SMALL SIGNAL AMPLIFIER

Ver.2.0 : 2020.04.01

R&K-AA190-0S

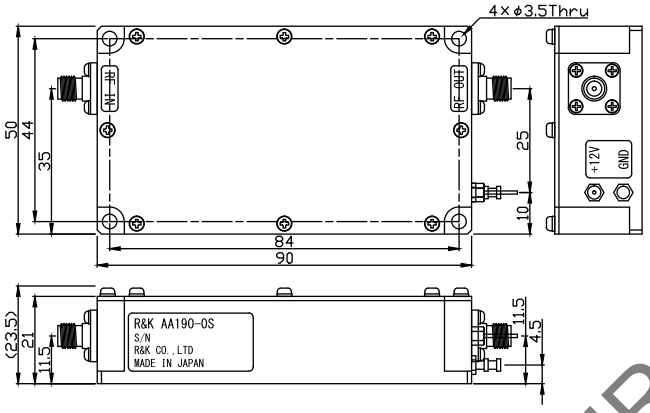
- Broadband Frequency :50MHz～3000MHz
- Output Power :＋35dBm @2GHz
- Small Signal Gain :＋17dB(typ.) @2GHz
- Low Cost
- RoHS Compliance

SPECIFICATIONS

Frequency Range	: 50MHz ~ 3000MHz
Small Signal Gain	: ＋17dB (typ.) @2GHz
	: ＋15dB (min.)
Gain Flatness	: ±1.5dB (max.)
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 (@Base Plate Temp.)	: −20℃ to ＋60℃
Storage Temperature	: −20℃ to ＋80℃
Connectors (Standard)	: SMA-FEMALE
(Option)	: BNC-FEMALE
	: N-FEMALE
Weight (AA190-0S)	: 165g (typ.)

OUTLINE DRAWING

※IN MILLIMETERS



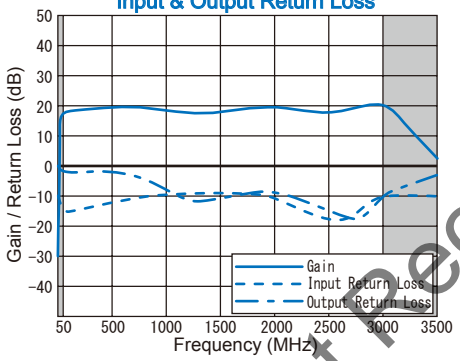
HOW TO ORDER

Model Name
R&K-AA190-0S

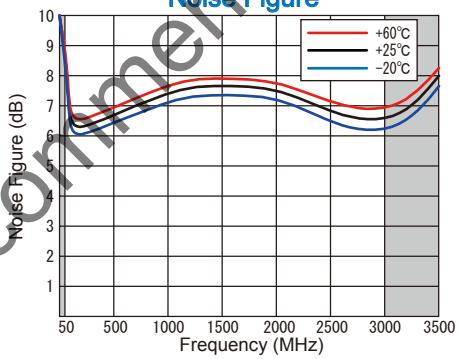
- S = SMA-FEMALE
- B = BNC-FEMALE (BNC Operational to 1GHz)
- N = N-FEMALE
- 0 = Module
- 1 = With Heatsink & Fan

TYPICAL PERFORMANCE (Temp @+25℃)

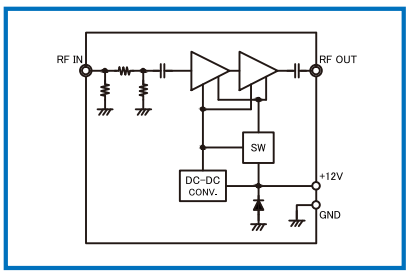
Small Signal Gain & Gain Flatness Input & Output Return Loss



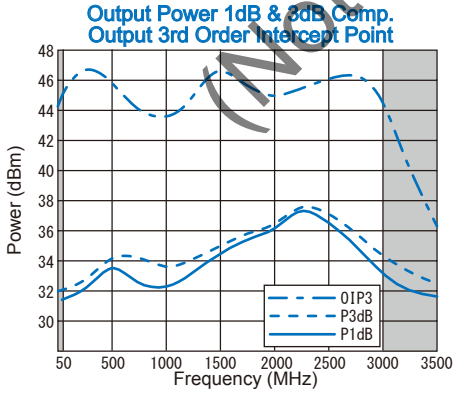
Noise Figure



SCHEMATIC

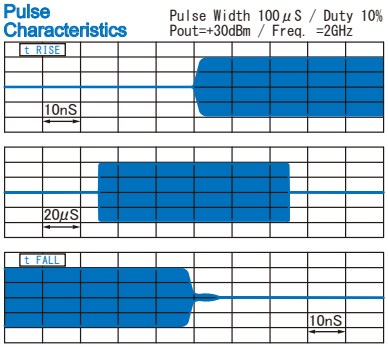


Output Power 1dB & 3dB Comp. Output 3rd Order Intercept Point

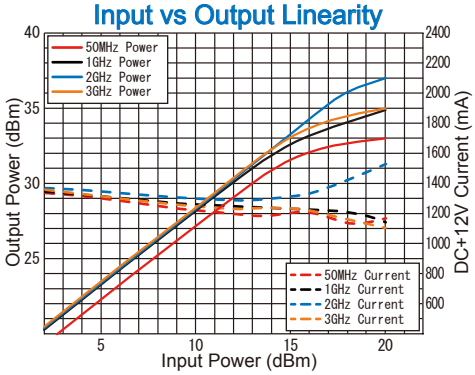


Pulse Characteristics

Pulse Width 100μS / Duty 10%
Pout=+30dBm / Freq. =2GHz



Input vs Output Linearity



NRND (Not Recommended for New Design)

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".

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R&K-AA190-0S

■Revision history

Date	Version Number	Detailed contents of the change.
2008/11/25	1.0	First edition issued.
2020/04/01	2.0	Outline drawing change. Specifications change. - Output I.C.P. : +44dBm (typ.) @2GHz ⇒ +45dBm (typ.) @2GHz - Noise Figure : 9.0dB (max.) ⇒ 10.0dB (max.) - DC Supply Input : +12V ±0.5V, 1.4A (max.) ⇒ +12V ±0.5V, 1600mA (max.) - Maximum RF Input Power : +25dBm ⇒ +23dBm - Weight : 170g (typ.) ⇒ 165g (typ.)

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