

ROHDE &amp; SCHWARZ

Make ideas real



# R&S®RT-ZISO ISOLATED PROBING SYSTEM

## The next ground breaking probe solution



The R&S®RT-ZISO isolated probing system sets new standards for electrical measurements with exceptional accuracy, sensitivity and speed. The innovative tool is vital to the development of next-generation power electronics, particularly those using wide bandgap materials such as SiC and GaN.

- ▶ 100 MHz to 1 GHz bandwidth (upgradeable)
- ▶ > 90 dB (> 30 000:1) CMRR at 1 GHz
- ▶  $\pm 3000$  V differential input and offset range
- ▶  $\pm 60$  kV CMRR range
- ▶  $\pm 10$  mV sensitive input range
- ▶ Dual connectivity with Rohde & Schwarz probe interface or SMA



For options, prices and more information, visit  
[www.rohde-schwarz.com/RT-ZISO](http://www.rohde-schwarz.com/RT-ZISO)

### Ideal for:

Switching converters with WBG devices

Double-pulse testing

Shunt measurements

Inverter design and motor drive analysis

### Key specifications

| Bandwidth                | 100 MHz                                                                                                                                                                              | 200 MHz | 350 MHz   | 500 MHz  | 1 GHz    |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|----------|----------|
| Rise time (10% to 90%)   | < 4 ns                                                                                                                                                                               | < 2 ns  | < 1.14 ns | < 800 ps | < 450 ps |
| Flatness                 | 3%                                                                                                                                                                                   |         |           |          |          |
| CMRR                     | DC: 145 dB; 1 MHz: 145 dB; 100 MHz: 110 dB; 200 MHz: 100 dB; 500 MHz: 100 dB; 1 GHz: 90 dB                                                                                           |         |           |          |          |
| Input voltage range      | $\pm 0.01$ V to $\pm 30$ V (with tips goes up to $\pm 3000$ V)                                                                                                                       |         |           |          |          |
| Offset range             | $\pm 30$ V                                                                                                                                                                           |         |           |          |          |
| Operating voltage window | each signal socket to ground: $\pm 60$ kV (CM range):<br>▶ in combination with R&S®ZISO-Zxxx:<br>1000 V (RMS) CAT III<br>▶ in combination with R&S®ZISO-Z301:<br>300 V (RMS) CAT III |         |           |          |          |
| Thermal drift            | $\pm 0.15\%/^{\circ}\text{C}$ (meas.)                                                                                                                                                |         |           |          |          |
| Warranty                 | 3 years                                                                                                                                                                              |         |           |          |          |

| Probe tips | MMCX | Square pin (SQPIN) | Wide square pin (WSQPIN) | Isolated browser |
|------------|------|--------------------|--------------------------|------------------|
|------------|------|--------------------|--------------------------|------------------|



|                   | R&S®ZISO-Z101 | R&S®ZISO-Z201          | R&S®ZISO-Z202          | R&S®ZISO-Z203          | R&S®ZISO-Z301         | R&S®ZISO-Z302           |
|-------------------|---------------|------------------------|------------------------|------------------------|-----------------------|-------------------------|
| Attenuation       | 1.5x          | 10x                    | 25x                    | 100x                   | 100x                  | 1000x                   |
| DC loading        | 50 $\Omega$   | 10 M $\Omega$   3.7 pF | 10 M $\Omega$   3.7 pF | 40 M $\Omega$   3.2 pF | 10 M $\Omega$   11 pF | 100 M $\Omega$   4.6 pF |
| Maximum input     | 8 V (RMS)     | 300 V (RMS)            | 750 V (RMS)            | 2500 V (RMS)           | 300 V (RMS)           | 3540 V (RMS)            |
| Temperature range | 0°C to +40°C  |                        |                        |                        |                       |                         |



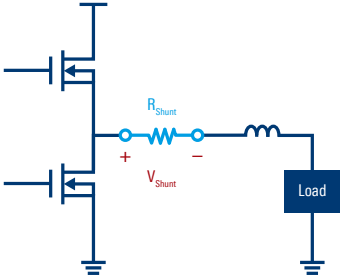
Safe attach probe tips

- ▶ Quick lever to secure and release the probe tips to easily switch tips without tedious set up
- ▶ Equipment has no exposed metal parts for safe usage and protection in line with CAT III 1000 V ratings



