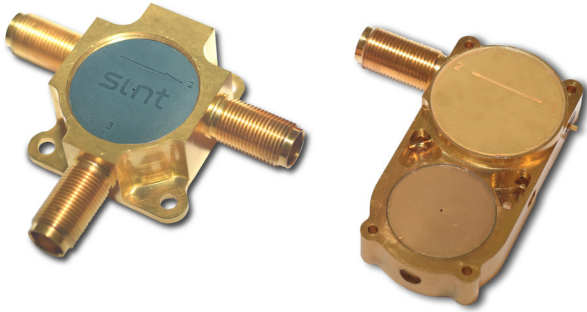


# L-Band Very High Power

## Isolators & Circulators



Smiths Interconnect has been producing space qualified coaxial isolators and circulators for over 30 years. This expertise has resulted in the introduction of our L-Band Very High-Power Isolator and Circulator components.

Specifically designed for solid state power amplifiers (SSPA) used aboard spacecrafts' communication, navigation, RadarSats and satellite payloads (GEO/MEO and LEO constellations) these L-Band Isolators and Circulators are space qualified and are multipaction free to 1000 Watts peak at 1.57GHz.

Smiths Interconnect's high power isolators and circulators feature solid TNC connectors while the isolator features in-house produced 500ohm terminations. Internally the devices feature proprietary multipaction suppression techniques to offer the SSPA designer minimal risk operation today and a path towards operating at higher powers in future. Together in combination these features provide highly compact, space qualified solutions for the most rugged of space applications.

L-Band devices are examples of a range of mechanical variants operating in assigned bands from 1.1 GHz, (E5/L5) to 1.59 GHz (E1/L1) GNSS, the 1.2-1.4GHz EOS and 2.0-2.3 GHz TT&C bands.

## Designed and Qualified for Solid State Power Amplifiers (SSPA)

### Features & Benefits

- Temperature stable, multipaction free SSPA Isolators and Circulators designed for SSPA applications
- Variants available in a variety of mechanical arrangements operating in assigned bands from 1.1-2.3GHz
- In-house facility for CW, multipaction, corona discharge power testing, and mechanical-shock & random vibration
- Sample data and test reports available to assist the design and qualification process

## End Product Markets



## Technical Characteristics

### Typical L-Band High Power Isolator Specifications

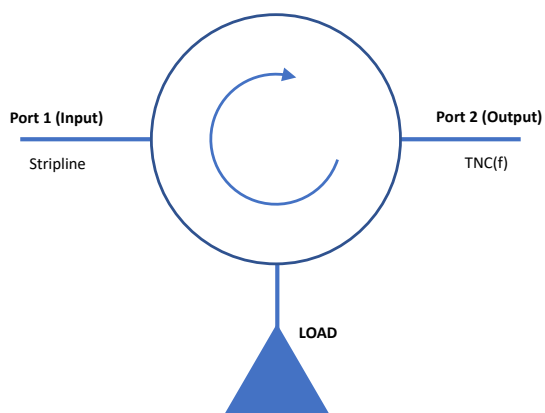
Operating Frequency*	1.57 - 1.62 GHz
Qualification	-25 to +95C
Acceptance	-20 to +90C
Insertion Loss	0.15dB max
Isolation	21 dB min
Return Loss (tab)	21 dB min
Return Loss (TNC)	21 dB min
Power Handling	162 CW average
Multipaction (qualified)	1000W pk full reflection, any phase
Mass	138g nom

### Typical L-Band High Power Circulator Specifications

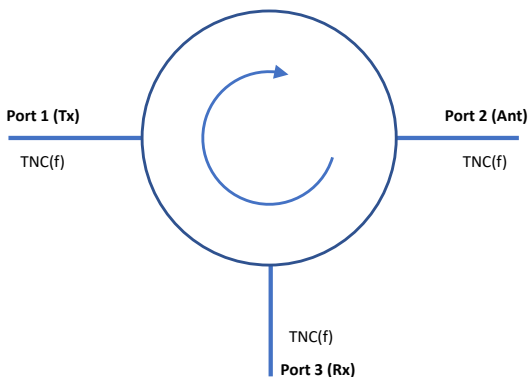
Operating Frequency*	1.57 - 1.62 GHz
Qualification	-25 to +95C
Acceptance	-20 to +90C
Insertion Loss	0.15dB max
Isolation	N/A to isolator
Return Loss (tab)	21 dB min
Return Loss (TNC)	23 dB min
Power Handling	225 CW average
Multipaction (qualified)	1500W pk full reflection, any phase
Mass	127g nom

\* other options available on request

### Isolator Device Schematic



### Circulator Device Schematic



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