

R&K-CA3900BW3-5560R-SL



- All Solid-State Amplifier
- 2 SSAs Contained in One System Rack
- Frequency Range: 3900MHz \pm 1.5MHz
- Output Power : 900W (min.) @1dB Comp. per SSA
- CW, 100% DUTY CAPABILITY
- VERY HIGH RELIABILITY

SPECIFICATIONS @ +25°C

Frequency Range	: 3900MHz \pm 1.5MHz
Small Signal Gain	: +55dB (min.)
Output Power	SSA-1 : 900W (min.) @1dB Comp. SSA-2 : 900W (min.) @1dB Comp.
Operation Mode	: Class-AB
Delay	: 300ns (max.)
Phase Flatness	: 10deg (max.) @Po=90W~900W
Harmonics	: -30.0dBc (max.) @Po=900W
Spurious	: -70.0dBc (max.) @Po=900W
Cross Talk	: -75.0dBc (max.) @3.9GHz \pm 100kHz
Efficiency	: 25% (min.) @Po=900W @2SSAs
Impedance	: 50 Ω
Maximum RF Input Power	: +5.0dBm
AC Supply Input	: AC480V \pm 5% / 3 ϕ , 4wire, 60Hz AC120V \pm 5% / 1 ϕ , 2wire, 60Hz
Consumption Power	: 9kVA (max.)
Connectors	: RF - IN N - FEMALE RF - OUT WR284
Size	: (W)761mm \times (D)1269mm \times (H)1688.5mm (Excluding Projection)
Weight	: 635kg (max.)
Cooling	: Water Cooling
Water Input Pressure	: 40-75psi (nominal), 150psi (max.)
Water Temperature	: +30°C \pm 0.5°C
Water Flow Rate	: 4gpm (min.)
Protection Circuits	: Over Temperature Protection Power Supply Voltage Protection Output Over Power Protection
Other Function	: With Output Circulator (each final device)

FEATURES

1) DOUBLE SHIELDED RACK CONSTRUCTION

Internal heat is water-cooled and discharged outside by self-contained heat exchanger. Double-layer housing provides high RF/EMI shielding performance.

2) WILKINSON RADIAL COMBINER

Single-stage power combining of output transistors protected by each respective ferrite circulator provides high reliability in long-term operation.

3) BROADCAST-TRANSMITTER-LEVEL REDUNDANCY

High redundancy design of RF transistors and power supplies provides fault-tolerant and sustainable system operation.

4) PASSIVE ANALOG PRE-DISTORTION

Very ideal AB-class linear power amplifier is realized by passive analog predistortion circuit despite poor linearity of GaN transistor.

5) MULTIPLE CPU CONTROLLER AND SENSORS

Multiple CPUs monitor a total of 123 points and save the status data to an internal SD memory card by use of Modbus protocol and through Ethernet.

