

ATV 9cm

DL8MBI



Vektorantenne EUROPEAN ANTENNAS SA17-60-3.5V/9301, V, 3,3...3,8 GHz



Produktbeschreibung

Professionelle, vertikal polarisierte Antenne für den 3,3...3,8 GHz Frequenzbereich. Mit dem mitgelieferten Zubehör kann die Antenne direkt an einen Mast montiert werden.

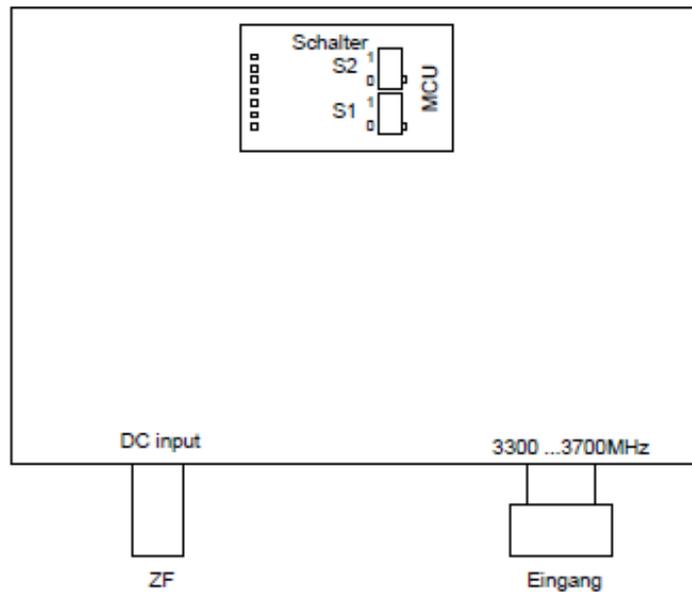
Technische Daten:

- Sektor: 60°
- Gewinn: 17,5 dBi
- Azimut-/Elevationswinkel: 60° / 8°
- Anschluss: N-Buchse
- Maße (LxBxH): 650x200x100 mm



WLAN Antenne

Empfangszweig 9cm mit Roberto Konverter



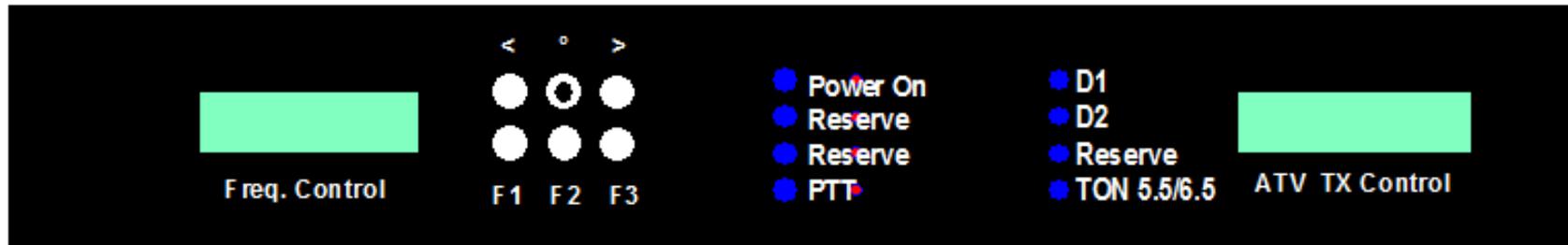
SAT Receiver

Antenne

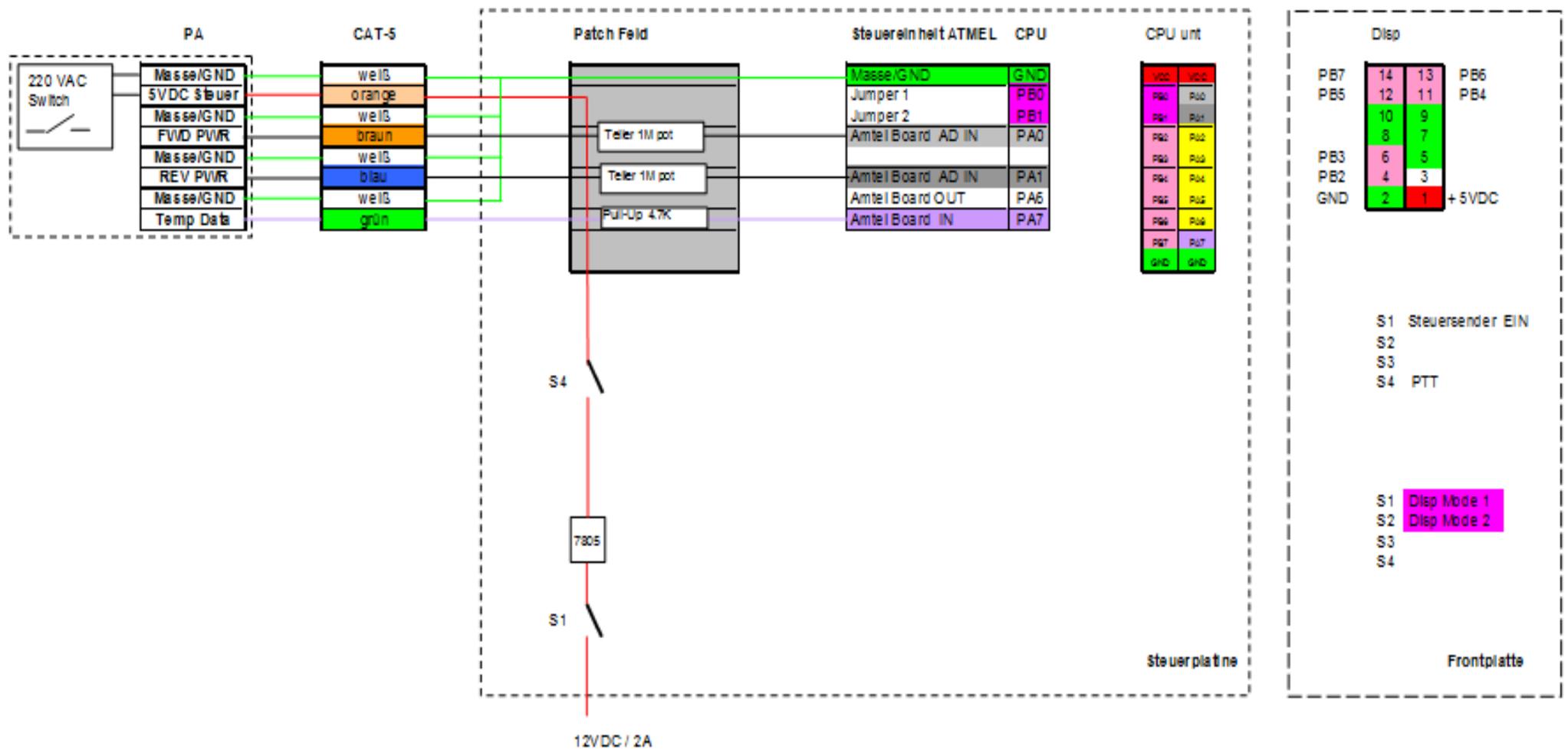
Verstärkung >35 (typ. 40dB)
 Rauschfaktor < 1,0dB typ 0,8....0,9dB
 Ub 12-18Volt
 Ib ca. 220....250mA

| Änderungen | | Datum | Name | Bezeichnung | Blattzahl: 1 |
|---------------------------------------|------|--------------|------|-------------------|---------------|
| Datum | Name | gez.: 5/2010 | Zech | | Kon-DWN3337-S |
| | | gepr.: | | Blatt-Nr.: 1 | |
| Irrtümer und Änderungen Vorbehalten ! | | | | Zeichnungs-Nr.: 1 | |
| | | | | | |

