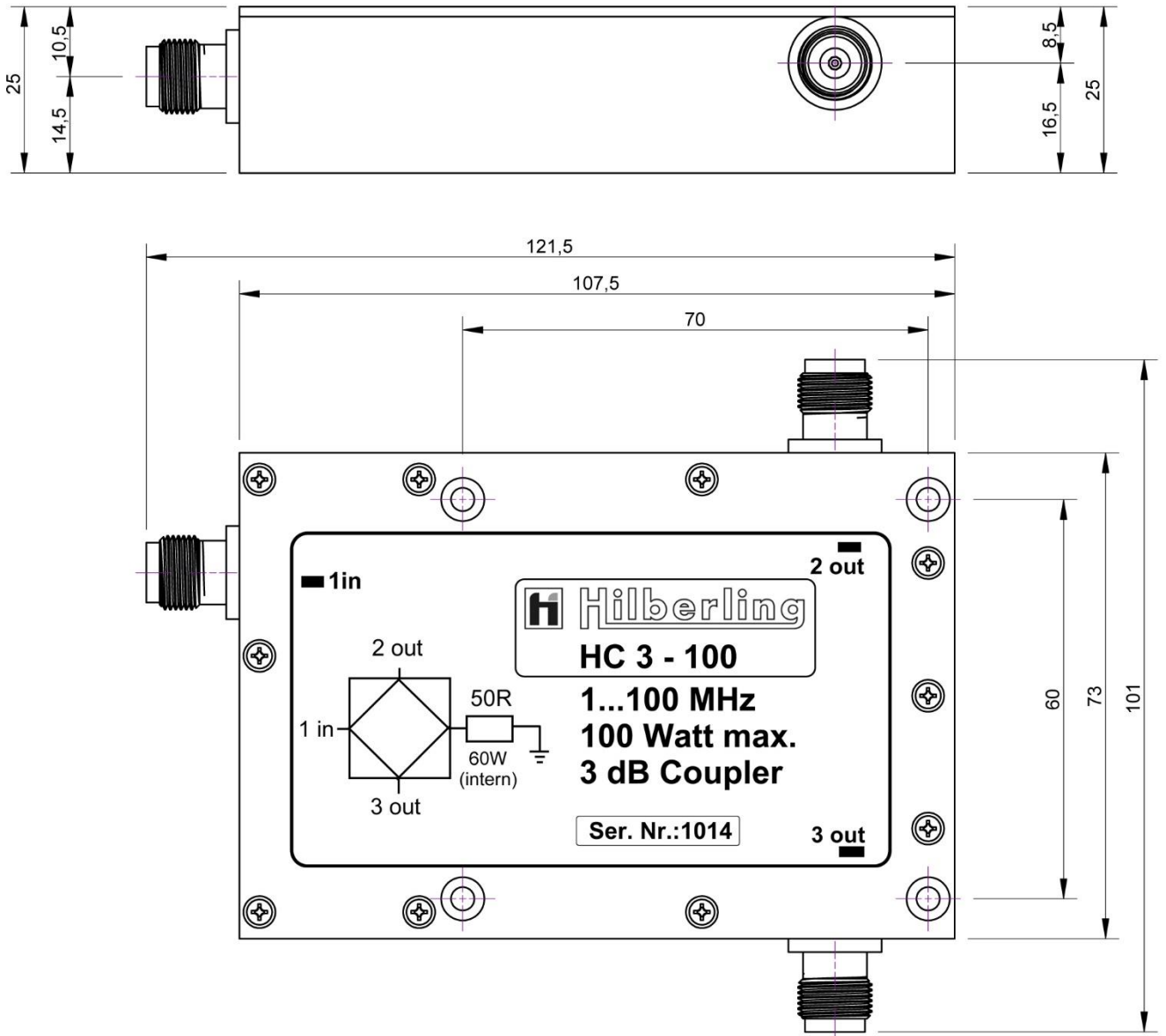


Hilberling

HF-Entwicklungslabor email:info@hilberling.de
Heinrich-Hertz-Str. 2 24790 Schacht-Audorf
GERMANY