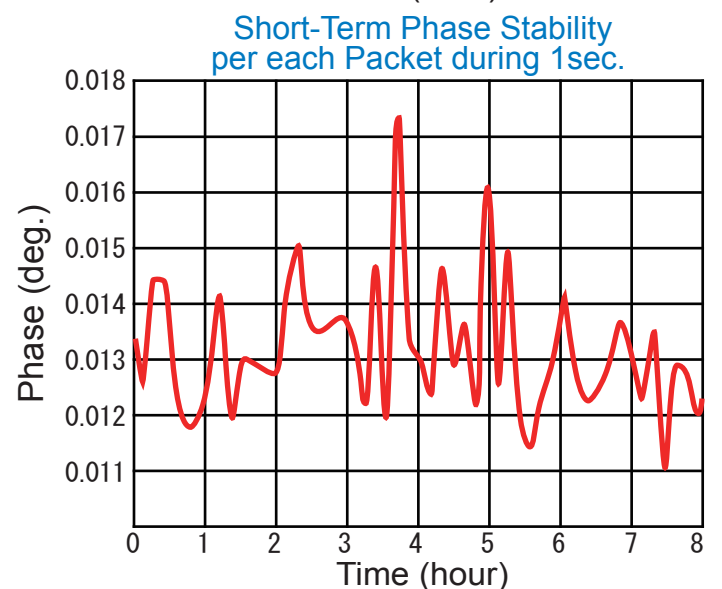
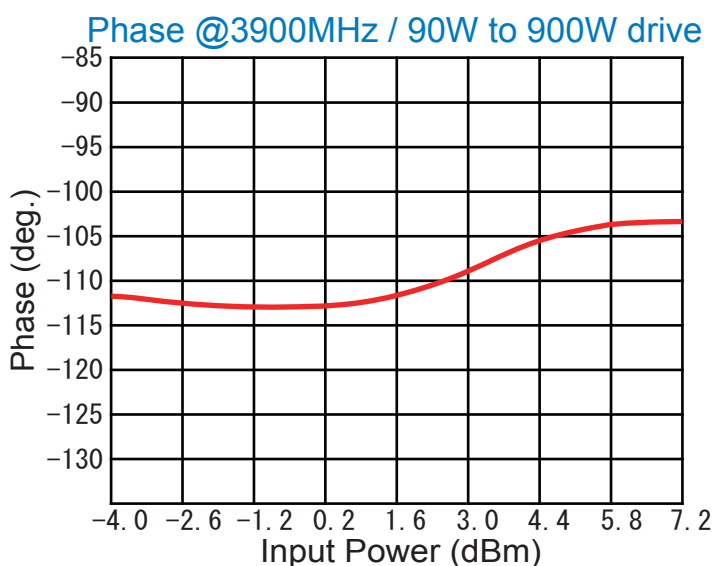
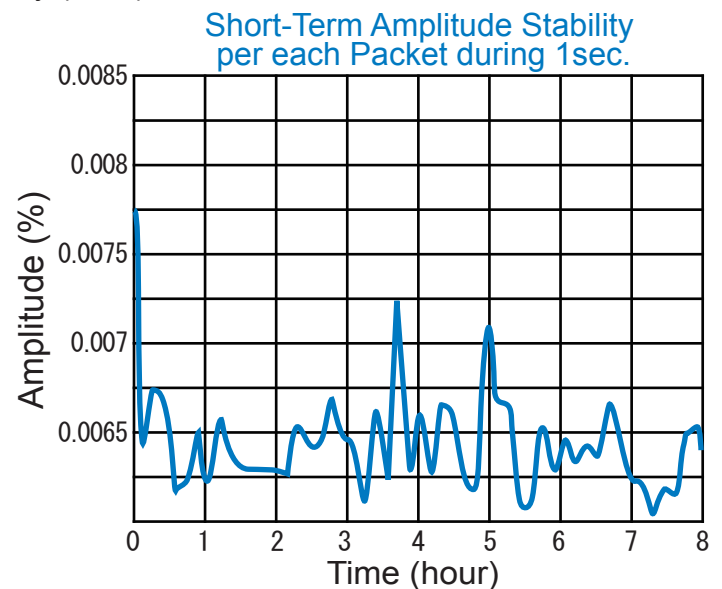
