

# H-102 RF RECEIVER MODULE

Harris' radio frequency (RF) product portfolio offers innovative solutions to challenging applications. These products are used as building blocks to integrate new RF systems, such as radars and direction finding systems, or to modernize aging systems that are experiencing obsolescence issues.

Typical applications include:

- New ground or mobile radar receivers, UHF to L band
- Modernization/modifications for improved sensitivity of existing UHF or L-band radar receivers
- Robust front end for monostatic or bistatic radars with sustained protection of pulsed RF, up to 150W at 250µs with maintained 1 dB noise figure
- Direction finding/interferometry systems for signal geolocation

A typical application of the H-102 for UHF signals uses industry-proven E-pHEMT low-noise amplifier technology to provide a noise figure of less than 1 dB. The receiver module uses double down-conversion to baseband. It features manual phase and gain controls to enable external calibration, simplifying calibration within an array. The receiver module is cooled by natural convection. It supports hot swap, streamlining site maintenance and improving operational availability.



## KEY FEATURES

- Selectivity over 60 dB
- Excellent gain and phase stability
- Modular design
- 360° output phase adjustment
- Gain adjust range over 20 dB
- High efficiency

### ELECTRICAL SPECIFICATIONS FOR TYPICAL UHF APPLICATIONS

PARAMETER	SYMBOL	MIN	TYPICAL	MAX	UNIT
Operating Frequency Range	BW	400		500	MHz
P1dB Output	P1dB	7			dBm
RF Input Gain Flatness (437MHz to 447MHz)				±0.5	dB
Noise Figure at 20°C			1		dB
IF Output Frequency Response (1MHz BW)			3		dB
RF Output Phase Response	AM-PM			±1.5	dB
RF Output Phase Adjustment Range	DF	360			deg
IMD		60			dB
IF Output Harmonic			-60		dBc
IF Output Spurious Content			-60		dBc

### POWER REQUIREMENTS FOR TYPICAL UHF APPLICATIONS

PARAMETER	SYMBOL	MIN	TYPICAL	MAX	UNIT
DC Line Current			450		mA
DC Line Voltage		6.8	7.5	10	V

### ENVIRONMENTAL PARAMETERS FOR TYPICAL UHF APPLICATIONS

PARAMETER	SYMBOL	MIN	TYPICAL	MAX	UNIT
Cooling Air Temperature _Natural Convection				NA	°C
Receiver Weight				13	Lb

Harris reserves the right to change specifications without notice.

### About Harris Corporation

Harris Corporation is a leading technology innovator, solving customers' toughest mission-critical challenges by providing solutions that connect, inform and protect. Harris supports government and commercial customers around the world. Learn more at [harris.com](http://harris.com).

Harris Corporation SENSOR PROGRAM

4450 East Fountain Boulevard • Colorado Springs, CO USA 80916 • phone 1-719-637-5900

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