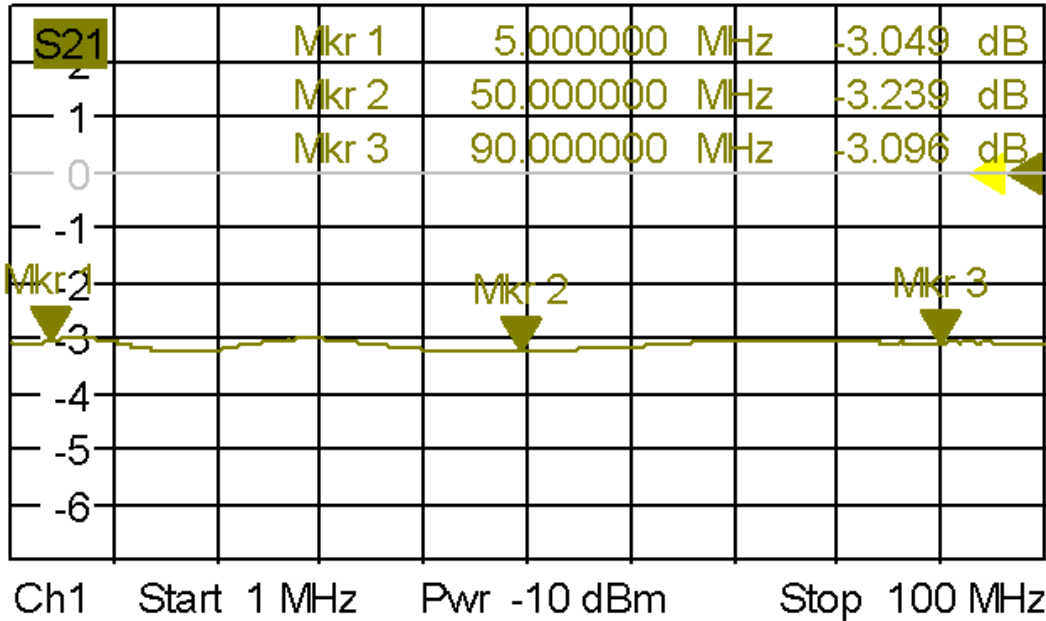
Data Sheet HC 3 - 100

Outline Drawing



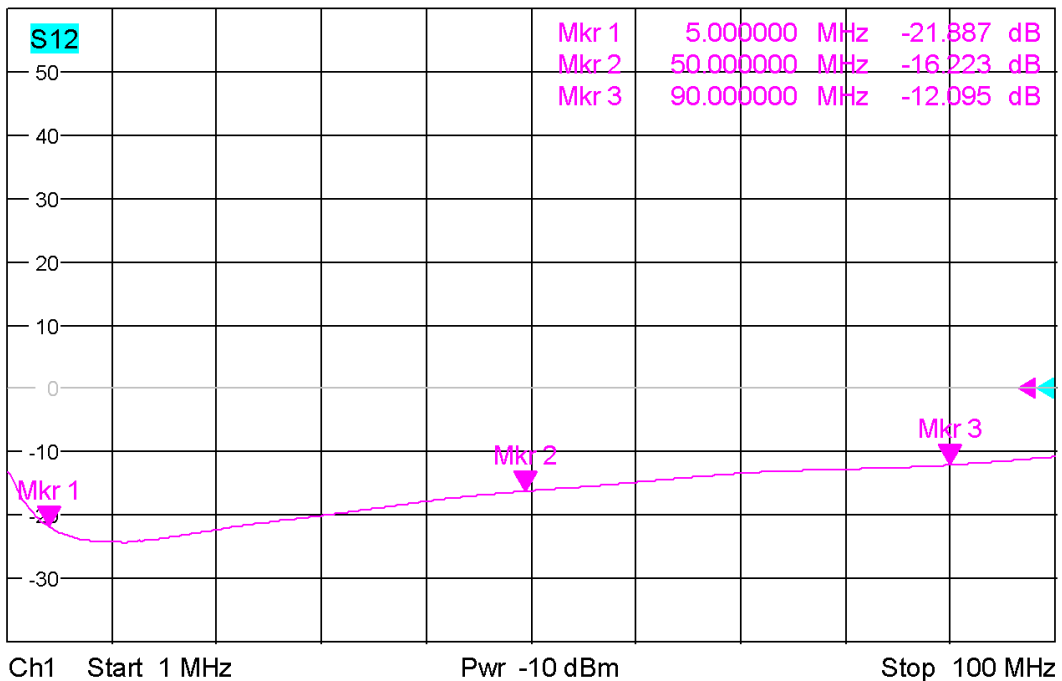
Insertion Loss S21

Trc1 **S21** dB Mag 1 dB / Ref 0 dB Cal Smo 1
 Mem5[Trc1] **S21** dB Mag 1 dB / Ref 0 dB Invisible