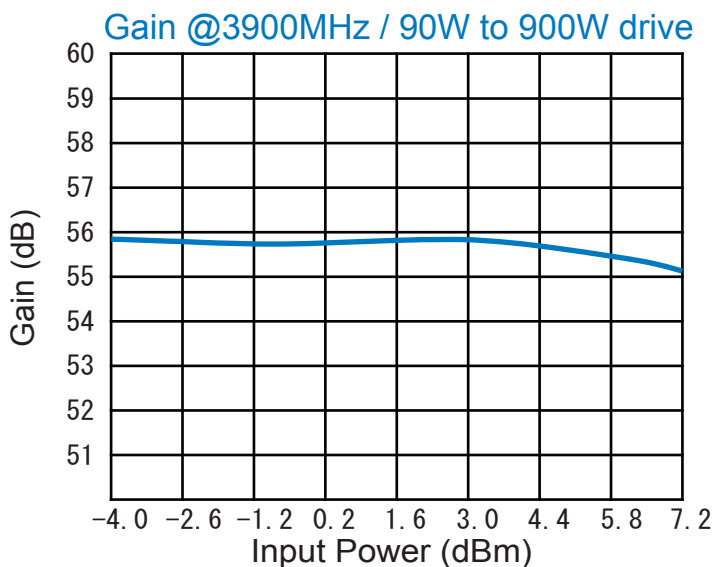
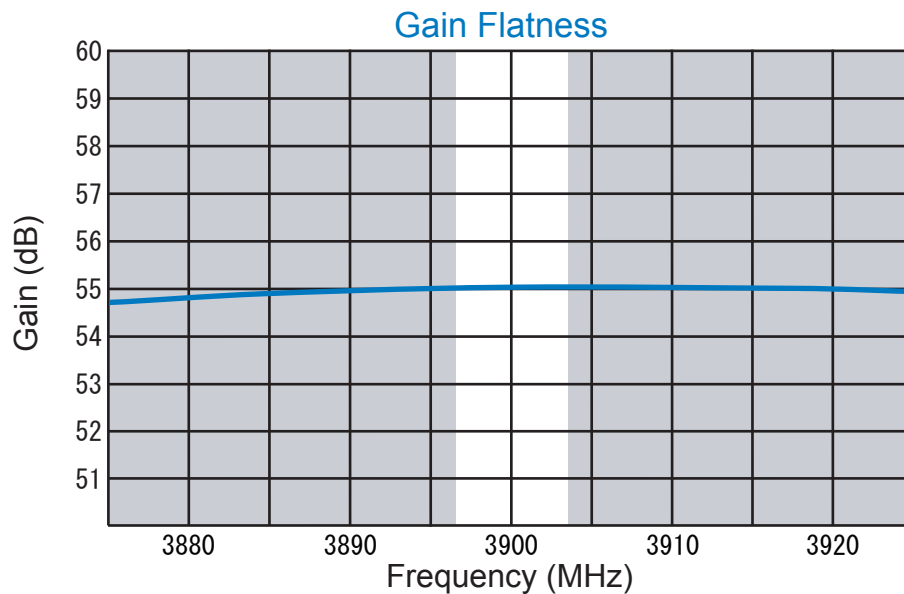
6) ADVANCED ANALOG RF POWER TECHNOLOGY

