S-band and X-band Radar Components

Altum RF offers a wide range of components for S– and X–band radar applications. We are designing custom components, along with catalog products. We continue to expand our product portfolio, so if you do not see a component you need, please inquire as it may be in development.

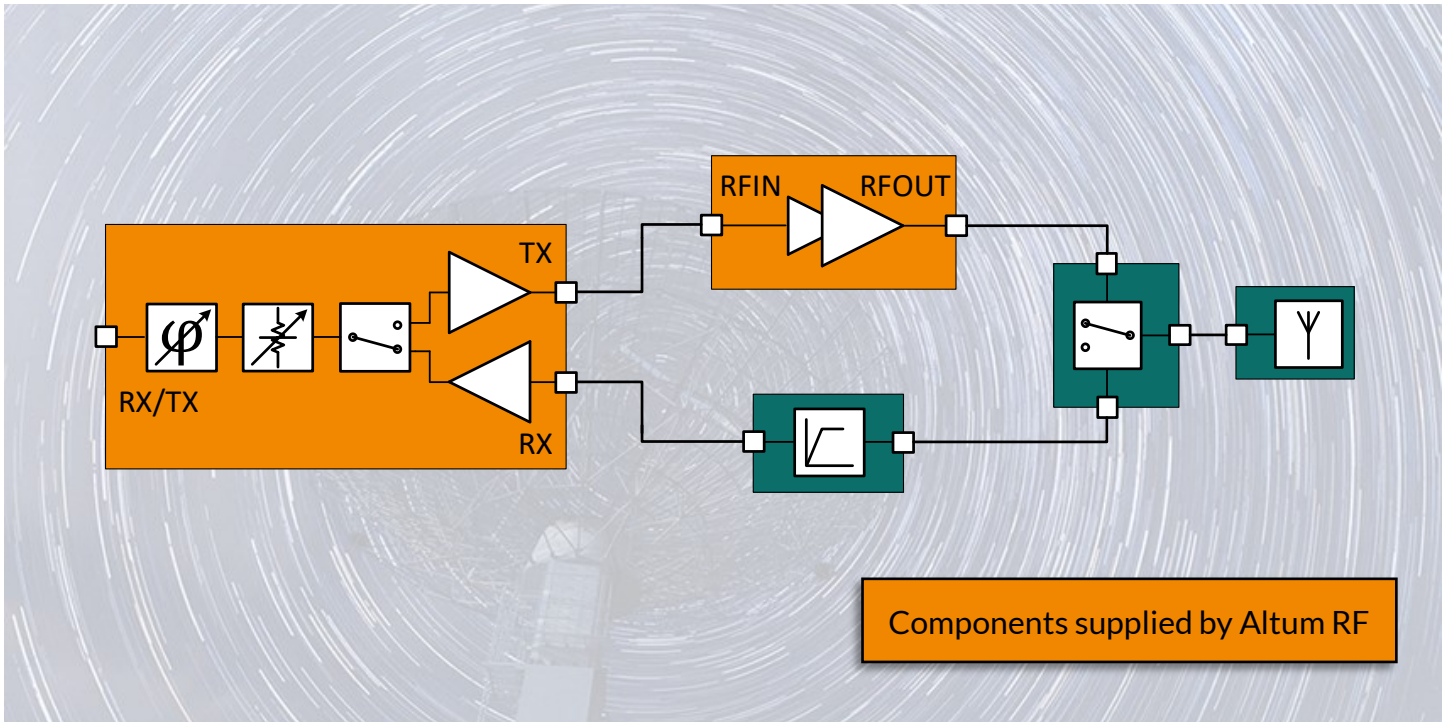
Product Types:

- Amplifiers
- Core chips
- Phase shifters

Features and Benefits:

- Qualified and proven solutions
- Robust supply from one of the world's leading GaAs foundries
- RF tested
- Derivative product possibilities
- EU product/export (non-ITAR)

