

High Frequency Slip Ring



Main Application

- ◆ Precise Instrument
- ◆ Military Weapon System
- ◆ Communication Network Appliance
- ◆ Exhibit &.display equipment
- ◆ Radar antenna and military system
- ◆ Air traffic control, Anti-missile defense
- ◆ Medial engineering equipment
- ◆ SATCOM technology
- ◆ TV Camera systems

Option

- ◆ Data bus compatible
- ◆ Maintenance-free operation
- ◆ Circuits optional
- ◆ Custom available

Contact us to discuss your special needs

LPHF-05

SINGLE-CHANNEL COAXIAL ROTARY JOINT

Description

A slip ring is also called a rotary electrical interface, collector, swivel or rotary joint. A slip ring can be used in any electromechanical system that requires unrestrained, continuous rotation while transmitting power and / or data from a stationary to a rotating structure. A slip ring can improve system performance by simplifying operations and eliminating damage-prone wires dangling from moving joints.

The LPHF Series features precious metal contacts at the rotary interface. Flying lead wires on the rotating side and solder terminals on the stator side complete the electrical connections. Precision ball bearings and the patented fiber brush design allow operation up to 10,000 rpm without the need for cooling equipment. Fiber brush technology offers several advantages over conventional slip ring contacts including multiple points of contact per brush bundle, low contact force per fiber and low contact wear rates. In addition, fiber brushes do not require lubrication and produce virtually no wear. It is specially designed for high frequency signal transmission, the frequency could be high to 50GHz.

Advantage

- ◆ Highlights
- ◆ Compact design
- ◆ Precision ball bearings
- ◆ Transmitting up to 21 channels
- ◆ Working life up to 1, 000, 000, 000
- ◆ Frequency range from DC up to 50 GHz
- ◆ High crosstalk attenuation and excellent VSWR
- ◆ Extremely long-lived rotary joints are available as coaxial and waveguide units
- ◆ Low attenuation loss and low variation of transmission during rotation

High Frequency Slip Ring

| Specification | | | | | | |
|----------------------------------|------------|------------|------------|------------|------------|------------|
| LPHF-05 | Channel1 | | Channel2 | | | |
| Frequency range (GHz) | 0...1.4 | 1.4...18 | 0...1.4 | 1.4...2.0 | 2.0...3.0 | 3.0...4.0 |
| Peak power (kW) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Average power (W) | 200 | 200 | 200 | 200 | 200 | 200 |
| VSWR | ≤1.2 | ≤1.8 | ≤1.2 | ≤1.4 | ≤1.8 | ≤2.5 |
| VSWR-WOW | ≤0.05 | ≤0.05 | ≤0.1 | ≤0.1 | ≤0.4 | ≤0.4 |
| Insertion loss(dB) | ≤0.1 | ≤0.7 | ≤0.5 | ≤0.5 | ≤1.5 | ≤1.5 |
| Insertion loss - WOW(dB) | ≤0.05 | ≤0.05 | ≤0.1 | ≤0.1 | ≤0.3 | ≤0.3 |
| Isolation between other channels | ≥50 | ≥50 | ≥50 | ≥50 | ≥50 | ≥50 |
| Phase- WOW | ≤1° | ≤1° | ≤2° | ≤2° | ≤2° | ≤2° |
| Connection | SMA socket | SMA socket | SMA socket | SMA socket | SMA socket | SMA socket |

- ◆ The operating life of the unit depends upon temperature, rotation speed and environment.
- ◆ The operating life ≥1, 000, 000, 000 ref.

