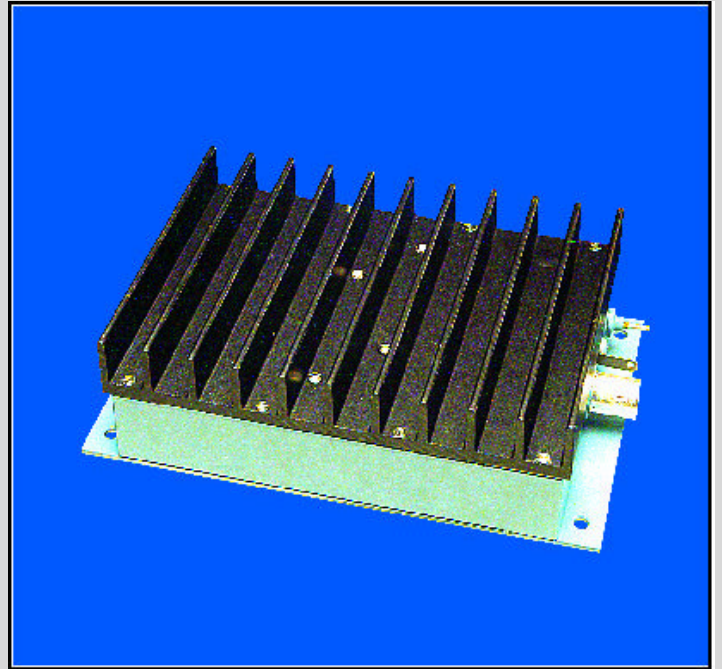




Arkonia Systems Limited

ARK7034 Series HIGH INTERCEPT HF AMPLIFIER

- ▲ *Frequency Range 1MHz to 30MHz*
- ▲ *Rugged Construction*
- ▲ *Operating Temperature up to 50°C*
- ▲ *MTBF 274,000 Hours*
- ▲ *Gain Available up to 18.5dB*
- ▲ *Designed for Broadband HF RX Systems*



The ARK7034 active components are operated at a very conservative rating for high reliability; the noise figure compares favourably with amplifiers using other types of transistor. As such, these units can be used as low-noise RF amplifiers or low-distortion power amplifiers. Another benefit is excellent linearity: HF input signals of large amplitude can be handled with low spurious outputs and intermodulation products. Of note, frequency range is specified from 1 to 30 MHz although the amplifier is usable between 500kHz and 35 MHz.

Since input to this amplifier will often be fed from an antenna system, protection against high input voltages is standard.

Each unit is capable of withstanding, without performance degradation, voltage pulses of amplitude up to 1kV with rise-times of 1.6 μ s and steady RF voltages up to 30V RMS for 5 minutes. The integral heatsink allows stand alone operation in ambient temperatures of up to 50°C.

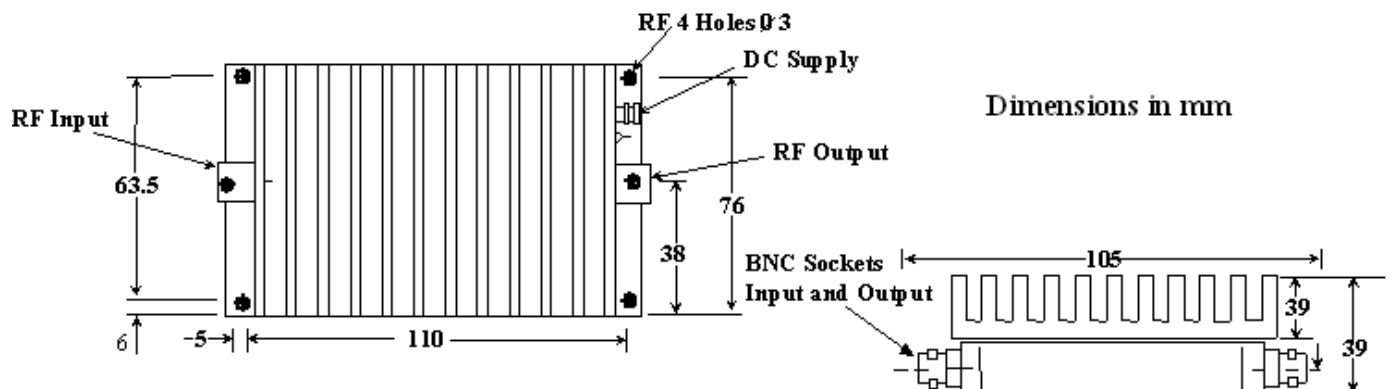
Alternative Amplifier modules with *exceptional specifications and specifically designed for SIGINT, multi-array and phase coherent applications are available on request.*

Typical Specifications

Frequency Range		1 to 30 MHz
Gain Flatness		±0.5 dB maximum
Gain	ARK7034-5	13.5 dB nominal
	ARK7034-6	18.5 dB nominal
Noise Figure @ 30MHz	ARK7034-5	6 dB maximum (4.5 dB typical)
	ARK7034-6	6 dB maximum (4.5 dB typical)
Power Output at 1 dB Gain Compression		+34 dBm minimum (+ 36 dBm typical)
3 rd Order Output Intercept Point		+51 dBm minimum
2 nd Order Output Intercept Point		+82 dBm minimum
Input/Output VSWR relative to 50 ohms		1.6:1 maximum (1.2:1 typical)
Power Supply Requirements ²		+ 24 VDC nominal, 650 mA maximum
RF Input Power	continuous	5W maximum
RF Input Power	Short term	10W for 5 minutes maximum
Pulse Input for no Damage ⁴		2kV maximum, duration 50µs typical
Ambient Operation Temperature Range		-10°C to +50°C
Mean Time Between Failures ⁵		274,000 hours
RF Connectors		50 ohms BNC sockets
DC Connectors		SMB Connector
Weight		0.32 kg (0.7 lb)
Dimensions		See diagram below

Notes

- Specifications above apply to both the ARK7034-5 and ARK7034-6 except where noted.
- Amplifier will operate with input voltages from 20v to 30v DC.
- For further details contact Applications Engineering.
- These positive and negative pulses have rise and fall times 1.6µs and are generated from a source of internal impedance 50 ohms; used to simulate the effects of a lightning strike.
- MTBF calculated according to procedures detailed in MIL-HDBK-217D at worst-case temperature.



FOR FURTHER TECHNICAL INFORMATION REQUEST: PRODUCT SPECIFICATION



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