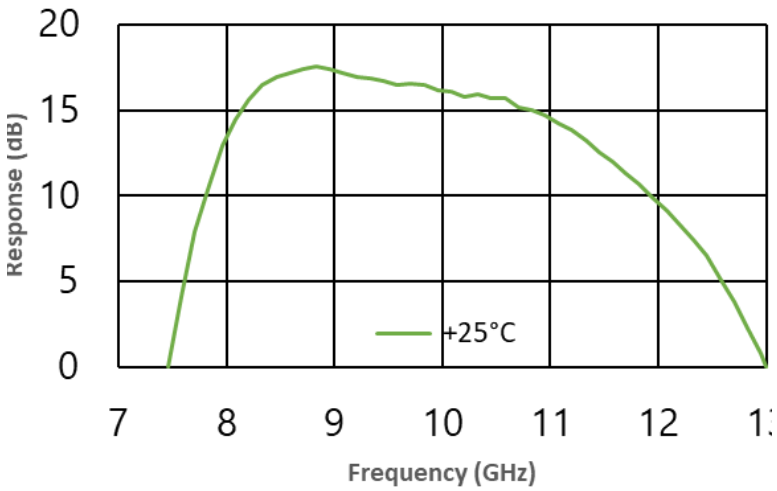
Typical Schematic Diagram of Radar Front-end



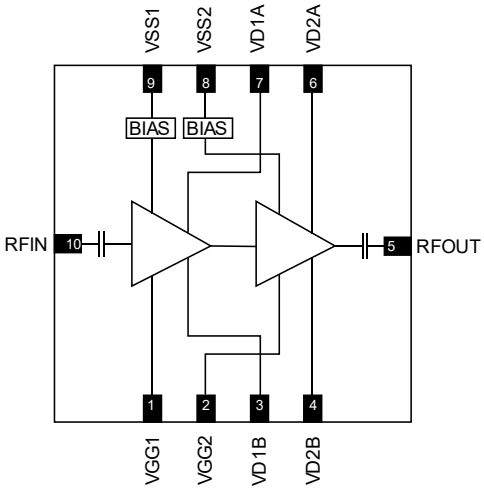
X-band 5 W, 10 W, 15 W Power Amplifier

Name	Frequency	Gain	P_{1dB}	Efficiency	Package
ARF1001C7	8.0-11.5 GHz	24 dB	37 dBm (5 W)	40 %	7x7 Ceramic
ARF1002C7	7.5-11.5 GHz	24 dB	40 dBm (10 W)	40 %	7x7 Ceramic
ARF1003C7	8.5-10.5 GHz	19 dB	42 dBm (15 W)	40 %	7x7 Ceramic

