



NOW HIRING:

MICROWAVE / MM-WAVE LINEARIZER DESIGN ENGINEERS

Company Overview

ELECTROMAGNETIC SENSOR TECHNOLOGIES (EMST) was incorporated in the United States in 2011 as a subsidiary of Nanowave Technologies. EMST's mandate is to establish and develop the Nanowave group presence in the United States. EMST has access to all of the Nanowave group intellectual property, manufacturing capabilities, and test resources. *Areas of focus for EMST include fabless MMIC design and high-power hybrid solutions for the radar, space, aerospace, defense, and ISM instrumentation markets.*

NANOWAVE TECHNOLOGIES was founded in 1992 and is a leading designer and manufacturer of advanced microwave and mm-wave components and subsystems for customized telecommunication and radar systems. The Nanowave group has more than 6,000 multi-function RF assemblies on satellites and more than 30,000 avionics on commercial and defense aerospace platforms. Customers include many of the major space, aerospace, and defense OEMs in both the US and Europe. *As a vertically integrated engineering design and manufacturing company, Nanowave uses its core technologies to create and deliver innovative products that meet our customers' needs in functionality, cost, scalability, quality, and reliability.*

Job Description

- Full-time position as a key member of the Active Component Design Engineering team
- Responsible for specification, design, layout, measurement, analysis, and documentation of advanced, high-performance broadband MMIC and hybrid microwave components
- Provide support for technical / business proposals, product troubleshooting, literature surveys, and obsolescence mitigation

Roles & Responsibilities

- Contribute to all phases of microwave product development flow, starting with specification
- Design, simulate, layout, and test linearizers for GaN, GaAs, and InP devices, power amplifiers, LNAs, switches, mixers, and other high-frequency circuits needing linearization
- Implement designs in either hybrid or monolithic circuits, as required
- Create a variety of design solutions, including linearization at the chip, package, and board levels
- Configure testbenches, calibrate systems, and collect laboratory measurements for device characterization, first-article testing, design tuning, and product troubleshooting
- Interpret, evaluate, visualize, contextualize, and extract actionable insights from measured data
- Document design performance, test procedures, measurement results, and lessons learned
- Report progress weekly, and present work coherently during engineering design reviews

Qualifications

- **Minimum:** MSc in Engineering from an accredited university, with 3+ years of high-frequency linearizer circuit design and hands-on test experience in industry
- **Preferred:** PhD in Engineering or Physics from an accredited university, with a thesis on linearization of high-power active circuits or a related topic, and 2+ years of industry experience

Minimum Requirements

- Deep understanding of:
 - EM theory (transmission lines, network analysis, impedance matching and tuning, etc.)
 - Linearizability for various power amplifier architectures and matching topologies
 - Suitability of different circuit design and EM simulation techniques from 0.1-75 GHz
 - GaAs & GaN device behavior (FET's, HEMT's, HBT's, diodes)
 - Microwave device performance metrics and their interdependencies
- Demonstrated success in designing broadband linearizers for microwave components / subsystems
- Proficiency with RF EDA tools such as Advanced Design System (ADS) and Microwave Office
- Hands-on experience with RF test equipment (VNA, signal generator, spectrum analyzer, etc.)

Preferred Skills & Traits

- Configuration and automation of large-signal test equipment for linearized device measurements
- Additional microwave component or related subsystem design capabilities, including:
 - Power amplifiers (broadband, high efficiency, output power > 10 W)
 - Front-end components (mixers, LNAs, switches, etc.)
 - Radar and communications subsystems
 - Multi-chip microwave hybrid circuit modules, packaging, and integration
- Broadband MMIC circuit design in GaN and GaAs technologies at mm-wave
- Confident, articulate, and professional speaking abilities, in addition to technical writing expertise
- Multi-tasking mastery, self-motivated attitude, and proven problem-solving capabilities
- Creative, naturally curious individual with an enthusiasm for developing complex designs in collaboration with an interdisciplinary, international, multicultural engineering team

Location

- Atlanta, Georgia, USA
- Occasional travel to Canada and Europe is required

Status

- Legally permitted to work in the United States
- Authorized to work with export-controlled items (ITAR)
- Willing to obtain a US security clearance

Compensation & Benefits

- Annual salary: \$125,000 and higher (considering experience level)
- Flexibility for partial remote work (depending on project requirements and managerial approval)
- Additional benefits include health insurance coverage and 401(k) plan.

How to Apply

If you are an experienced RF circuit design professional looking to use your education and work life to create products that contribute to society in areas ranging from universal broadband communications to environmental monitoring, then you should send your resume, engineering design portfolio, the name of your favorite band, and a brief cover letter to careers@emst-inc.com