Frontplatte

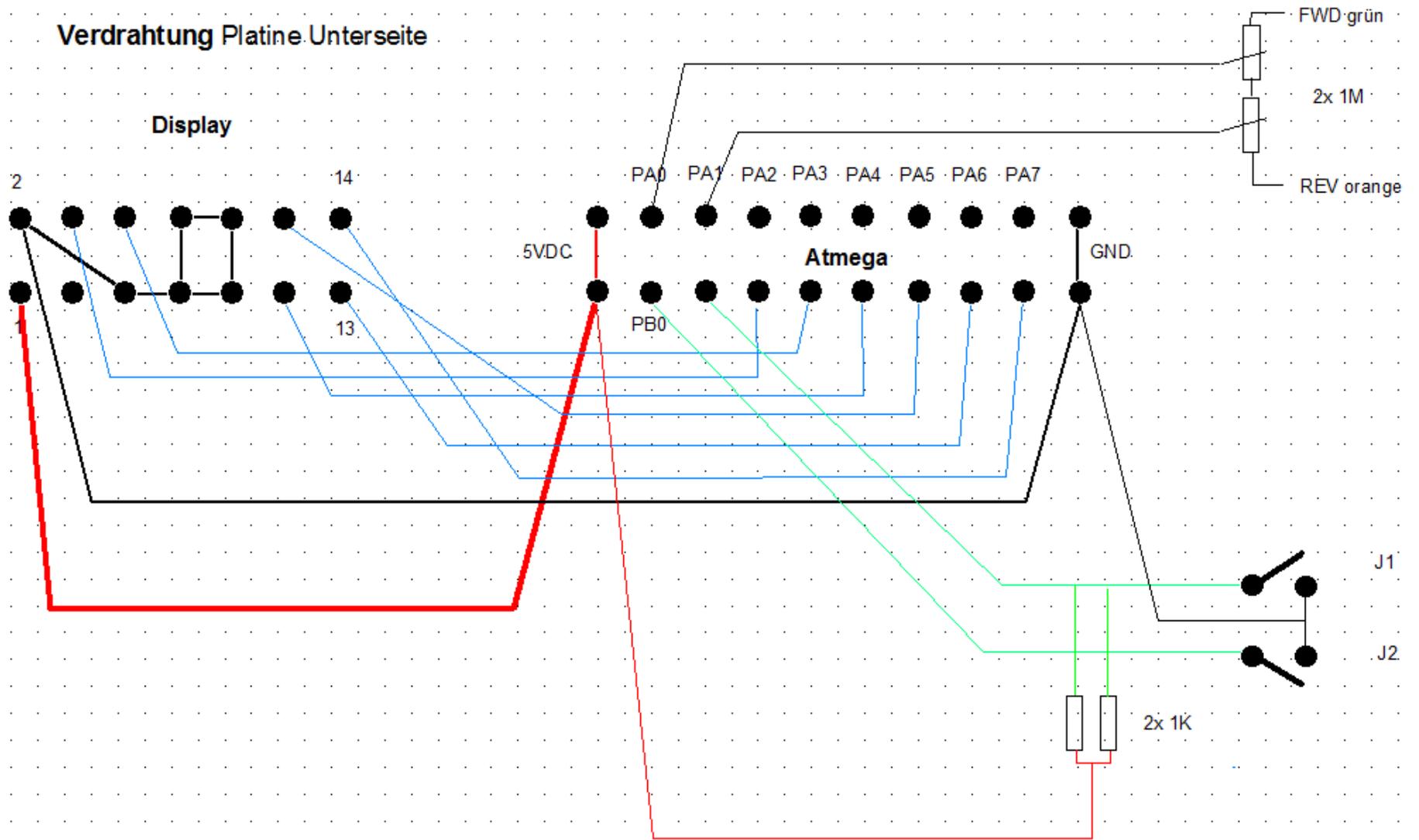


| D1 | D2 | |
|----|----|---------------|
| 0 | 0 | Temperaturèn |
| 1 | 0 | FWD+ Temp |
| 0 | 1 | VSWR |
| 1 | 1 | FWD-REF Power |



