### R&K-CA500BW1-7272R

- **All Solid-State Amplifier**
- **Frequency Range**: 500MHz ± 0.5MHz
- **Output Power (CW)**: 15kW (min.) @2dB Comp.

**APPLICATION**
- Accelerator

**SPECIFICATIONS @ ±25°C**

- **Frequency Range**: 500MHz ± 0.5MHz
- **Small Signal Gain**: +72.0dB (min.) @Po=15kW
- **Gain Flatness**: ±0.5dB (max.) @Po=15kW
- **Output Power (CW)**: 15kW (min.) @2dB Comp.
- **Operation Mode**: Class AB
- **RF Stability**: Amplitude: ±0.1%
- **Harmonics**: ≤-30.0dBc (max.) @Po=15kW
- **Spurious**: ≤-70.0dBc (max.) @Po=15kW
- **Impedance**: 50Ω
- **Input Return Loss**: 14.0dB (min.) / VSWR : 1.5 (max.)
- **Output Return Loss**: 10.0dB (min.) / VSWR : 2.0 (max.)
- **Maximum RF Input Power**: ≤0.5dBm
- **AC Supply Input**: AC200V±15%/1φ, 50/60Hz, 38kVA
- **Operating Temperature**: -15°C to +35°C
- **Storage Temperature**: -25°C to +70°C
- **Connectors**: RF-IN : N-FEMALE @FRONT PANEL
  RF-OUT : 3-1/8"EIA Flange @TOP BOARD
- **Size**: (W)560mm×(D)1000mm×(H)2010mm
- **Weight**: 600kg (typ.)
- **Cooling**: Water Cooling
- **Protection Circuits**: Over Temperature Protection, Power Supply Voltage Protection, Input Over Power Protection(@ +0.5dBm), Output Over Power Protection(@16kW), Output Over Reflected Power Protection(@9kW)
- **Remote Interface**: Ethernet
- **Other Functions**: R&K Multi Monitoring System With Output Circulator (each final device)

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TYPICAL PERFORMANCE (Temp @+25°C)

Gain Flatness

Input / Output Return Loss

Harmonics

Output Power Linearity

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**RF Stability @1sec.**

- **Amplitude (V) vs Time (1sec, full scale, 20000point/50μs)**
  - Frequency: 500MHz
  - Std(Amp.)/Mean(Amp.) in % = 0.0168  Should be < 0.1

- **Phase (deg.) vs Time (1sec, full scale, 20000point/50μs)**
  - Frequency: 500MHz
  - Std(Phase) in degree = 0.0216  Should be < 0.1
TYPICAL PERFORMANCE (Temp @+25°C)

Long-Term Amplitude Stability

Frequency : 500MHz  
Output Power: 15kW

Long-Term Phase Stability

Frequency : 500MHz  
Output Power: 15kW

Short-Term Amplitude Stability [Packet(1sec.) Sampling every 10minutes]

Frequency : 500MHz  
Output Power: 15kW

Short-Term Phase Stability [Packet(1sec.) Sampling every 10minutes]

Frequency : 500MHz  
Output Power: 15kW

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