Flexible connection

- ▶ Direct connection to a Rohde&Schwarz oscilloscope with probe interface to seamlessly control probe settings on an instrument
- ▶ Supports connection to any oscilloscope with BNC or SMA interface; probe with a touchscreen display for more complex setting controls



High sensitivity with best thermal stability

- ▶ Every R&S®RT-ZISO probe has the frontend equivalent of the MXO oscilloscopes for best signal conditioning with high sensitivity and low noise
- ▶ Small signal detection best for small shunt current measurements and power ripple analysis

| Ordering information                  | Type          | Order No.    |
|---------------------------------------|---------------|--------------|
| Step 1: Base model                    |               |              |
| Isolated probing system <sup>1)</sup> | R&S®RT-ZISO   | 1804.5000K02 |
| Step 2: Choose your cable length      |               |              |
| 3 m optical fiber cable               | R&S®ZISO-B403 | 1804.5017.02 |
| 10 m optical fiber cable              | R&S®ZISO-B410 | 1804.5023.02 |
| Step 3: Choose your system bandwidth  |               |              |
| 100 MHz option                        | R&S®ZISO-B901 | 1804.5030.02 |
| 200 MHz option                        | R&S®ZISO-B902 | 1804.5046.02 |
| 350 MHz option                        | R&S®ZISO-B903 | 1804.5052.02 |
| 500 MHz option                        | R&S®ZISO-B905 | 1804.5069.02 |
| 1 GHz option                          | R&S®ZISO-B910 | 1804.5075.02 |

<sup>1)</sup> Included: carrying case, operating manual, probe stand, Rohde&Schwarz probe interface cable, SMA cable, SMA to BNC adapter and an external DC power supply for standalone operation

| Ordering information                                                    | Type          | Order No.    |
|-------------------------------------------------------------------------|---------------|--------------|
| Step 4: Choose your probe tips                                          |               |              |
| MMCX 1.5x 50 Ω, tip module, 8 V (RMS), ±45 V (peak), 1 kV (RMS) CAT III | R&S®ZISO-Z101 | 1803.4100.02 |
| MMCX 10x 10 MΩ, tip module, ±300 V (peak), 1 kV (RMS) CAT III           | R&S®ZISO-Z201 | 1803.4200.02 |
| SOPIN 25x 10 MΩ, tip module, ±750 V (peak), 1 kV (RMS) CAT III          | R&S®ZISO-Z202 | 1803.4300.02 |
| WSOPIN 100x 40 MΩ, tip module, ±3 kV (peak), 1 kV (RMS) CAT III         | R&S®ZISO-Z203 | 1803.4400.02 |
| Browser 10x 10 MΩ, tip module, ±300 V (peak), 300 V (RMS) CAT III       | R&S®ZISO-Z301 | 1803.4500.02 |
| Browser 100x 100 MΩ, tip module, ±3 kV (peak), 1 kV (RMS) CAT III       | R&S®ZISO-Z302 | 1803.4600.02 |

| Ordering information                              | Type           | Order No.    |
|---------------------------------------------------|----------------|--------------|
| Step 5: Choose your accessories                   |                |              |
| MMCX socket to dual square pin                    | R&S®RT-ZAMXSQ  | 1803.1647.02 |
| MMCX socket to UFL adapter                        | R&S®RT-ZAMXUFL | 1803.1676.02 |
| MMCX socket to solder-in cable HT                 | R&S®RT-ZAMXHTS | 1803.1660.02 |
| MMCX socket to solder-in pad flex HT              | R&S®RT-ZAMXPAD | 1803.1653.02 |
| When needed: Choose your future bandwidth upgrade |                |              |
| 200 MHz upgrade                                   | R&S®ZISO-B202  | 1804.5146.02 |
| 350 MHz upgrade                                   | R&S®ZISO-B203  | 1804.5152.02 |
| 500 MHz upgrade                                   | R&S®ZISO-B205  | 1804.5169.02 |
| 1 GHz upgrade                                     | R&S®ZISO-B210  | 1804.5175.02 |