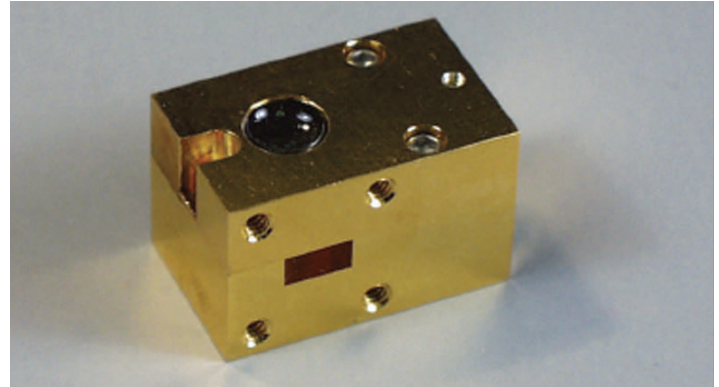


Description

Mi-Wave's 172 Series is an H-plan, three-port Y-junction ferrite device with one arm internally terminated in a matched load. Reflected energy is circulated into this load to isolate the input. All external mating surfaces are machined to extreme flatness to provide connection to standard waveguide flanges for minimum discontinuity. The 172 Series isolators are available in standard waveguide sizes from 12.4 to 50 GHz, using square UG-419, UG-595 and 599 style flanges only.

- *Optimal Temperature Response*
- *Compact & Rugged*
- *Broad Bandwidth*
- *Low Loss*
- *Low VSWR*
- *High Isolation*



Applications

The 172 Series Y-junction isolators are useful in test setup and operational systems. These devices provide a high degree of isolation between signal sources and system loads by sharply attenuating reflected signals with very low loss in the forward direction.

PLEASE NOTE:

- Low-cost production versions available for telecommunications applications.
- Smaller versions of certain model numbers are available.
- Consult Mi-Wave for current dimensions.
- Wide bandwidth available

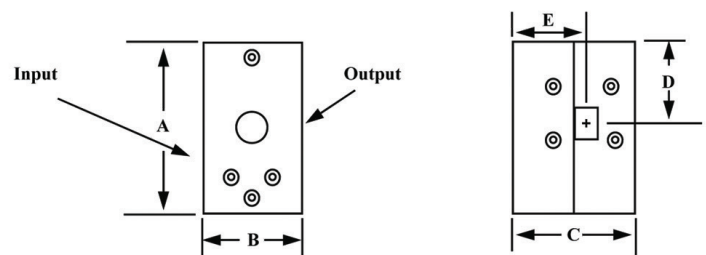
Dimensional Specifications

| Model No. | A | | B | | C | | D | | E | |
|-------------|------|------|------|------|------|------|------|------|------|------|
| | in. | mm | in. | mm | in. | mm | in. | mm | in. | mm |
| 172K | 1.50 | 38.1 | 0.88 | 22.4 | 1.25 | 31.8 | 0.63 | 16.0 | 0.63 | 16.0 |
| 172A | 1.20 | 30.5 | 0.75 | 19.1 | 0.75 | 19.1 | 0.38 | 9.7 | 0.38 | 9.7 |
| 172B | 1.20 | 30.5 | 0.75 | 19.1 | 0.75 | 19.1 | 0.38 | 9.7 | 0.38 | 9.7 |

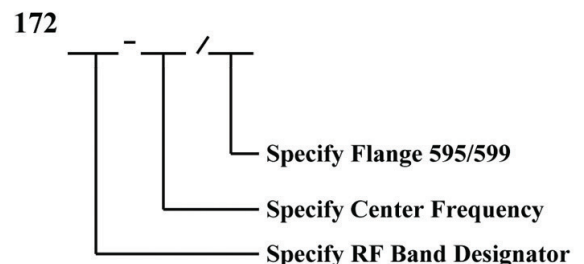
TECHNICAL SPECIFICATIONS

(TYPICAL)

| Model No. | 172K | 172WR-34 | 172A | 172B |
|--|---------------|----------|----------|----------|
| Frequency Band (GHz) | 18–26.5 | 22–33 | 26.5–40 | 33–50 |
| Bandwidth¹ | 2.0 GHz | 2.0 GHz | 1.5 GHz | 1.3 GHz |
| Isolation² (dB) | 20.0 | 20.0 | 20.0 | 20.0 |
| Insertion Loss (dB)¹ | 0.3 | 0.3 | 0.4 | 0.5 |
| VSWR² Max | 1.30 | 1.30 | 1.30 | 1.30 |
| Temperature Range | -15° to +65°C | | | |
| Peak Power (kW) | 1.0 | 1.0 | 1.0 | 1.0 |
| Average Power (Watts) | — | | | |
| Forward | 30 | 30 | 30 | 25 |
| Backward | 1.5 | 1.5 | 1.0 | 0.8 |
| Weight (oz) | 2.0 | 2.0 | 2.0 | 2.0 |
| Flange Type | UG-595/U | UG-595/U | UG-599/U | UG-599/U |



Ordering Information



1. Specify center frequency.
2. Wider bandwidths are available.

I Full Band Version available for WR-42 + WR-28