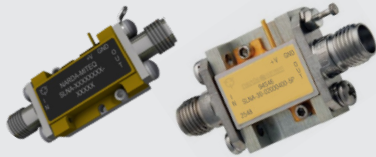


NEW

NEW



SLNAs

Space Low Noise Amplifiers

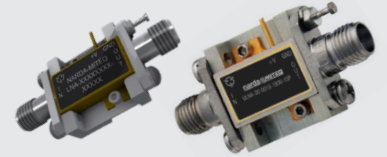
- Reduce Cost & Shorter Lead Time
- Frequency Bands 0.1 to 40 GHz
- Radiation Hardened Voltage Regulators



CLNAs

Cryogenic Low Noise Amplifiers

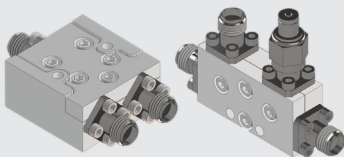
- Enable Ultra Low Noise Amplification
- Sub-Cryogenic Temp Down to 4K
- Radiometers & Quantum Computing



ULNAs

Ultra Low Noise Amplifiers

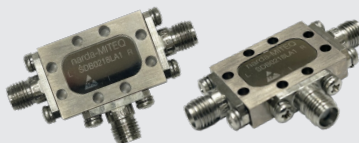
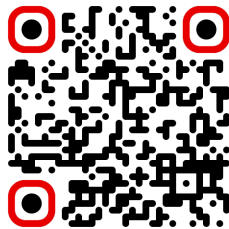
- 0.5dB Reduction in NF (2-18GHz)
- VHF to Ka Band (0.1 to 40GHz)
- Gain (25 to 40dB) Power (5 to 15dBm)
- Hermetic Sealed



SPACE PASSIVES

Space Couplers & Power Dividers

- Frequency Range 8 to 16 GHz
- Designed For Space Flight
- Leverage Flight Proven Design



SPACE MIXERS

Space Mixers

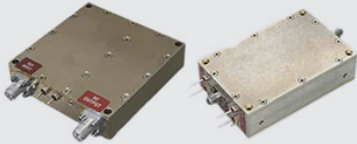
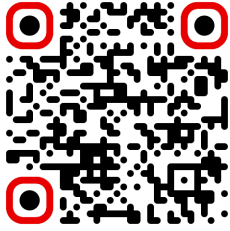
- Broadband Coverage Up To 18GHz
- COTS Models For Space Flight
- Selectable Space Screening Levels



SPACE SOURCES

Space Frequency Sources

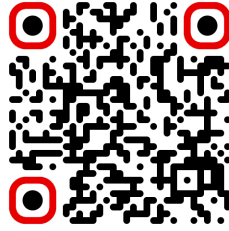
- Frequencies 40 MHz To 30 GHz
- Fixed Frequencies or Synthesized
- Selectable Space Screening Levels
- Radiation Hardened



OSCILLATORS

Frequency Source Products

- 10 MHz to 60 GHz
- Free Running & Temp Compensated DROs
- Phase Locked Oscillators
- Ultra Low Phase Noise Models



SYNTHESIZERS

Frequency Source Products

- 10 MHz to 60 GHz
- Phase Locked Tunable Synthesizers
- Single or Multi-Loop
- High Spectral Purity and Low Phase Noise



FIBER OPTICS

Fiber Optics Products

- Transmitters, Receivers & Links
- Bandwidths 5 kHz to 18 GHz
- Components or Rack Mount
- AC or DC Powered



AMPLIFIERS

SatCom Low Noise Amplifier Systems

- Indoor & Outdoor Configurations
- Amplitude / Slope Equalization
- Switchover Solutions for Redundancy
- Space Saving 1/3 Rack 1RU Versions



CONVERTERS

SatCom Frequency Converter Systems

- Block & Synthesized
- C, DBS, Ka, Ku, L, S, X and V Bands
- 1:1 and 1:2 Redundant Systems
- Space Saving 1/3 Rack 1RU Versions



IMAs

Integrated Microwave Assemblies

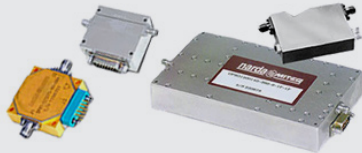
- Custom Solutions DC to Over 40GHz
- Proprietary Multilayer Microwave Circuits
- 3U VPX SWaP-C
- Automated Assembly and Test