Anschluss Diagramm
ATV TX Control

Verdrahtung Platine Unterseite

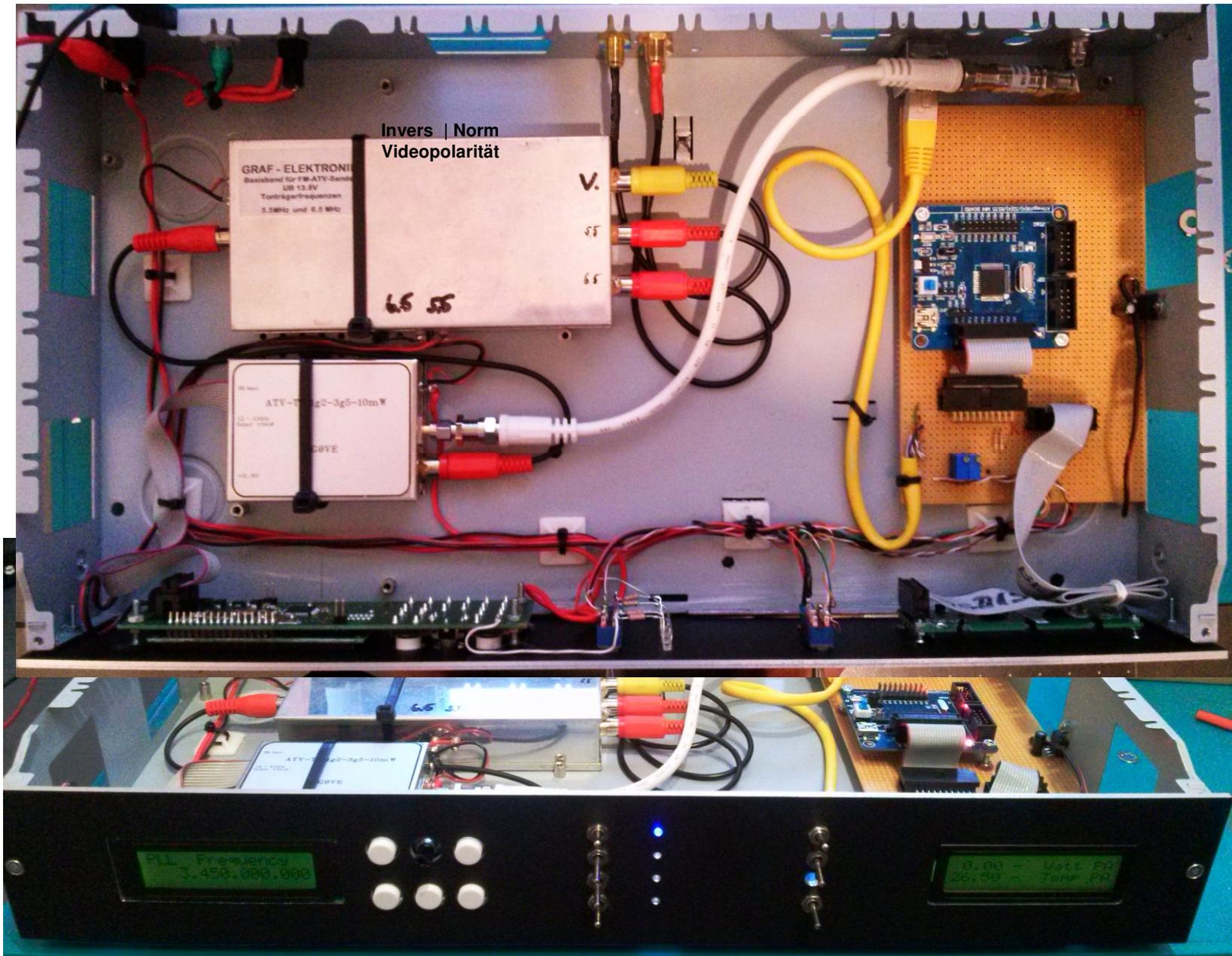


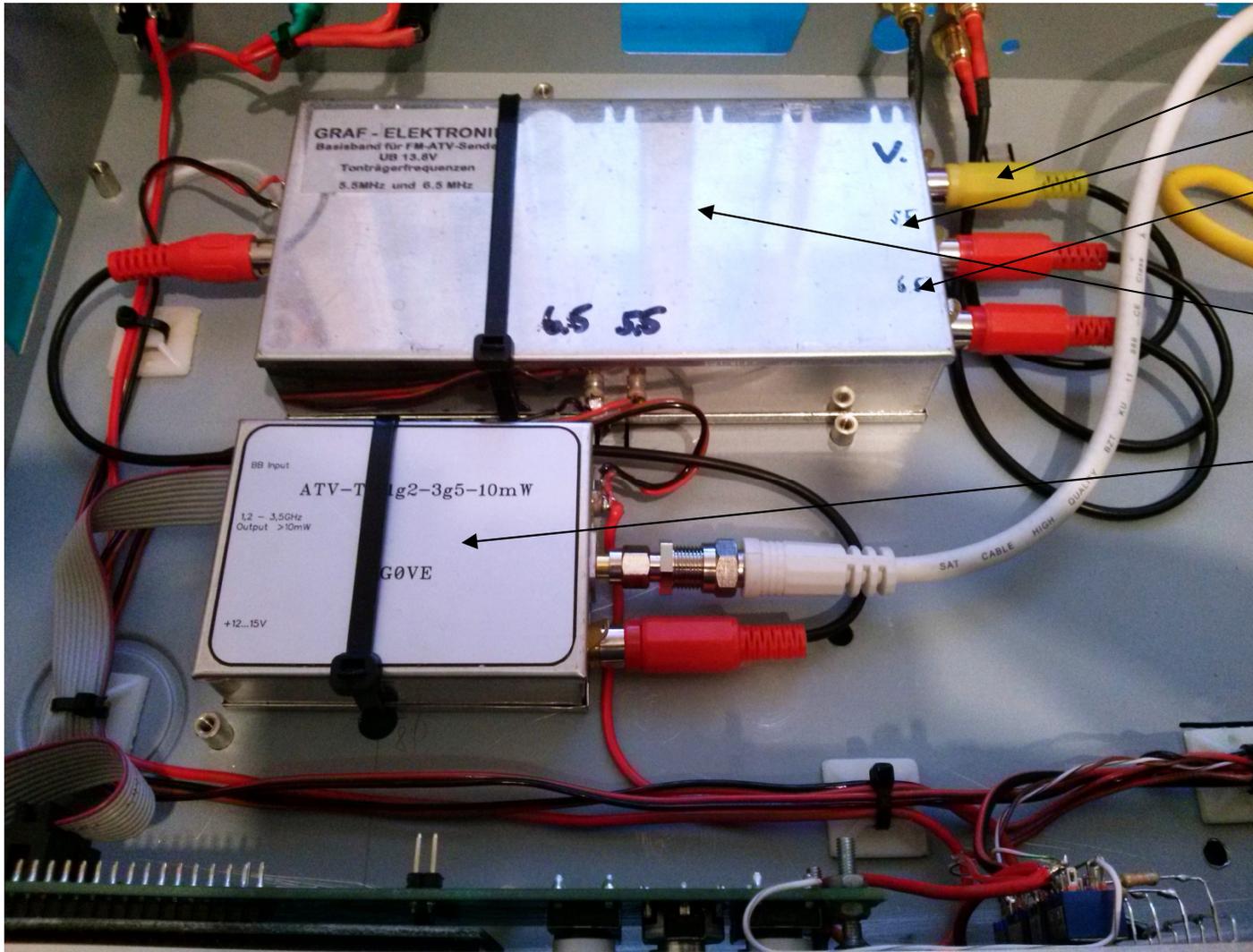


Display Sendeeinheit

Display PA Control







Video IN
Audio L IN
Audio R IN

Basisband

Sender

HF Ausgang

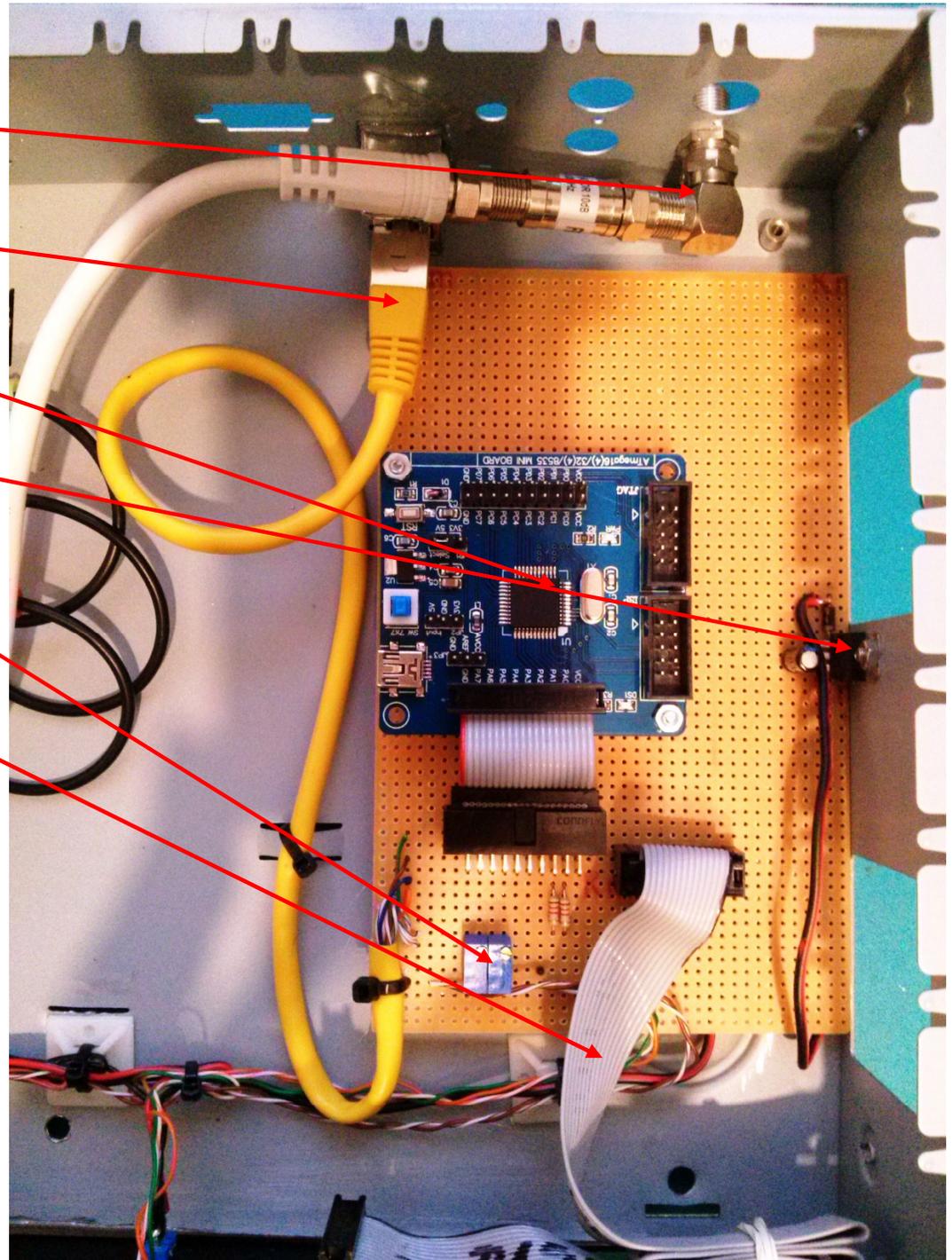
Verbindung zur PA

Prozessor Atmega 3216

Spannungsregler 5VDC

FWD / REV Potis

Display Anschluss

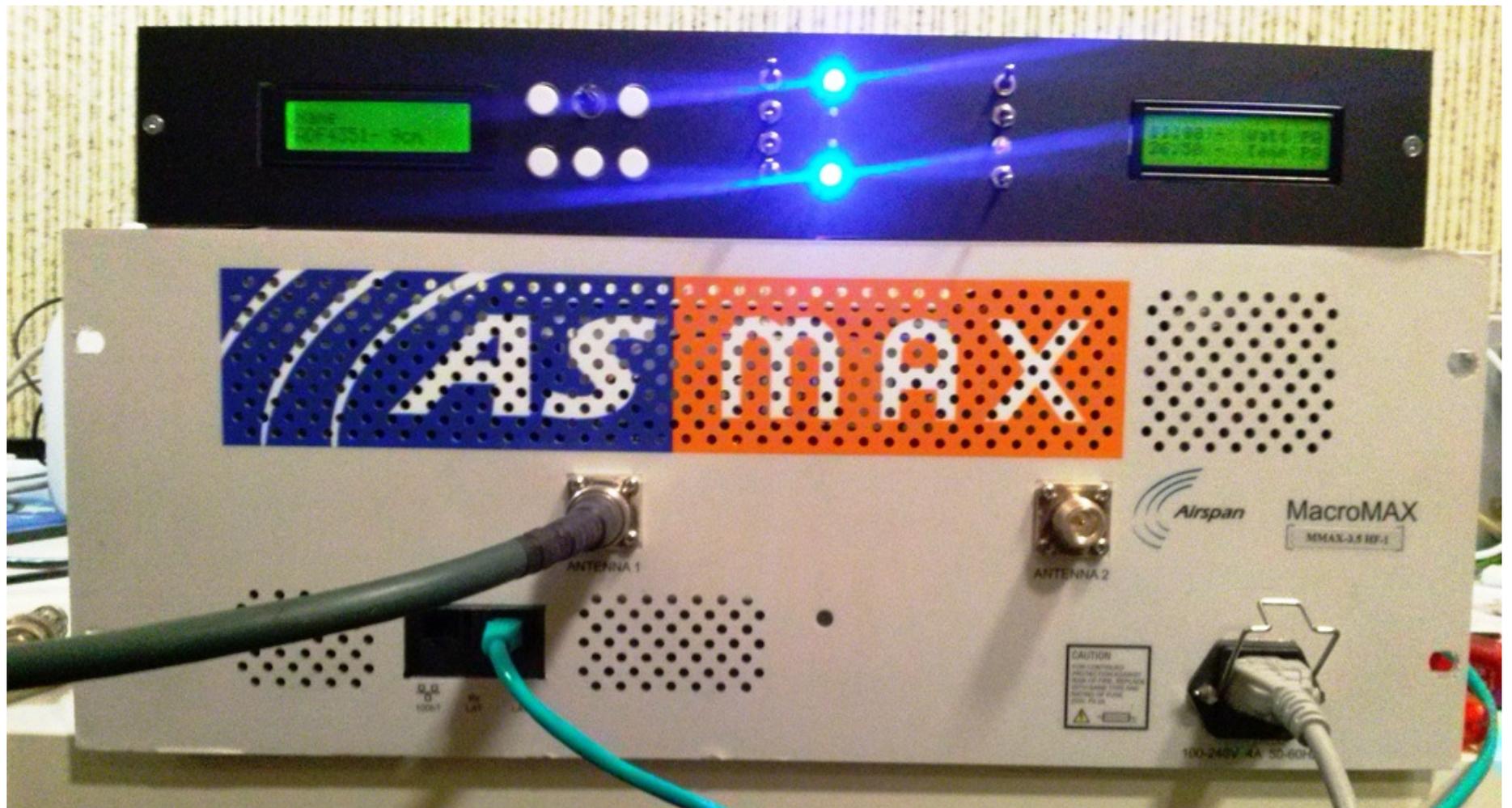




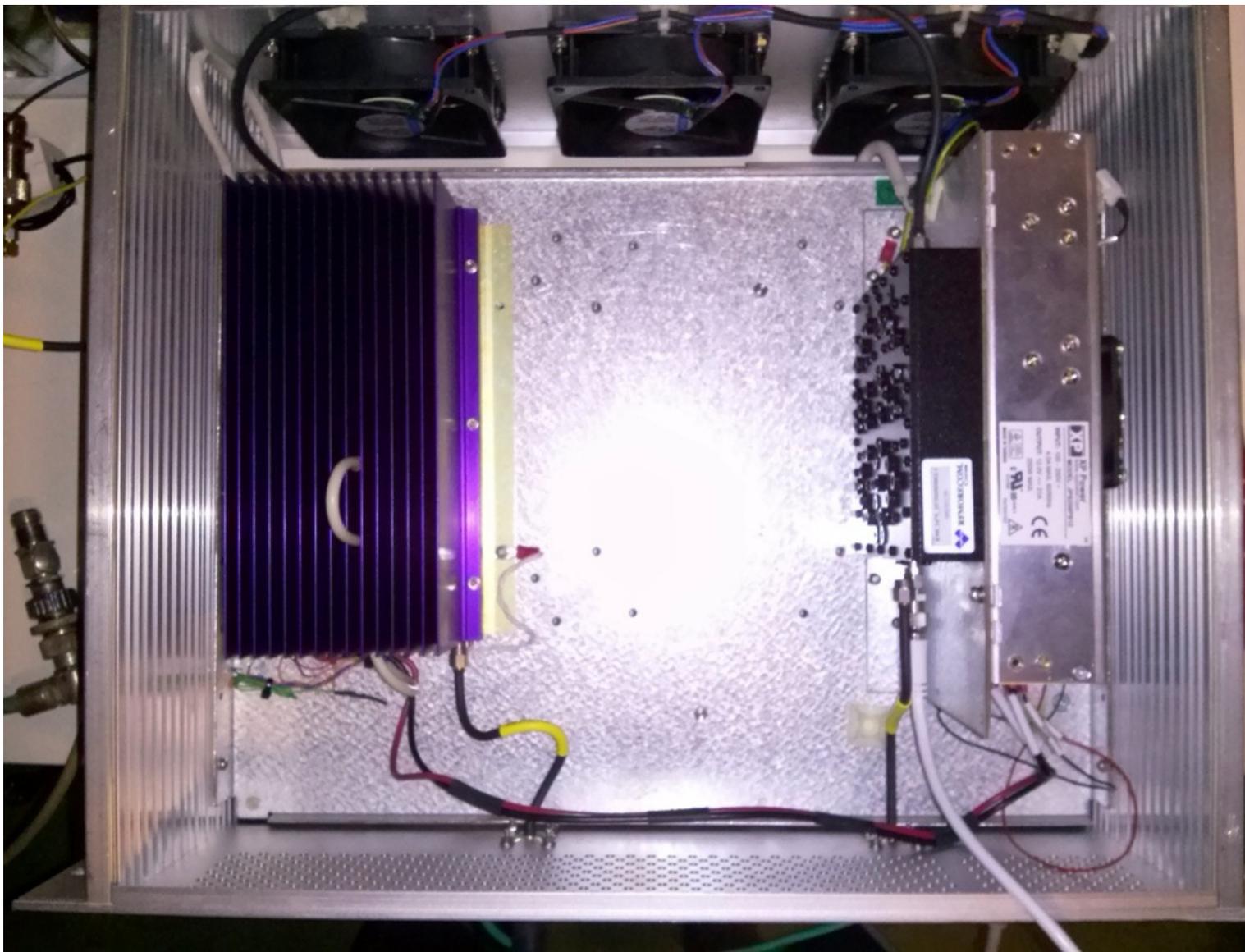
Frontseite



Rückseite

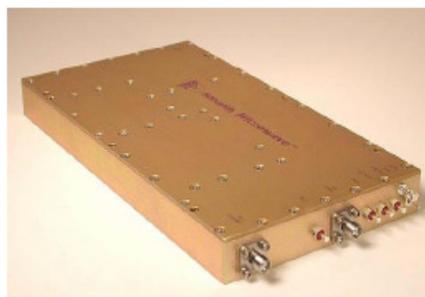






Die Endstufe wird über ein Solid State Relais PTT EIN/AUS geschaltet

The SM3437-43L is a 3.4 to 3.7 GHz solid state GaAs FET amplifier designed for Broadband Wireless Access markets. Our proprietary pre-distortion technique improves the OIP3 by almost 9 dB. The unit provides ultra-linear performance for rigorous system requirements. It is available in modular form (standard), or in 19" rack mountable form.



Features

- Integrated Linearizer
- Single Power Supply
- Over Voltage Protection
- Thermal Protection with Auto Reset
- Temperature Compensation

Options

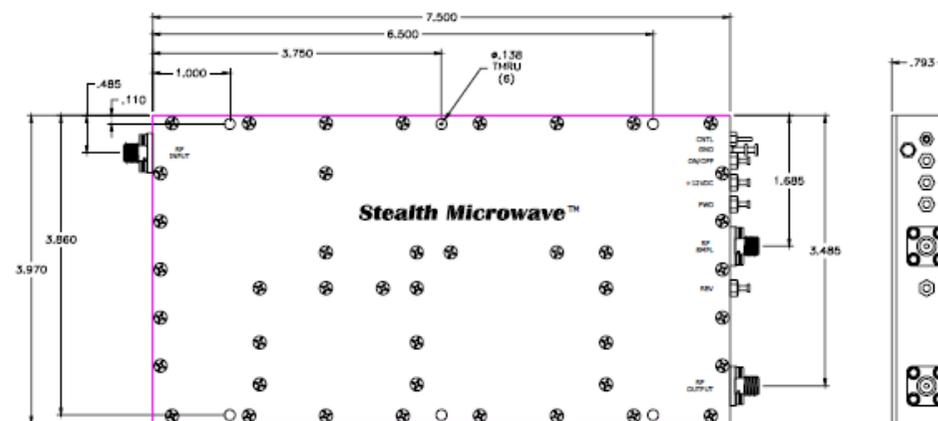
- Forward/Reverse Power Detection
- RF Sampling Port
- Pulse Control with 1μs switching speeds for TDD operation
- RF isolation during TDD Rx Cycle
- Logic On/Off Control
- Integral Heatsink

Configurations

- Module
- 19" Rack Mount

