

# Radio Communication Test Station MT8000A Layout

## System Configuration



- 1 Radio Communication Test Station MT8000A**  
All-in-one test platform supporting 5G RF measurements and protocol tests.
- 2 28 GHz RF Converter MA80001A/39 GHz RF Converter MA80002A**  
Convert frequency of RF signal output from MT8000A to 28 GHz and 39 GHz band.
- 3 RF Chamber MA8171A**  
For 5G RF measurements/protocol tests in OTA environment.
- 4 Position Controller MA8174A**  
Controls the Positioner MA8175A rotational angle inside the RF Chamber MA8171A.

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# Radio Communication Test Station MT8000A Specifications

## Peripherals

### 28 GHz RF Converter MA80001A

|                              |  |                                    |
|------------------------------|--|------------------------------------|
| RF Input/Output Connector    | Port 1, Port 2<br>Connector: K (m)<br>Impedance: 50Ω (nom.)<br>VSWR (when transmitted): ≤2.5 (23.75 GHz ≤ frequency ≤ 30 GHz)<br>VSWR (when received): ≤2.5 (23.45 GHz ≤ frequency ≤ 30.3 GHz)   |                                    |
| Transmission Characteristics | Frequency<br>Setting range: 24.25 GHz to 29.5 GHz (Center frequency setting range of measurement software)<br>Setting resolution: 1 Hz<br>Accuracy: Depend on accuracy of MT8000A reference oscillator<br>Level<br>Setting range: -90 to +5 dBm<br>Setting resolution: 0.1 dB<br>Accuracy: ±1.5 dB (+18°C to +28°C, after Cal, with CW)<br>Signal purity<br>Non-harmonic spurious<br>With CW, maximum output level<br>≤-40 dBc (non-harmonic on setting frequency ±500 MHz, non-harmonic, exclude setting frequency ±50 MHz)<br>≤-30 dBc (23.75 GHz ≤ non-harmonic frequency ≤ 30 GHz, exclude setting frequency within ±500 MHz and -4500 MHz)<br>Maximum modulation bandwidth: 1 GHz |                                    |
| Receiving Characteristics    | Frequency<br>Setting range: 24.25 GHz to 29.5 GHz (Center frequency setting range of measurement software)<br>Setting resolution: 1 Hz<br>Level<br>Maximum input level: +20 dBm, 0 VDC (with CW)<br>Setting range: -70 to +5 dBm<br>Setting resolution: 0.1 dB<br>Amplitude<br>Measurement resolution: 0.01 dB<br>Measurement accuracy: At the signal equal to the setting frequency and the setting level<br>After Cal, with CW, 24.25 GHz ≤ setting frequency ≤ 29.5 GHz, measurement bandwidth 100 MHz, +18°C to +28°C<br>±1.5 dB (-50 dBm ≤ setting level ≤ +5 dBm)<br>±2.5 dB (-70 dBm ≤ setting level < -50 dBm)   |                                    |
| IF Input/Output Connector    | Connect to MT8000A: B<br>Connector: N (f)<br>Impedance: 50Ω (nom.)   |                                    |
| External Control Connector   | Round multiway type connector  |                                    |
| DC Input Connector           | Voltage: 12 VDC<br>Current: ≤3 A   |                                    |
| Dimensions and Mass          | Dimensions: 92 (W) × 175 (H) × 260 (D) mm (excluding projections)<br>Mass: ≤6 kg   |                                    |
| Environmental Conditions     | Operating temperature range: +5°C to +40°C (without condensation)<br>Storage temperature range: -20°C to +71°C (without condensation)  |                                    |
| CE                           | EMC  | 2014/30/EU, EN61326-1, EN61000-3-2 |
|                              | LVD  | 2014/35/EU, EN61010-1              |
|                              | RoHS   | 2011/65/EU, EN50581                |