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Beschreibung Abgleich

Der Tastkopf kann sowohl für den niederfrequenten (NF), als auch für den hochfrequenten Bereich (HF) abgeglichen werden.

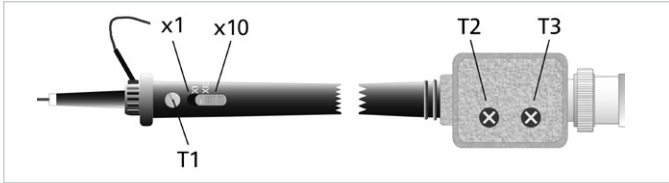
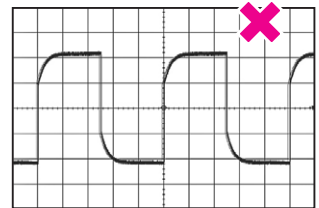
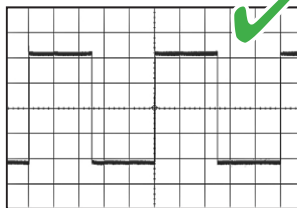
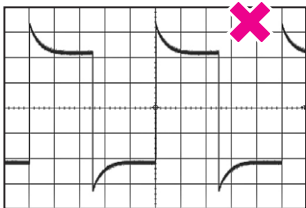


Abb. 3: Darstellung der Abgleichpunkte

NF-Abgleich

Verbinden Sie den Tastkopf mit einem 1kHz Rechtecksignal. Stellen Sie den NF-Trimmer T1 auf optimale Rechteckwiedergabe ein.

1 kHz Signal (NF)



HF-Abgleich

Am Tastkopf befinden sich zwei Trimmer für die HF-Kompensation. Bevor Sie den Abgleich starten stellen Sie sicher, dass sich die Trimmer in einer mittleren Position befinden. Benutzen Sie den Probe-Adjust-Ausgang am Oszilloskop oder einen Pulse-Generator mit einer Anstiegszeit von weniger als 1ns für den Abgleich bei voller Bandbreite. Stellen Sie am Oszilloskop eine Zeitbasis von 5ns/Div ein. Beginnen Sie den Abgleich mit HF-Trimmer T3 und drehen solange, bis die Spitze des einstellbaren Rechtecks den Endwert des Sprungs erreicht, ohne dabei zu überschwingen. Danach wiederholen Sie diese Prozedur mit HF-Trimmer T2. Allerdings kann hier ein Überschwingen während der ersten paar Nanosekunden auftreten. In Abb.4 sind die Kompensationszeiten der beiden Trimmer dargestellt.

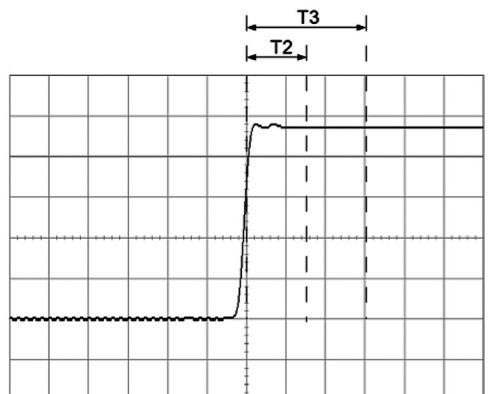


Abb. 4: HF-Abgleich

- **0** (instruments without measured measurement category): Other circuits that are not connected directly to the mains
- **Measurement CAT II:** Measurements on circuits electronically directly connected to the mains (e.g. household appliances, power tools, etc.)
- **Measurement CAT III:** Measurements in building installations (e.g. power distribution installations, power switches, firmly installed sockets, firmly installed engines etc.).
- **Measurement CAT IV:** Measurements at the source of the low voltage installations (e.g. meters)

Symbols

The following symbols may appear on the product or in this instruction manual:



Caution, risk of danger. Refer to manual.



Caution, risk of electric shock.

IEC Pollution Degrees

- Pollution Degree 1 - No Pollution or only dry, non conductive Pollution. The Pollution has no influence.
- Pollution Degree 2 - Only non-conductive Pollution. Occasionally, however, a temporary conductivity caused by condensation must be accepted.
- Pollution Degree 3 - Conductive Pollution occurs or dry, non-conductive Pollution occurs which becomes conductive due to condensation which is to be expected.

Safety Information

Read the following safety precautions to avoid personal injury and to prevent this product or products connected with it from fire or damage. This probe should be used by qualified personnel only.

Indoor use only:

This probe is intended for an indoor use only. Do not use this probe in wet or damp environments. Keep the surface clean and dry. Do not use the probe in explosive atmospheres.

Connecting the probe:

Before connecting the probe to a circuit under test make sure the probe is connected to a grounded measurement instrument.

Using the probe:

Do not use this probe with voltages exceeding the limits in the data sheet. This probe should not be used in circuits with measurement category II, III or IV. With increasing frequency the voltage on the probe tip should not be higher than illustrated in the derating curve.



