**Small Signal Amplifier**

**Model Name:** R&K-AA190-0S

**Specifications:**
- **Broadband Frequency:** 50MHz ~ 3000MHz
- **Output Power:** +35dBm @2GHz
- **Small Signal Gain:** +17dB (typ.) @2GHz
- **Low Cost:**
- **RoHS Compliance**

**Frequency Range:**
- **Gain Flatness:**
- **Output Power @1dB Comp.:** +35dBm (min.) @2GHz
- **Output I.C.P.:** +45dBm (typ.) @2GHz
- **Noise Figure:** 10.0dB (max.)
- **Impedance:** 50Ω
- **Input Return Loss:** 10dB (typ.)
- **Output Return Loss:** 6dB (typ.)
- **DC Supply Input:** +12V ± 0.5V
- **1600mA (max.)**
- **Maximum RF Input Power:** +23dBm
- **Operating Temperature:** -20°C to +60°C
- **Storage Temperature:** -20°C to +80°C
- **Connectors (Standard)**: SMA-FEMALE
- **Connectors (Option)**: BNC-FEMALE, N-FEMALE
- **Weight (AA190-0S):** 165g (typ.)

**How to Order:**
- **Model Name:** R&K-AA190-0S
  - S = SMA-FEMALE
  - B = BNC-FEMALE (BNC Operational to 1GHz)
  - N = N-FEMALE
  - 0 = Module
  - 1 = With Heatsink & Fan

**Typical Performance (Temp @+25°C):**
- **Small Signal Gain & Gain Flatness**
- **Input & Output Return Loss**
- **Noise Figure**
- **Output Power 1dB & 3dB Comp., Output 3rd Order Intercept Point**
- **Pulse Characteristics**
  - Pulse Width 100μS / Duty 10%
  - Pout = +30dBm / Freq. = 2GHz

**SCHEMATIC:**

R&K reserves the right to make changes in the specifications of or discontinue products at any time without notice. R&K products shall not be used for or in connection with equipment that requires an extremely high level of reliability and safety such as aerospace uses or medical life support equipment. Further, the export of R&K products from Japan may be subject to an export license by the government of Japan, based on Japan’s “Foreign Exchange and Foreign Trade Law.”
# Revision history

<table>
<thead>
<tr>
<th>Date</th>
<th>Version Number</th>
<th>Detailed contents of the change.</th>
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<tbody>
<tr>
<td>2020/04/01</td>
<td>2.0</td>
<td>Outline drawing change.</td>
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<td>Specifications change.</td>
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<td>- Output I.C.P. : +44dBm (typ.) @2GHz ⇒ +45dBm (typ.) @2GHz</td>
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<td>- Noise Figure : 9.0dB (max.) ⇒ 10.0dB (max.)</td>
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<td>- DC Supply Input : +12V ±0.5V, 1.4A (max.) ⇒ +12V ±0.5V, 1600mA (max.)</td>
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<td>- Maximum RF Input Power : +25dBm ⇒ +23dBm</td>
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<td>- Weight : 170g (typ.) ⇒ 165g (typ.)</td>
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