| Parameter | Specification |
|---|-----------------------------------|
| Frequency Range | 3.4 – 3.7 GHz |
| Pout (P1dB) | +43 dBm |
| Output Third Order Intercept Point (OIP3) | +63 dBm |
| Linear Gain | 50 dB ± 1 dB |
| Gain Flatness (over full band) | ± .5 dB |
| Gain Change (over temperature) | ± .5 dB |
| Input/Output Return Loss | -16 dB / -16dB |
| DC Input Voltage | +12 Volts |
| DC Input Current | 8.5 Amperes (operational) |
| Mechanical Dimensions | 7.50 x 3.97 x .79 inches |
| RF Connectors | SMA Female |
| Operating Temperature | 0°C to +55°C |
| Operating Humidity | 95% Non-condensing |
| Operating Altitude | Up to 10,000 feet above Sea Level |

DIMENSIONS IN INCHES



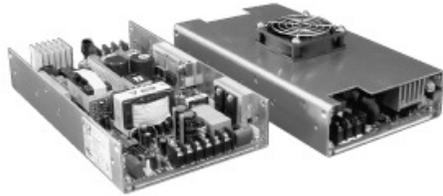
| Pin | Description | Values |
|-----------|--------------------------------|---|
| RF INPUT | Input Connector (SMA Female) | - 6 dBm (max.) |
| RF OUTPUT | Output Connector (SMA Female) | + 43 dBm @ P1dB |
| RF SAMPLE | RF Sample Port (SMA Female) | 30 dB |
| GND | Ground Turret | --- |
| FWD | Forward Power Detector | + 37 dBm Output Power ≈ + 2.5 Volts |
| REV | Reverse Power Detector | ∞ VSWR @ + 37 dBm ≈ + 5.0 Volts |
| +12VDC | DC Input Voltage | + 12 Volts @ 8.5 Amperes. (operational) |
| ON/OFF | TTL Logic On/Off | 0 Volts = Off, + 5 Volts = On |
| CNTL | TTL Pulse Control | Rates up to 100 kHz |

Specifications subject to change without notice.