ATTENUATORS

Continuous Variable Attenuators

- Broad Frequency Coverage to 40 GHz
- up to 40 dB Attenuation Range
- Low VSWR And Insertion Loss
- Compact Form



PIN DIODE ATTENUATORS

Control Products

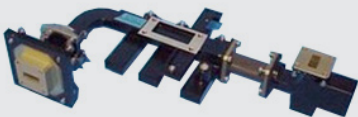
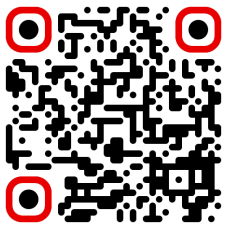
- Analog & Digital PIN Diode Controlled
- 1 GHz to 40 GHz
- up to 80 dB Range
- 8-Bit Design w/ 0.125 dB Step



PHASE SHIFTERS

Coaxial Phase Shifters

- Broad Frequency Coverage up to 40GHz
- Adjustment Options 30°- 360°/GHz
- Excellent VSWR Performance
- Rugged & Compact Construction



WAVEGUIDE

Waveguide Components

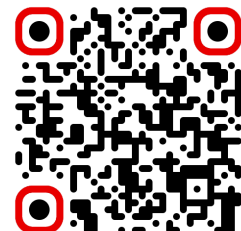
- Extensive Portfolio
- Low Insertion Loss
- High Power Handling
- Customization For System Optimization
- Precision Manufactured Components



WAVEGUIDE LNAs

Waveguide Amplifiers

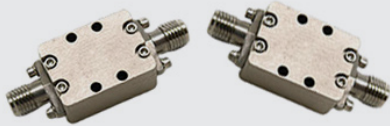
- Defense, Commercial Aerospace, SatCom
- S-Band thru Ka-Band
- Designed for Harsh Environments
- Market Leading Performance



LIMITERS

Control Products

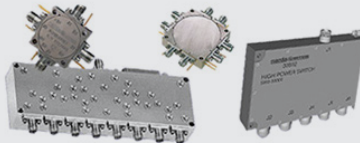
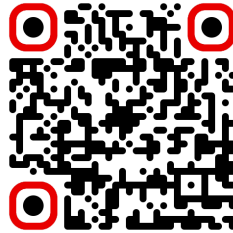
- PIN Diode Based
- Broadband 1 to 18 GHz
- Power Handling to 500W
- 100ns Recovery Time



MULTIPLIERS

Passive & Active Frequency Multipliers

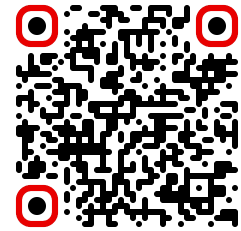
- x2, x3, x4, x6 Frequency Multipliers
- Active and Passive
- Spurious Suppression via Special Filtering
- Standard and Custom Models



SWITCHES

Control Products

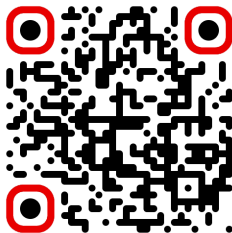
- Digital PIN Diode
- 80 MHz to 44 GHz
- Standard Models from SPST to SP8T
- Absorptive & Reflective
- Fast Switching Time



LNAs

Low Noise Amplifiers

- Frequency Coverage to 67GHz
- Thousands of Models
- Narrow-Band, Wide-Band, Ultra Low Noise
- Multiple Packaging Options



POWER DIVIDERS

Narrow & Broadband Power Dividers

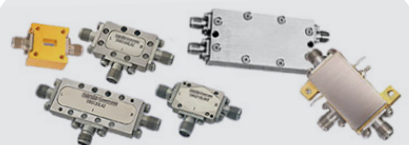
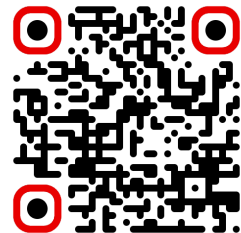
- Multi-Octave Designs up to 45 GHz
- Stripline & Microstrip Designs
- High Isolation >20dB
- Excellent Amplitude / Phase Balance
- Low Insertion Loss



COUPLERS

RF / Microwave Directional Couplers

- Broad Frequency Coverage to 40 GHz
- High Directivity
- 90° And 180° Hybrids
- Low Insertion Loss
- Precise RF Power Monitoring



MIXERS

Microwave Mixers

- Frequencies up to 50 GHz
- >400 Standard Models
- Active Mixers / Frontends
- Hermetically Sealed Commercial Grade