



WR-12 Radar Front End 76.5-77.5 GHz FMCW-12-0006 (Low Power)

Farran's 77 GHz FMCW Radar Front End is based on a GaAs MMIC chipset offering wide bandwidth in a small outline package.

The transmit signal is derived from an external VCO signal, internally multiplied, which also acts as the LO for the receive mixer. The resulting IF is conditioned for gain and filtering as required. The IF also contains an industry leading IF noise figure, especially in the frequency range below 500MHz.

Key Facts:

- Industry leading Noise Figure
- 3 output power levels available
- Lightweight and low power consumption
- High available bandwidth



ADDITIONAL FEATURES

- FMCW homodyne architecture
- Customised solutions possible
- Bi-Static antenna configuration
- Very compact, simple design



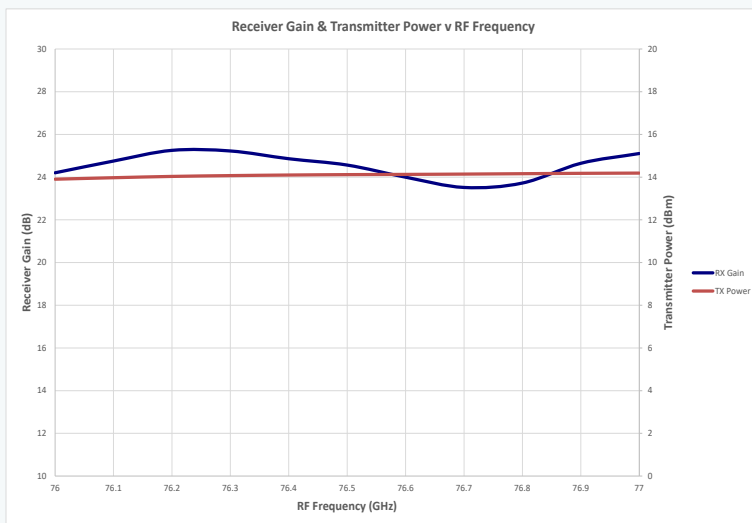
APPLICATIONS

- Aircraft collision avoidance
- Critical area surveillance
- Vehicular collision avoidance
- Runway incursion detection
- Traffic management
- FOD - Foreign Object Detection



ACCESSORIES

- User manual



"I have been working with Farran for around 10 years and have found them to be very knowledgeable, helpful, customer orientated with great products. Work has included supply of standard line items, bespoke designs, advice, and modifications, enabling key features in our products. I see Farran as a key partner for many years to come."

Richard Poulton, Hardware Team Leader, Navtech Radar





Product Specification

Specification	Unit	Min	Typ	Max
Centre Frequency	GHz	-	76.5	-
Bandwidth	GHz	-	1	-
Receiver Gain		-	20	-
Receiver Noise Figure (@ 2 MHz IF)	dB	-	-	10
IF Output Frequency	MHz	0.05		10
LO input power	dBm	-	+10	-
Transmit output power	dBm	-	+12	-
RF Connections (Tx & Rx)		WR12 UG387/U		
LO Connector		SMA 3.5 mm (f)		
IF Connector		SMA 3.5 mm (f)		
Power Requirements		+5V @ 400mA typical -5V @ 40mA typical		
Dimensions (L x W xH) mm		67 x 28 x 19		



SERVICES AVAILABLE

- Technical Support
- Installation and Setup
- Maintenance
- Application Support
- Hardware Support

For more information on any of our products or services please visit our website: www.farran.com



TECHNICAL SUPPORT

- Technical support provided directly by our knowledgeable and friendly engineers.
- Support for pre- and post-purchase: system configuration, installation and troubleshooting.



PRODUCT INSIGHTS

- For more product insights register at www.farran.com/customer
- Additional information: test data, CAD drawings and 3D models available.



WARRANTY

- Standard 1 year warranty.
- Up to 5 year warranty optional.

Specification Definitions

Nominal value (nom.) – ensured by design, not tested. **Measured value (min, max)** – expected and warranted product performance obtained from the actual measurements of product sample. **Non-traceable measured value (n. trc. meas.)** – expected product performance obtained from the actual measurements of a product sample by means of using Farran's own equipment and methods. Traceable only to Farran laboratory equipment. **Typical data (typ.)** – value that represents the product specification met over 90% of bandwidth or a mean value. **Specifications without limits** – represent the warranted product performance; with values of no or a negligible deviation from the given value and as such have a secondary impact on the product performance.