250/350 Watts

xppower.com XP

JPS250/350 Series



- 200 W / 300 W with Convection Cooling
- High Efficiency – up to 88%
- Meets 1U, Low Profile Requirements
- AC OK & DC OK Signals
- Zero Voltage Switching Technology
- Remote On/Off & Remote Sense
- 3 Year Warranty

Specification

Input

| | |
|-----------------------|---|
| Input Voltage | • 85-264 VAC (170-370 VDC) |
| Input Frequency | • 47-63 Hz |
| Input Current | • 2.75 A/1.40 A max at 115 VAC/ 230 VAC (JPS250) 4.5 A/2.2 A max at 115 VAC/230 VAC (JPS350) |
| Inrush Current | • 30 A at 115 VAC, 60 A at 230 VAC |
| Power Factor | • 0.9 typical |
| Earth Leakage Current | • 3.0 mA max 264 VAC/60 Hz |
| Input Protection | • Internal T5 A, 250 VAC fuse (JPS250) Internal T6.3 A, 250 VAC fuse (JPS350) |

Output

| | |
|----------------------------|---|
| Output Voltage | • See tables |
| Output Voltage Trim | • $\pm 10\%$ on output 1 only (VR1) |
| Initial Set Accuracy | • At 60% rated load $\pm 1\%$ on V1 & V2, $\pm 5\%$ on V3 & V4 |
| Minimum Load | • Single output models: No minimum load required. Multi-output models, see note 4 |
| Start Up Delay | • 2 s typical |
| Start Up Rise Time | • 80 ms typical (JPS250) 100 ms typical (JPS350) |
| Hold Up Time | • 20 ms min at low line & rated load |
| Line Regulation | • $\pm 0.5\%$ at rated load across input voltage range |
| Load Regulation | • $\pm 1\%$ for single output models & V1 & V2 of multi-output models, $\pm 5\%$ for V3 & V4 |
| Transient Response | • 4% max deviation, recovery to within 1% in 500 μ s for a 25% load change |
| Ripple & Noise | • $\pm 1\%$ max pk-pk, 15 MHz bandwidth, see note 2 under model tables |
| Oversvoltage Protection | • 115-140% on single outputs & V1 of quad output models, recycle input to reset |
| Overtemperature Protection | • Shuts down at $+110^\circ\text{C}$, auto recovery, measured internally |
| Overload Protection | • 110-130% of max rated load on all O/Ps, auto recovery |
| Short Circuit Protection | • Trip and restart (hiccup mode), auto recovery |
| Temp. Coefficient | • $\pm 0.05\%/^\circ\text{C}$ |
| Remote Sense | • Compensates for up to 0.5 V drop |
| Remote On/Off | • On = Logic Low or Open, Off = Logic High |
| Current Share | • Current share on single output models & V1 & V2 of multi-output models (4 supplies can be paralleled) |
| Fan Output | • See mechanical notes for ordering information |

General

| | |
|---------------------|--|
| Efficiency | • Up to 88% |
| Isolation | • 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground |
| Switching Frequency | • 120 kHz typical for PFC and PWM |
| Power Density | • 4.96 W/in ³ |
| Signals | • AC OK, DC OK, Remote On/Off (see control and supervisory signals) |
| MTBF | • 125 kHrs to MIL-HDBK-217F at $+50^\circ\text{C}$, GB (JPS250) 146 kHrs to MIL-HDBK-217F at $+50^\circ\text{C}$, GB (JPS350) |

Environmental

| | |
|-----------------------|--|
| Operating Temperature | • 0°C to $+70^\circ\text{C}$, (see derating curve) Full power to $+50^\circ\text{C}$ |
| Cooling | • 250 W with 18 CFM airflow (JPS250) 200 W convection cooling (JPS250) 350 W with 18 CFM airflow (JPS350) 300 W convection cooling (JPS350) |
| Operating Humidity | • 5-95% RH, non-condensing |
| Storage Temperature | • -20°C to $+85^\circ\text{C}$ |
| Operating Altitude | • 2000 m |
| Vibration | • 2 g, 10 Hz to 55 Hz, 30 mins each axis |

EMC & Safety

| | |
|------------------------|--|
| Emissions | • EN55022, level B conducted FCC 20780, level B conducted |
| Harmonic Currents | • EN61000-3-2 |
| ESD Immunity | • EN61000-4-2, level 3 Perf Criteria A |
| Radiated Immunity | • EN61000-4-3, 10 V/m Perf Criteria A |
| EFT/Burst | • EN61000-4-4, level 3 Perf Criteria A |
| Surge | • EN61000-4-5, level 3 Perf Criteria A |
| Dips and Interruptions | • EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B |
| Safety Approvals | • EN60950-1, UL60950-1, CE Mark LVD CSA C22.2 No. 60950-1, CE Mark LVD |

Models and Ratings

JPS250 - Single Output

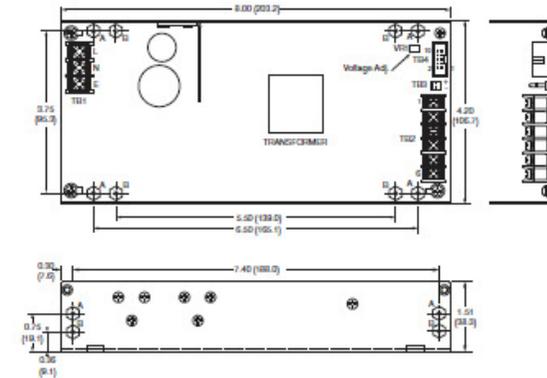
| Output Power ¹⁾ | Output Voltage | Output Current | | Ripple & Noise Pk-Pk | Model Number ²⁾ |
|----------------------------|----------------|-------------------|--------|----------------------|----------------------------|
| | | Convection-cooled | 18 CFM | | |
| 225 W | 5 V | 36.0 A | 45.0 A | 50 mV | JPS250PS05C |
| | 12 V | 17.0 A | 21.0 A | 120 mV | JPS250PS12C |
| 250 W | 15 V | 13.5 A | 17.0 A | 120 mV | JPS250PS15C |
| | 24 V | 8.5 A | 10.4 A | 200 mV | JPS250PS24C |
| | 48 V | 4.3 A | 5.2 A | 200 mV | JPS250PS48C |

Notes

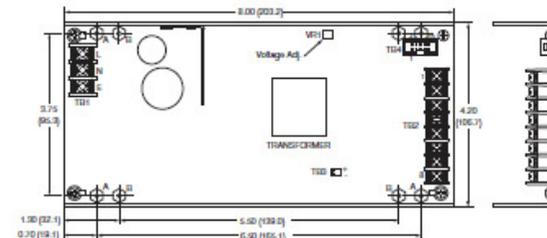
1. Maximum power with 18 CFM forced air is 250 W, or 200 W with convection cooling.
2. Ripple and noise measured over 15 MHz bandwidth with a 0.47 μ F capacitor.
3. For non-current share version delete suffix 'C' from model number.

Mechanical Details

All models (except JPS250PS05)



JPS250PS05



| Pin | PIN CONNECTIONS | | |
|-----|-----------------|------------------|-----------------------------|
| | JPS250PS05 | All other models | All models |
| 1 | +5 V | +V | Signal 0 V |
| 2 | +5 V | +V | DC OK |
| 3 | 0 V | +V | AC OK |
| 4 | 0 V | 0 V | Remote On/Off |
| 5 | 0 V | 0 V | +Sense |
| 6 | 0 V | 0 V | -Sense |
| 7 | +5 V | | Current Share ³⁾ |
| 8 | +5 V | | N/C |
| 9 | | | N/C |
| 10 | | | N/C |

Notes

1. TB3 is for fan, with Molex 5045-02A or equivalent.
5 V model: 5 V at 390 mA, 24 V model: 24 V at 80 mA, all other models: 12 V at 112 mA
2. TB1 (AC input) and TB2 (DC output) are terminal blocks.
3. TB4 signal connector is Molex 70246-10 or equivalent.
4. Fan cover option available, order part number:
5 V models: JPS250 F/CVR 5
12, 15 & 48 V models: JPS250 F/CVR
24 V models: JPS250 F/CVR 24
Or add suffix '-E' to model number to receive unit with fan cover fitted. 4.2 x 8 x 2.48 (106.7 x 203.2 x 62.9).
5. For current share operation connect current share (pin 7) between units. For non 'C' models pin 7 (current share) is not used.
6. Input and output terminal screw tightening torque 9 lbs-in (1.0 Nm) maximum.

Fixing Holes:

- A = #6-32 screw mounting holes
- B = M3 x 0.5 screw mounting holes
- Maximum mounting screw penetration is 0.16 (4.0) from chassis outer surface.

All dimensions are in inches (mm)
Tolerance: ± 0.03 (0.8) max
Weight: 1.65 lbs (750 g) approx.

S102S01/S102S02 S202S01/S202S02

SIP Type SSR for Medium Power Control

■ Features

- High radiation resin mold package
- RMS ON-state current
 I_T : 8 Arms at $T_c \leq 80^\circ\text{C}$
 (With heat sink)
- Built-in zero-cross circuit
 (S102S02/S202S02)
- High repetitive peak OFF-state voltage
 S102S01/S102S02 V_{DRM} : MIN. 400V
 S202S01/S202S02 V_{DRM} : MIN. 600V
- Isolation voltage between input and output
 (V_{iso} : 4 000V_{rms})
- Approved by CSA, No. LR63705
 Recognized by UL, file No. E94758

■ Applications

- Automatic vending machines, programmable controllers
- Amusement equipment

■ Model Line-ups

| | For 100V lines | For 200V lines |
|---|----------------|----------------|
| For phase control No built-in zero-cross circuit | S102S01 | S202S01 |
| Built-in zero-cross circuit | S102S02 | S202S02 |

■ Absolute Maximum Ratings

| Parameter | Symbol | Rating | | Unit |
|---|-------------|--------------------|--------------------|------------------|
| | | S102S01 S102S02 | S202S01 S202S02 | |
| Forward current | I_F | 50 | | mA |
| Reverse voltage | V_R | 6 | | V |
| *1RMS ON-state current | I_T | 8 | | A _{rms} |
| *2Peak one cycle surge current | I_{surge} | 80 | | A |
| Repetitive peak OFF-state voltage | V_{DRM} | 400 | 600 | V |
| Non-repetitive peak OFF-state voltage | V_{DRM} | 400 | 600 | V |
| Critical rate of rise of ON-state current | di/dt | 50 | | A/ μ s |
| Operating frequency | f | 45 to 65 | | Hz |
| *3 Isolation voltage | V_{iso} | 4 000 | | V _{rms} |
| Operating temperature | T_{opr} | - 25 to + 100 | | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | - 30 to + 125 | | $^\circ\text{C}$ |
| *4 Soldering temperature | T_{sol} | 260 | | $^\circ\text{C}$ |

($T_a = 25^\circ\text{C}$)

*1 $T_c \leq 80^\circ\text{C}$

*2 50Hz sine wave, $T_j = 25^\circ\text{C}$
start

*3 60Hz AC for 1 minute,
40 to 60% RH, Apply voltages
between input and output, by
the dielectric withstand
voltage tester with zero-
cross circuit.