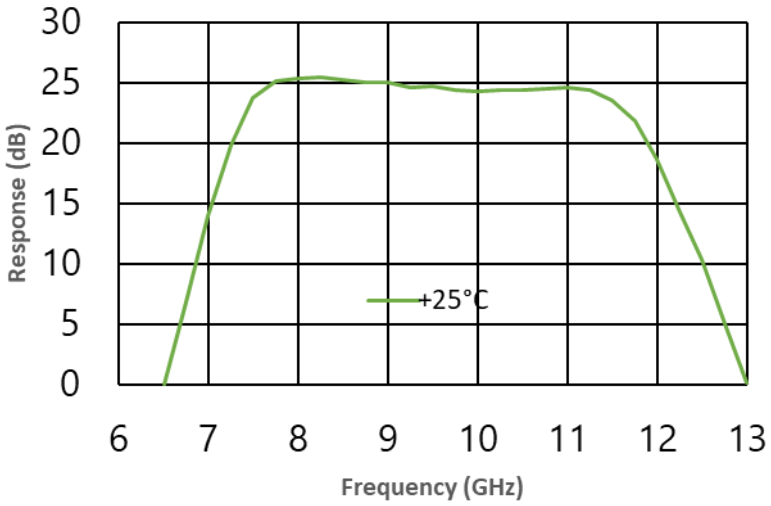
Measured GAIN - ARF 1003C7



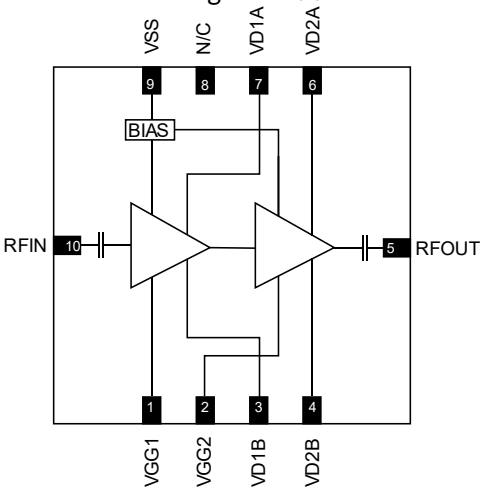
Pinning ARF1003



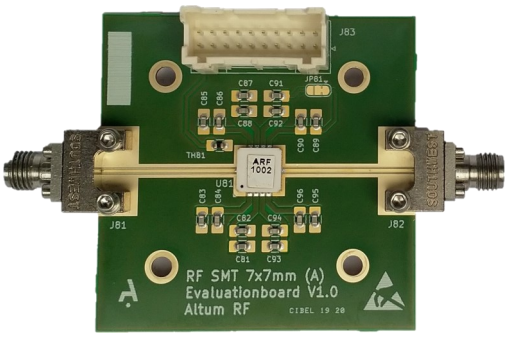
Measured GAIN - ARF 1002C7



Pinning ARF1002

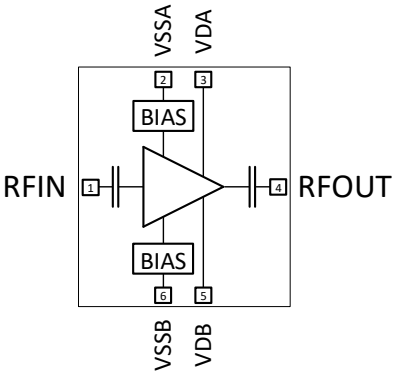


Evaluation Board ARF1002C7



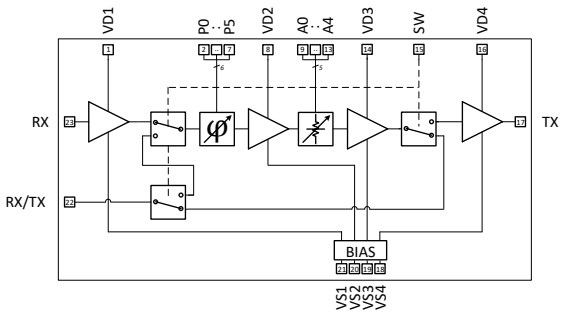
S, X-band Components

Amplifiers	Frequency	Gain	P1dB	Efficiency
ARF1004C7	2.8—3.7 GHz	19 dB	38.5 dBm (7 W)	42 %
ARF1005	3.0—3.6 GHz	17 dB	43 dBm (20 W)	40 %

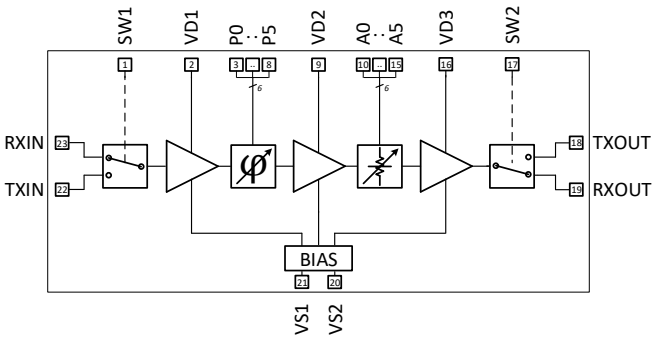


Schematic S-band Amplifier

Core Chip	Frequency	Rx Gain	Rx NF	Tx Gain	Tx P1dB	Phase Shifter	Attenuator
ARF9000	8.0-12.0 GHz	20 dB	5 dB	23 dB	23 dBm	354.4° / 6 bits	28 dB / 5 bits
ARF9001	2.5—4.0 GHz	30 dB	2.5 dB	31 dB	20 dBm	354.4° / 6 bits	28 dB / 6 bits

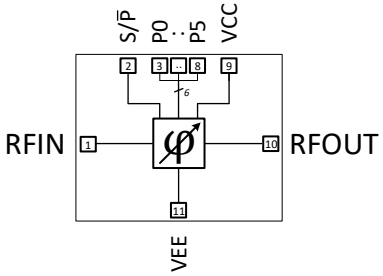


Schematic ARF9000



Schematic ARF9001

Phase Shifter	Frequency	Range	# Bits	LSB	Tx P1dB	Gain Variation
ARF2101	8.0-12.0 GHz	354.4^0	6	5.625°	25 dBm	+/- 1.4 dB
ARF2103	2.5—4.0 GHz	354.4^0	6	5.625°	23 dBm	+/- 1.4 dB



Schematic ARF2101/3

ALTUM RF

About Altum RF

Inspired by leading experts in the RF/microwave industry, Altum RF transforms how partnerships work to develop high-performance products with a focus on superior technical support and customer service. Our engineers use decades of modeling expertise and system applications knowledge to define the right products for the most challenging requirements.

With the help of our exceptional global partners, we can significantly shorten the product development cycles by managing the entire supply chain from design to packaging, testing and qualification. For development of GaAs, GaN, SiGe or RF CMOS components, discover Altum RF as your next RF semiconductor partner.

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