Insertion Loss S12

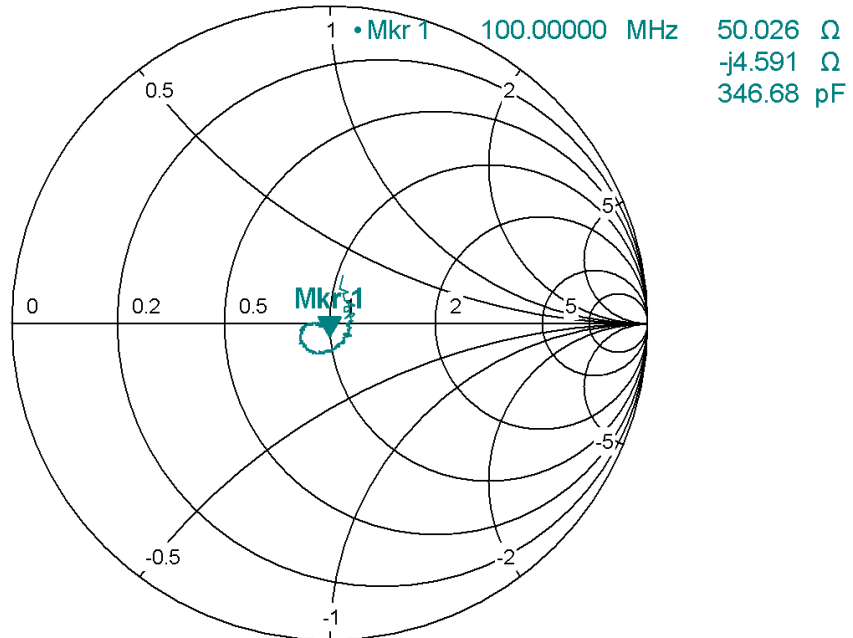
Trc2 **S12** dB Mag 10 dB / Ref 0 dB Invisible 2 of 4 (Max)
 Mem6[Trc2] **S12** dB Mag 10 dB / Ref 0 dB Smo



Input Reflection

Trc3 **S11** Smith Ref 1 U Invisible 3 of 4 (Max)
 Mem7[Trc3] **S11** Smith Ref 1 U

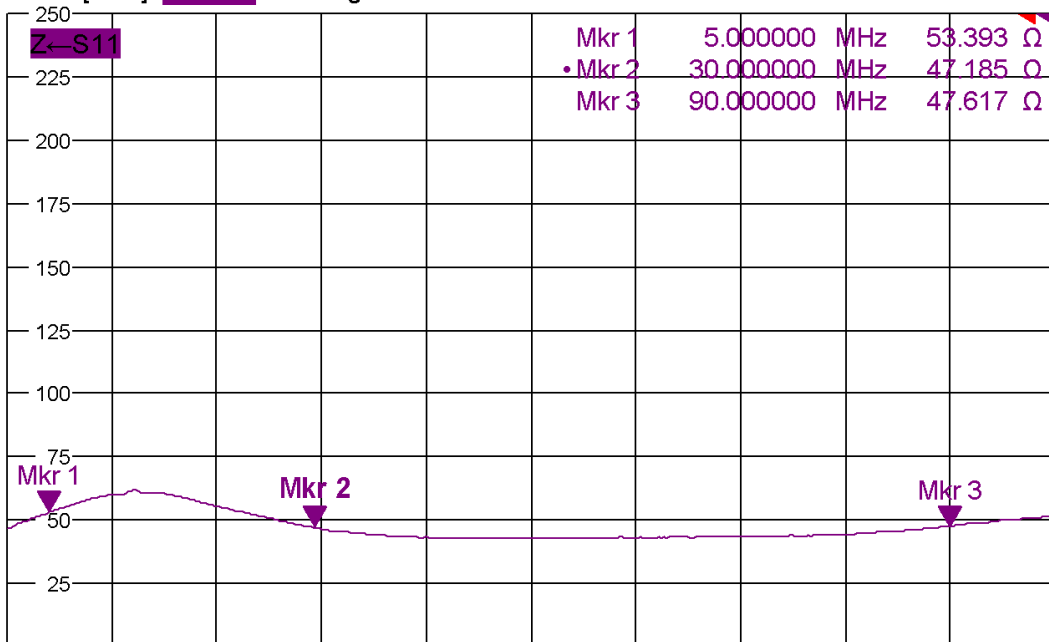
S11



Ch1 Start 1 MHz Pwr -10 dBm Stop 100 MHz

Z₀ Input / Output Impedance

Trc4 **Z←S11** Lin Mag 25 Ω / Ref 250 Ω Invisible 4 of 4 (Max)
 Mem8[Trc4] **Z←S11** Lin Mag 25 Ω / Ref 250 Ω Smo



Ch1 Start 1 MHz Pwr -10 dBm Stop 100 MHz