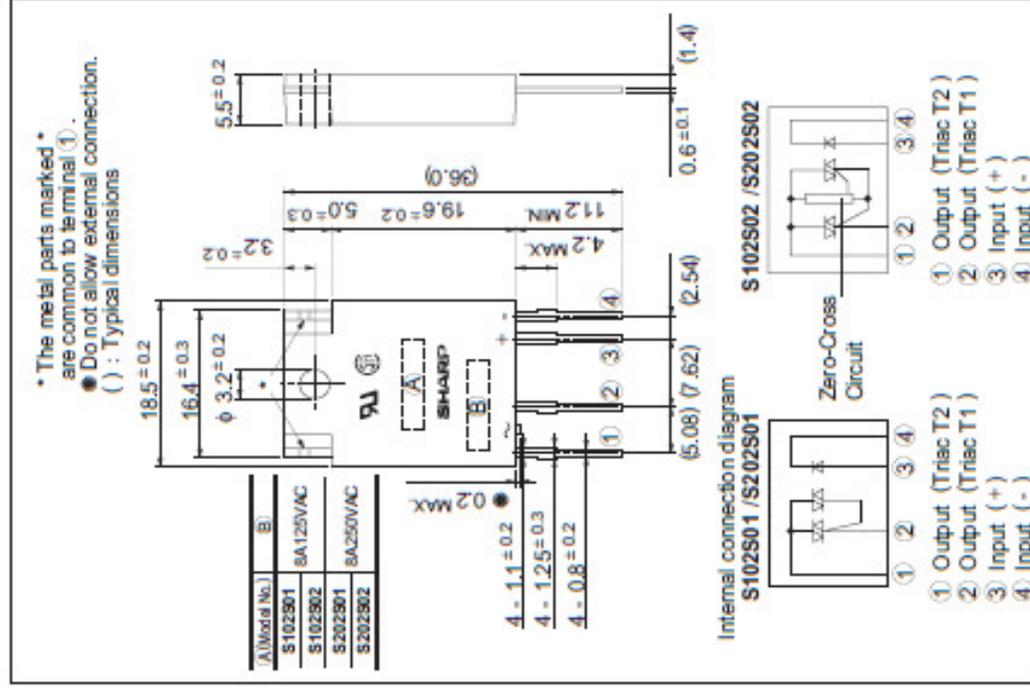
(Input and output shall be
shorted respectively).

(Note)

When the isolation voltage
is necessary at using external
heat sink, please use the
insulation sheet.

*4 For 10 seconds

■ Outline Dimensions (Unit : mm)



LCD TC1602E-01

Best.Nr. 120 420

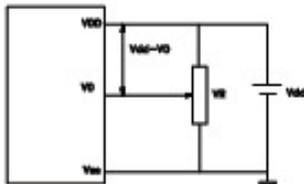
2-zeiliges STN-Display mit integriertem Controller und gelber LED-Hintergrundbeleuchtung. Es können pro Zeile 16 Zeichen dargestellt werden. Geeignet zum Betrieb am PC-Druckerport (LPT).

Series

| | |
|-----------------------|-------------------------|
| Display Format | 16 Characters X 2 Lines |
| Drive Method | 1/16 Duty, 1/5 Bias |
| LCD Type | STN Yellow green |
| LED Backlight | Yellow |
| Viewing direction | 6: 00 |
| Operating Temperature | 0°C~+50°C |

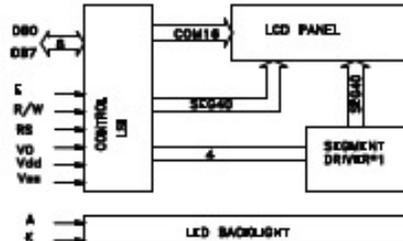


Power supply



VDD-V0: LCD driving voltage
VBI: 100~20K

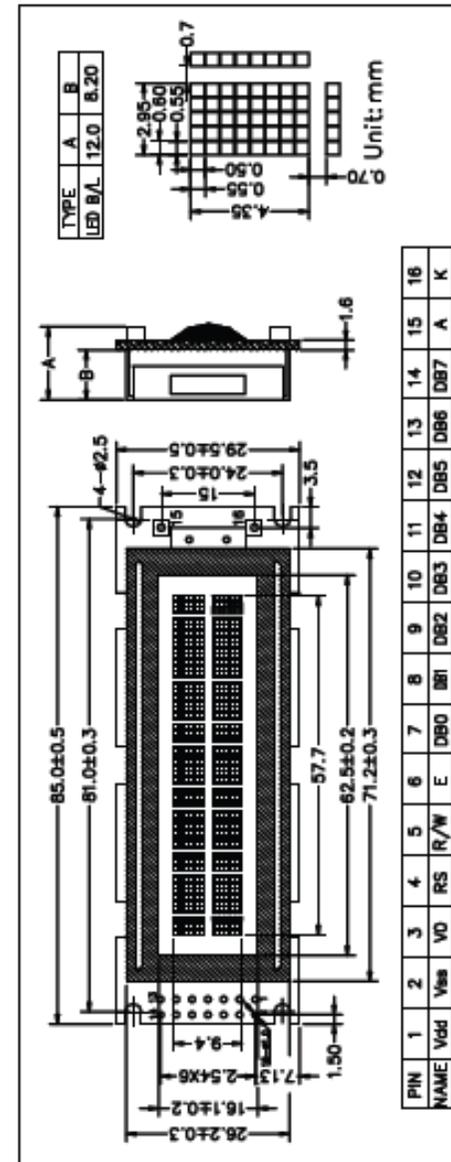
Block Diagram



Electrical Characteristics

| ITEM | Symbol | Condition | Standard value | | | UNIT |
|--------------------------|-----------------|----------------|----------------|------|------|------|
| | | | Min. | Typ. | Max. | |
| Supply Voltage For Logic | $V_{DD}-V_{BI}$ | - | 4.5 | 5.0 | 5.5 | V |
| Supply Voltage For LCD | $V_{DD}-V_0$ | - | - | 4.7 | - | V |
| Input High Voltage | V_{IH} | - | 2.2 | - | 5.0 | V |
| Input Low Voltage | V_{IL} | - | 0.3 | - | 0.6 | V |
| output High Voltage | V_{OH} | $I_{OH}=0.1mA$ | 2.4 | - | 5.0 | V |
| output Low Voltage | V_{OL} | $I_{OL}=0.1mA$ | - | - | 0.4 | V |
| Power Supply Current | I_{DD} | $V_{DD}=5.0V$ | - | 1.5 | 3.0 | mA |
| With B/L | I_{DD} | $V_{DD}=4.2V$ | - | 100 | 150 | mA |

EXTERNAL DIMENSIONS AND DISPLAY PATTERN



Technische Daten:

- 2 Zeilen x 16 Zeichen
- Integrierter Controller (Industriestandard)
- gelbgrünes Display mit gelber LED-Hintergrundbeleuchtung
- Betriebsspannung +5 VDC
- Zeichenhöhe 4,35 x 2,95 mm
- Anzeigefläche 62,5 x 16 mm



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Duplexbetrieb

Günther

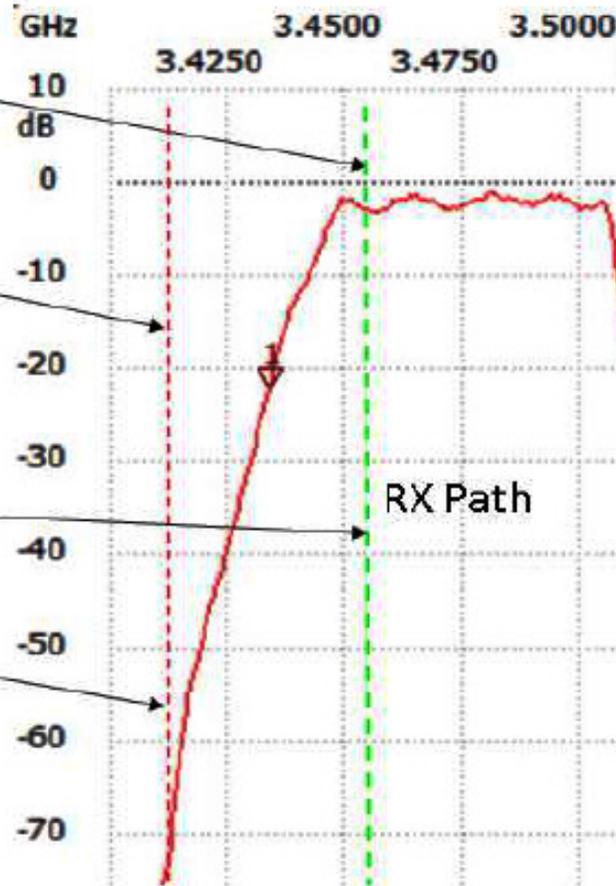
| |
|-------------|
| RX |
| Antenne 2 |
| 3415 MHz |
| Konverter |
| Satreceiver |
| 1585 |

| |
|--------------|
| TX |
| Antenne 1 |
| 3455 MHz |
| Filter |
| PA |
| Steuersender |