Short-term (1sec) phase stability in free-running operation is within 0.1deg and RF voltage level stability is 0.1%.

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R&K Company Limited

721-1 Maeda, Fuji-City, Shizuoka-Pref. 416-8577 Japan
Tel : +81-545-31-2600 E-mail : info@rkco.jp
Fax : +81-545-31-1600 URL : <http://rk-microwave.com>

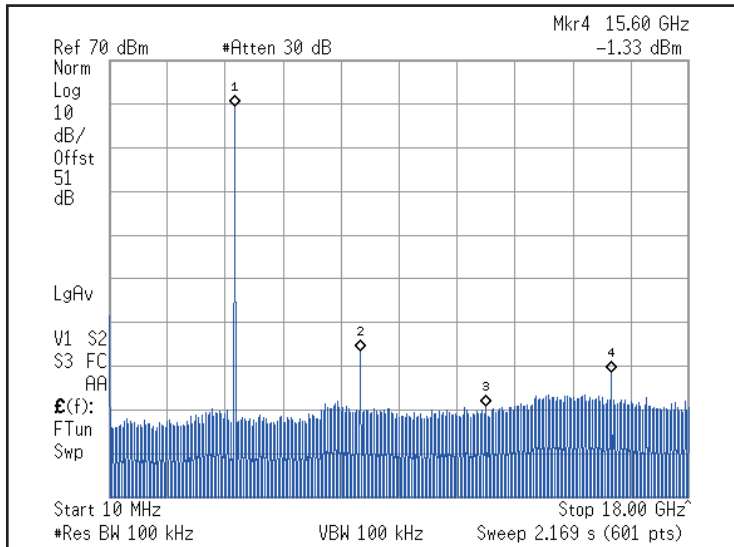


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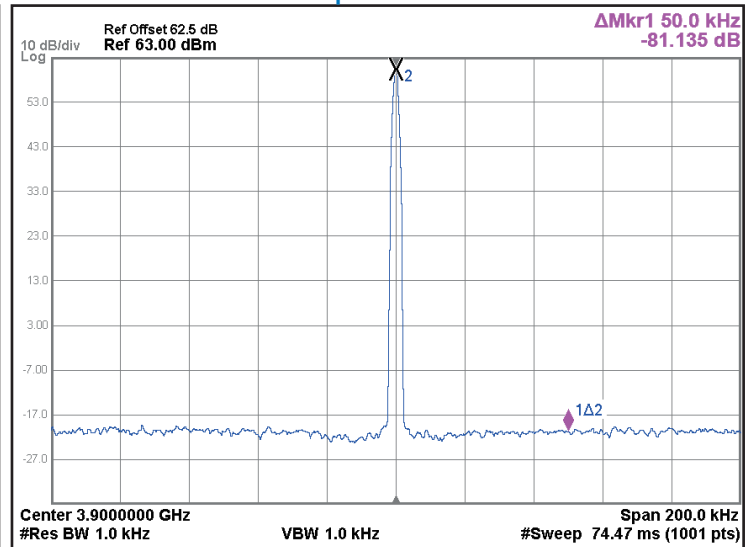
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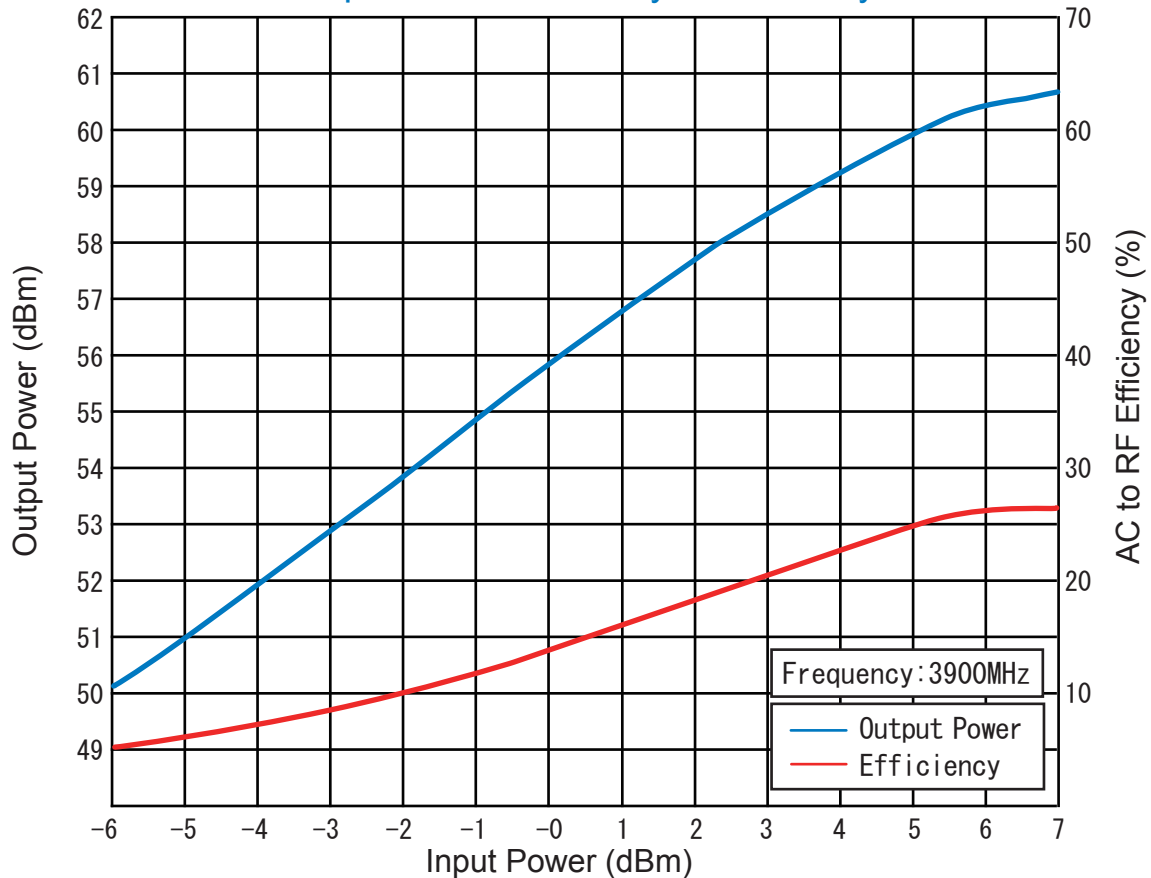
Harmonics