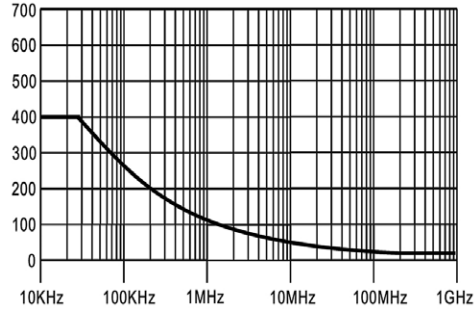
If the manufacturers specifications are not observed, this can result in electric shock, fire and/or serious personal injury, and in some cases, death.

The probe lead should not be connected to any other potential than earth ground.

5RGEKECVKQPU

1:1/10:1 Probe RT-ZP03		
Electrical specifications		
Attenuation ratio:	1:1	10 : 1
Bandwidth:	10 MHz (-3dB)VR	300 MHz (-3dB)VR
Rise time:	35 ns, typ	1.15 ns, typ
Input impedance:	/r++R(/r++R(
Input voltage:	max. 55 VRMS	max. 400 VRMS (600 V transient overvoltage)
Miscellaneous		
Temperature range:	0 - 40 °C	
Relative humidity:	max. 80%, without condensation	
Altitude:	max. 2000 m	
Polution degree:	2	
Cable length:	ca. 1.20 m	

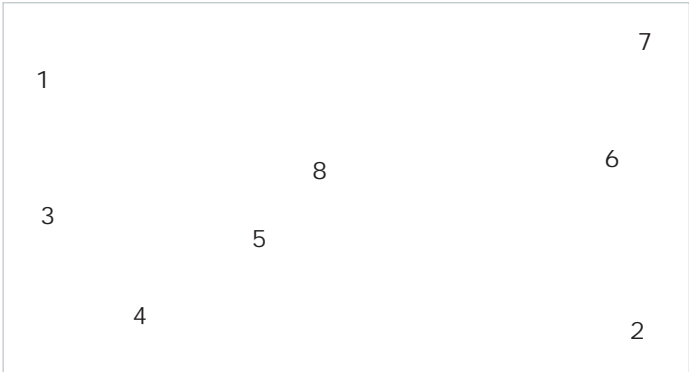
Derating



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Included in delivery



- 1 Probe
 - 2 Ground lead
 - 3 Retractable hook
 - 4 Adjustment tool
 - 5 Protection cap
 - 6 +6PVKHKECVKQPU
 - 7 IC Insulating cap
 - 8 Additional probe tip
-)TQWPENKR

(KIGTCVKPIEWTS

Adjustment

The probe can be adjusted for low (LF) and high frequency compensation (HF).

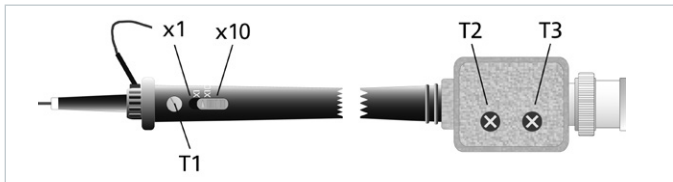
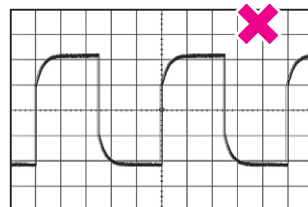
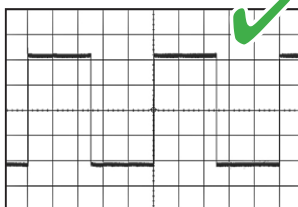
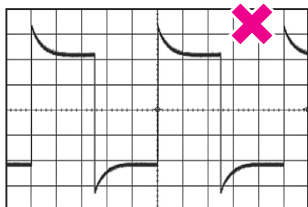


Fig. 3: Compensation trimmer

LF adjustment

Connect the probe to a 1 kHz square wave signal. Adjust LF compensation trimmer T1 for optimum square wave response.

1 kHz Signal (LF)



RF adjustment

The probe has two adjustable trimmers for RF compensation. Before starting the adjustment make sure the trimmers are in a center position. Use the probe adjust output on the oscilloscope or a pulse generator (less than 1ns rise time) for full bandwidth adjustment. Set the timebase of the oscilloscope to 5ns/div. Start the RF adjustment with trimmer T3 and turn it until the peak of the adjustable pulse response reaches the end level without any overshoot. Then, turn trimmer T2 in the same way, but accept a small overshoot for the first few nanoseconds. Fig. 4 shows the compensation times for both trimmers.

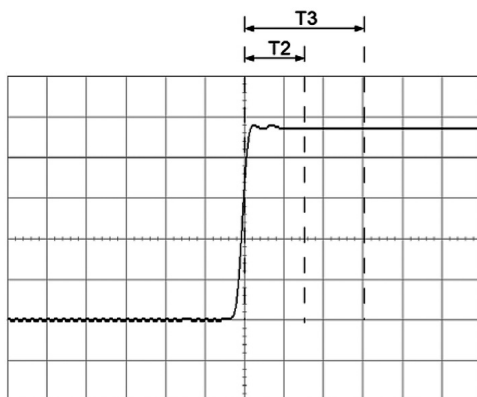


Fig. 4: HF adjustment

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