Wolfgang

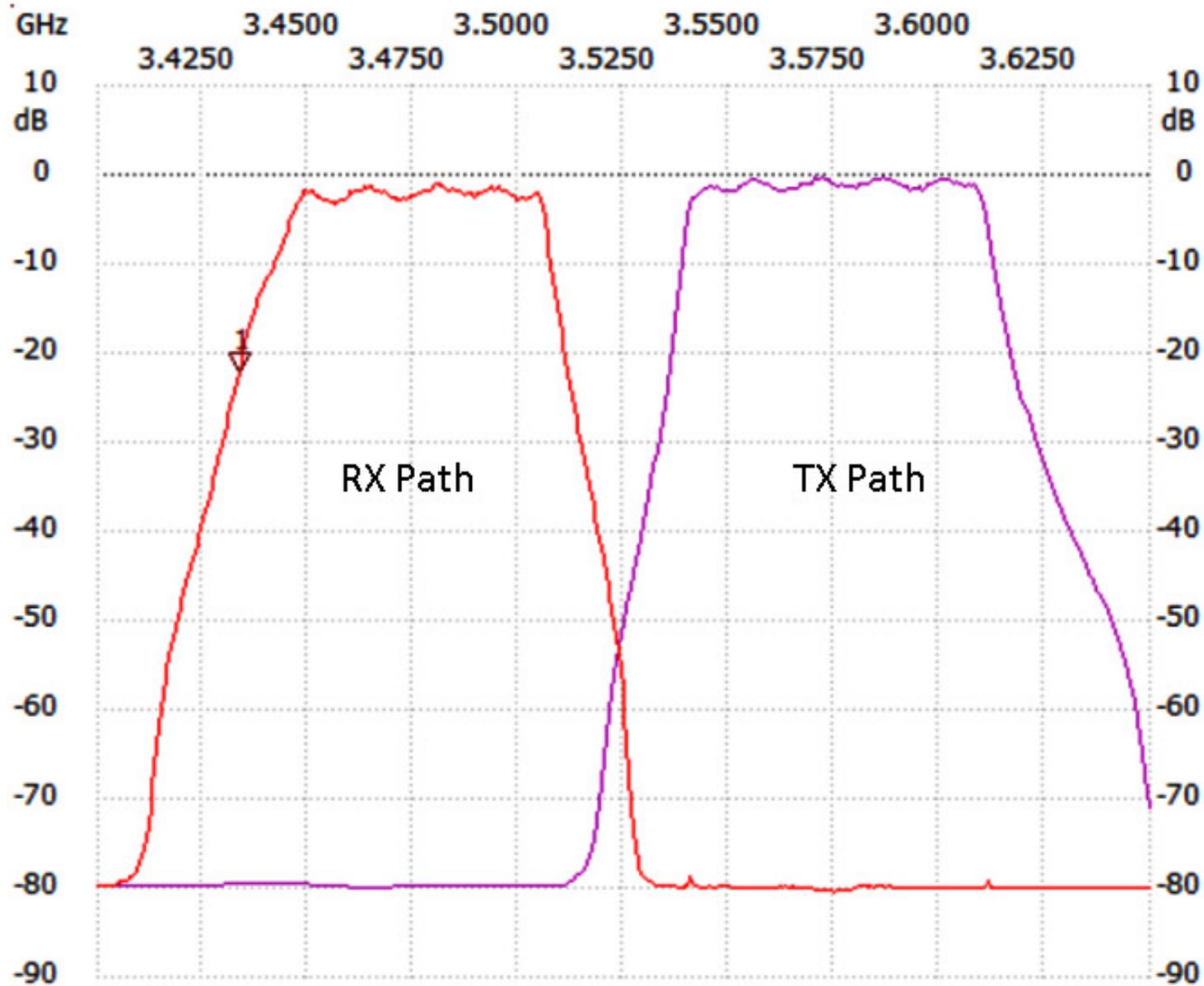
| |
|--------------|
| TX |
| Antenne 1 |
| 3415 MHz |
| PA |
| Steuersender |

| |
|-----------|
| RX |
| Antenne 2 |
| 3455 MHz |
| Filter |
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| Receiver |



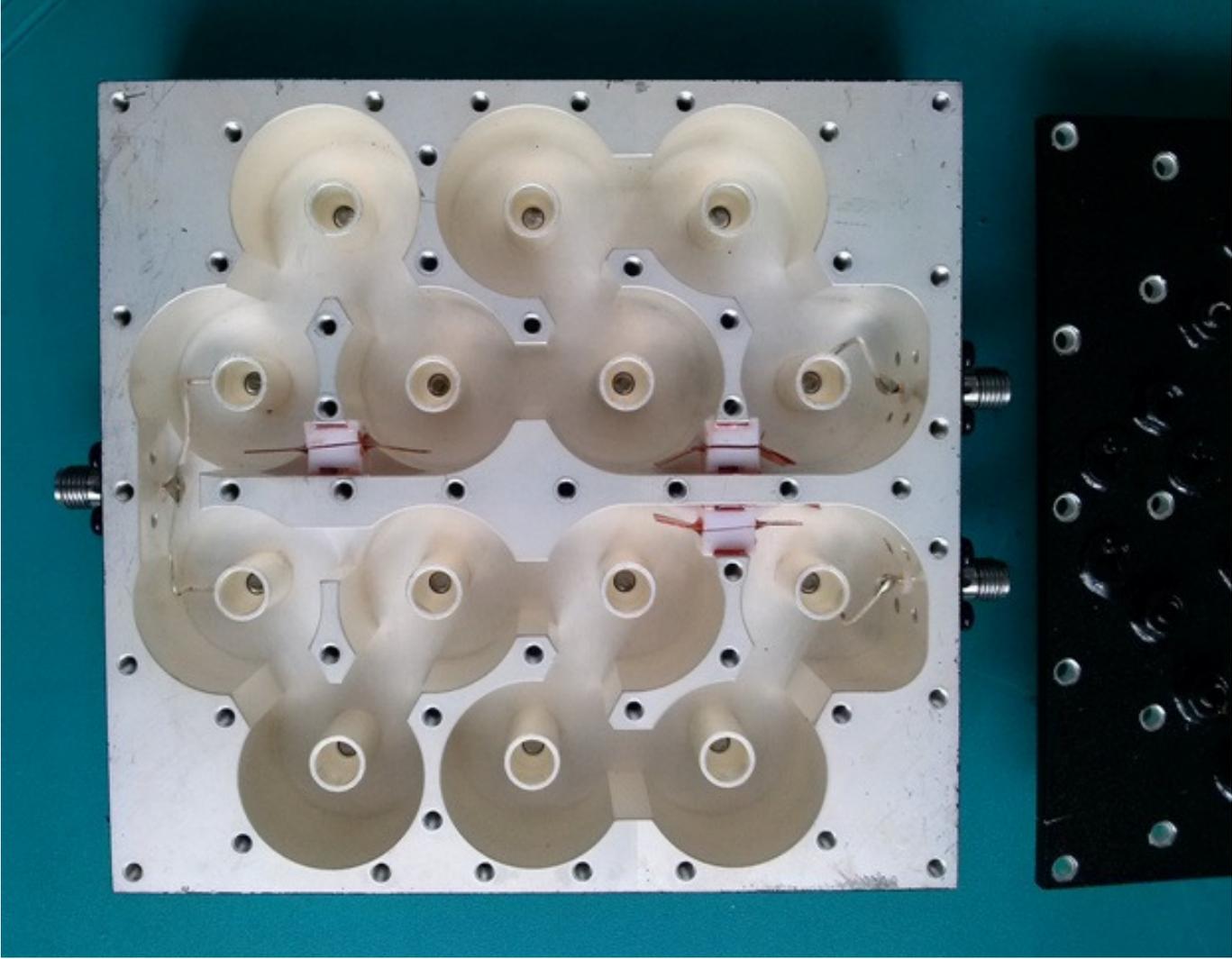
Startfrequenz: 3400.000000 MHz; Endfrequenz: 3649.999000 MHz; Schrittweite: 501.000 kHz