Spurious



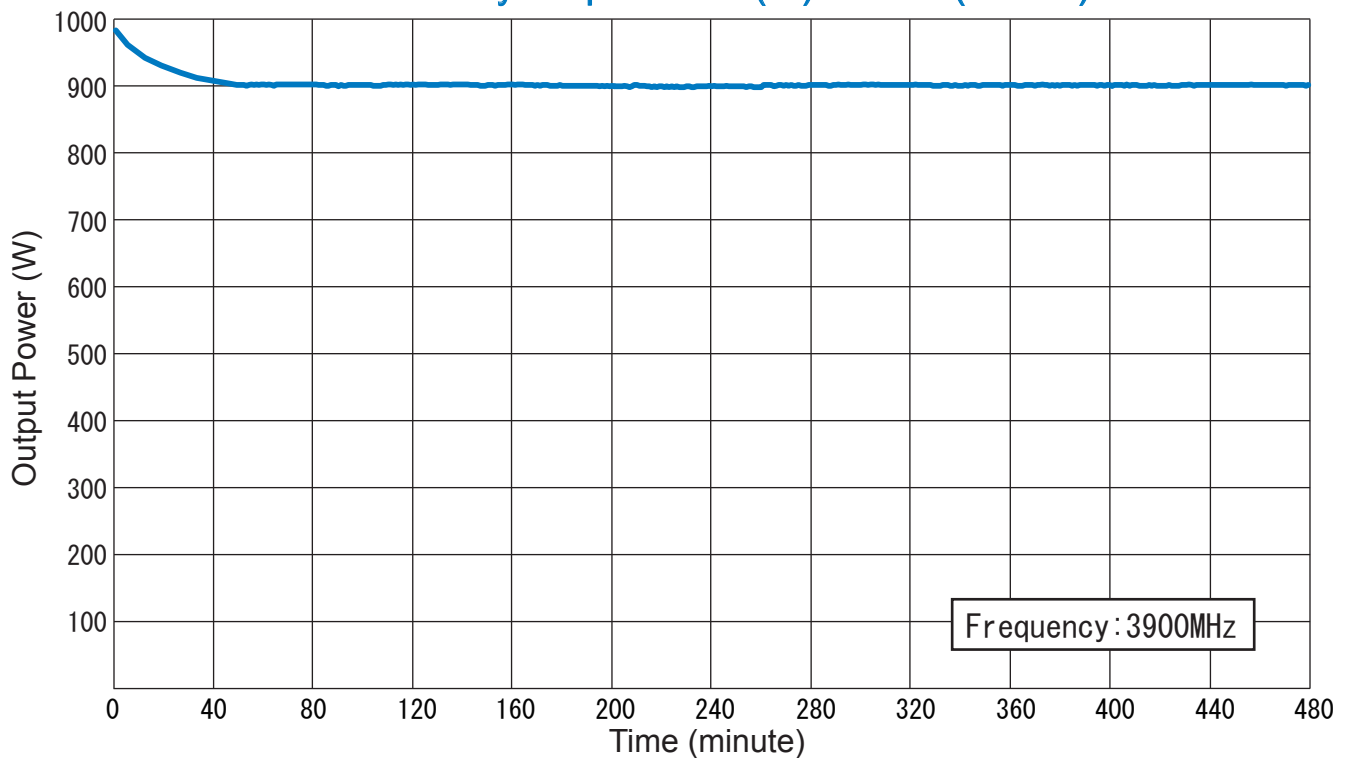
Output Power Linearity & Efficiency



TYPICAL PERFORMANCE (Temp @+25°C)