Messpunkte: 500; Zwischenzeit: 0 uSek

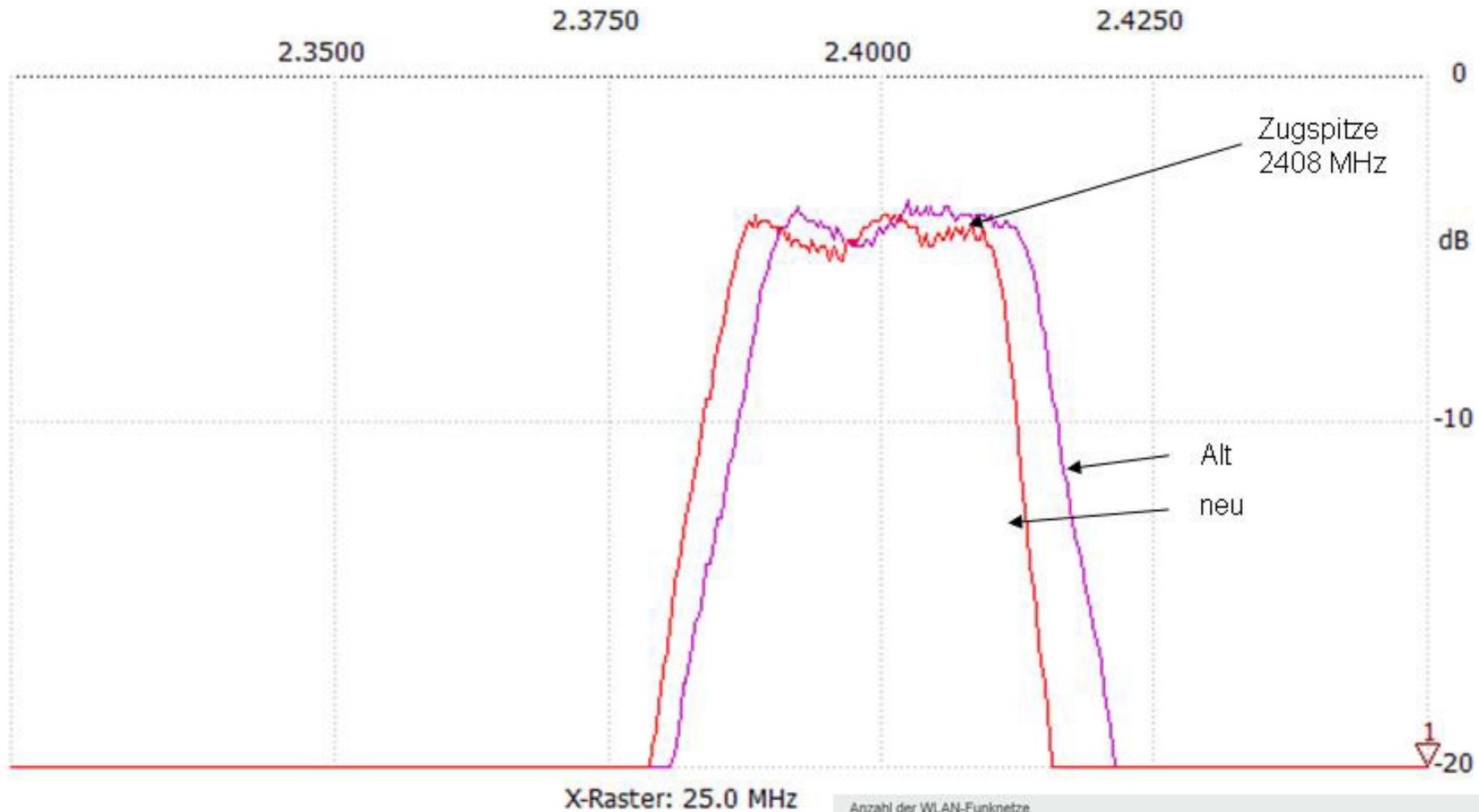


3.4GHz Filter
RMC-3475...

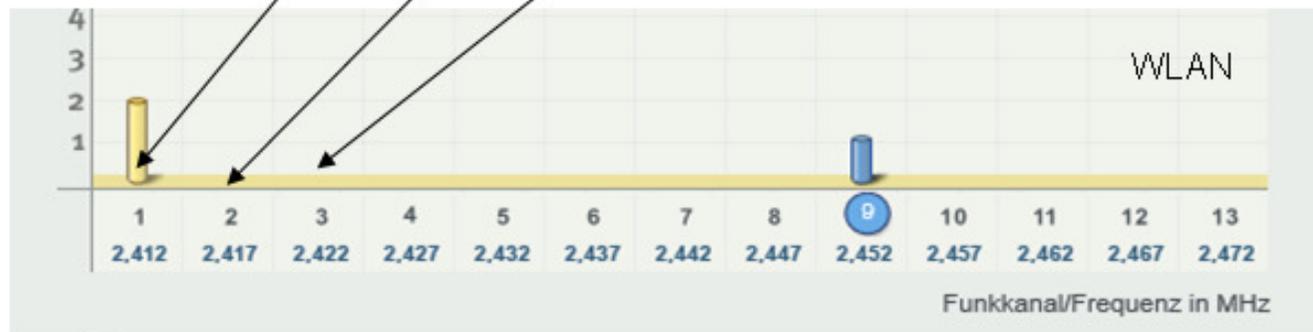
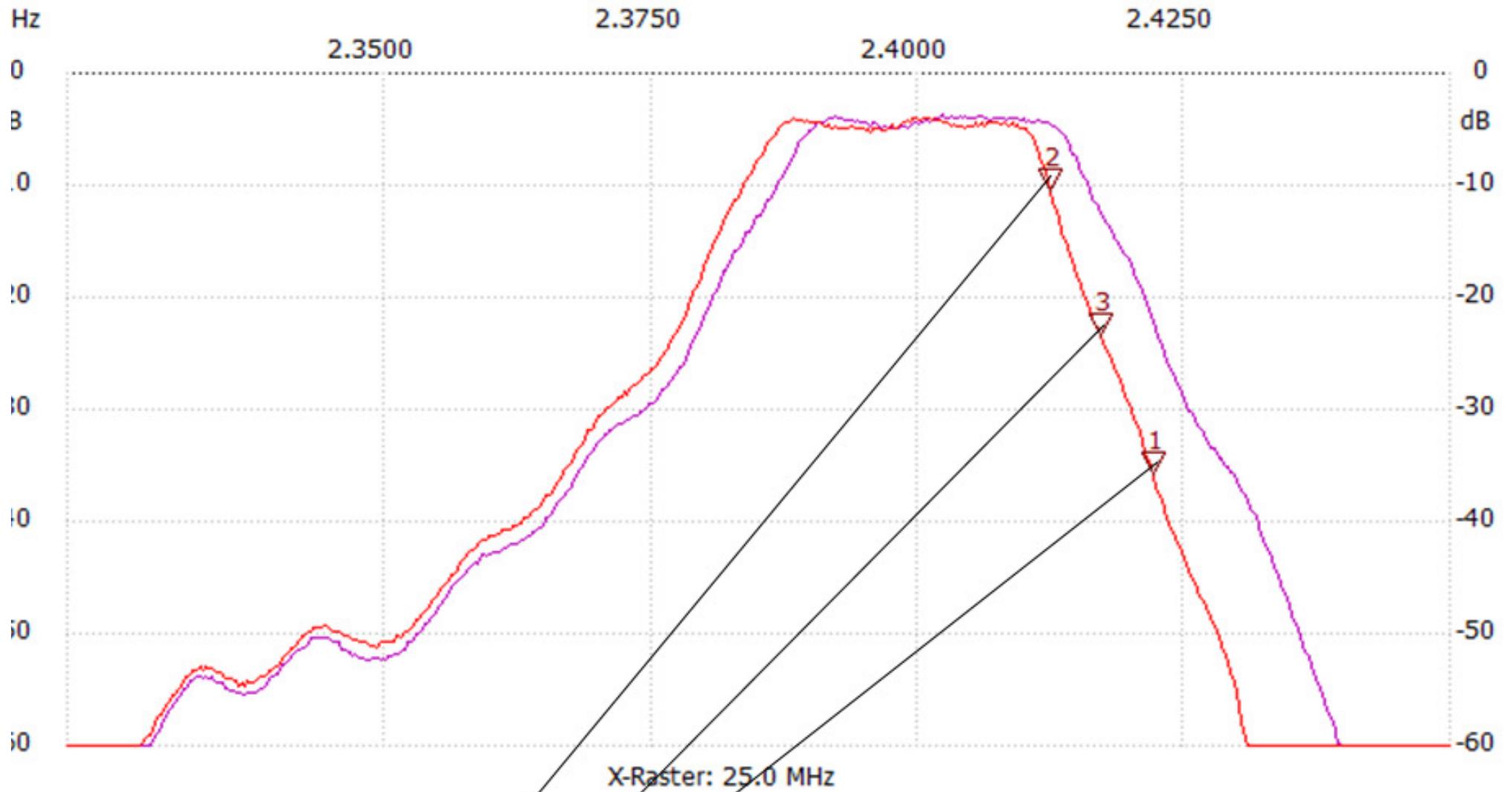




13 cm 5 Finger Filter Durchgangsdämpfung 1.7 dB



13 cm 5 Finger Filter Durchgangsdämpfung 1.7 dB



13 cm 3 Finger Filter Durchgangsdämpfung 1.2 dB