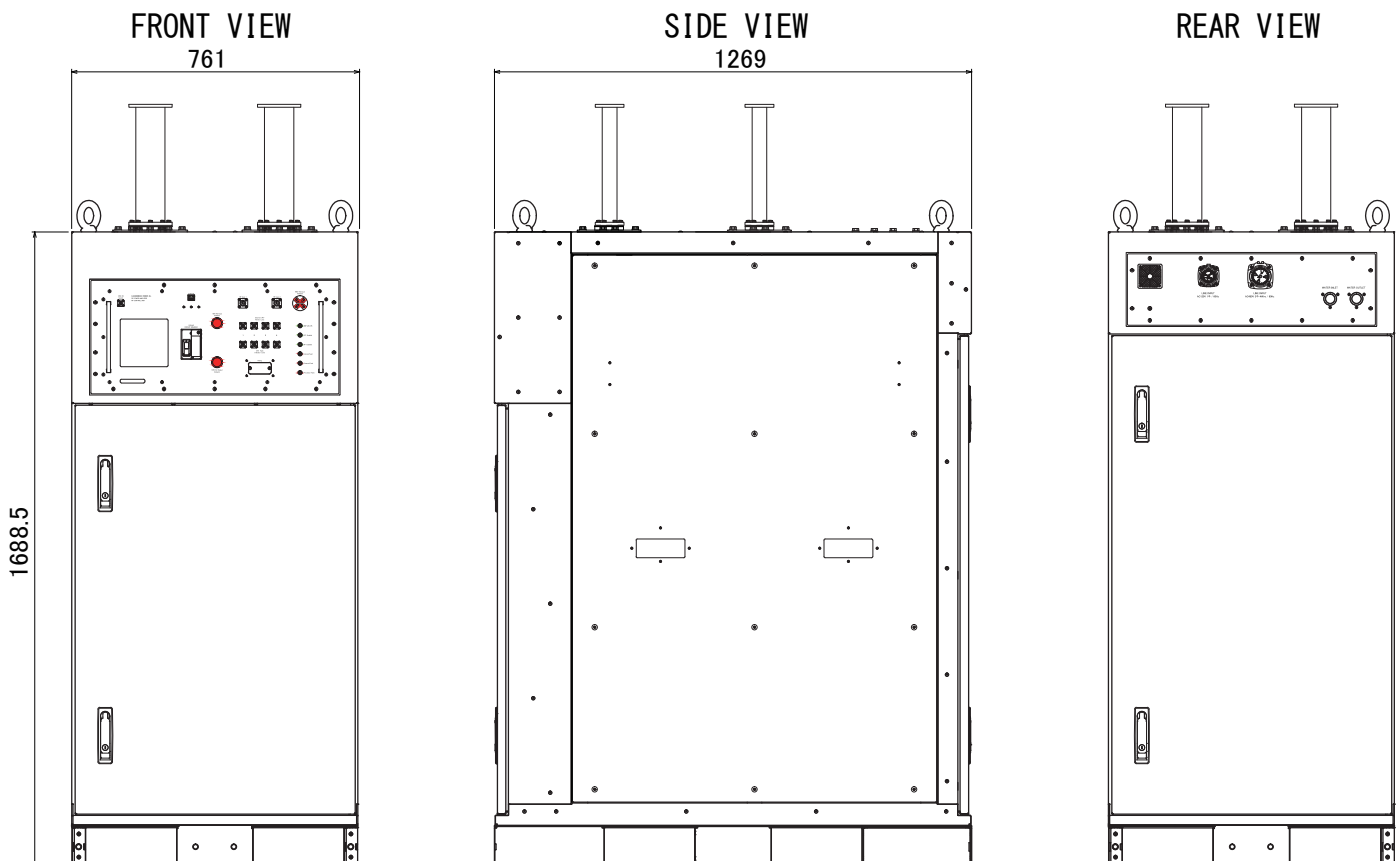
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RF Stability Output Power(W) vs Time(minute)



OUTLINE DRAWING

※IN MILLIMETERS



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