



**Section 4-1: Waveguide Straight, Twist, Bend & Termination load**  
[www.3jmicrowave.com](http://www.3jmicrowave.com) Frequency Coverage: 18 to 110 GHz

**Applications:**

- Instrumentations
- Test Bench
- Assembly Modules

**Features:**

- Low Insertion Loss
- Low Return Loss
- High Quality

**Descriptions:**

**3J Microwave, Inc.** offers standard waveguide straight, 90° twist, bend and termination Load in 8 waveguide bands. The precise fabrication fixtures and quality control procedure are utilized to ensure the high quality. The standard waveguide straight, twist, bend & termination load can be used for integration of



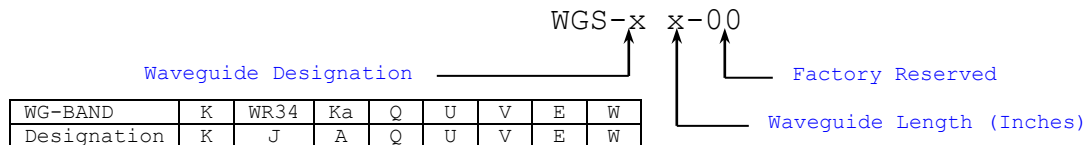
modules, receiver, transmitter, transceiver subsystems and bench testing, instrumentation etc. The waveguide components are sorted in four categories: 1) **WGS** series waveguide straights; 2) **WGT** series 90° waveguide twists; 3) **WGB** series 90° waveguide bends; 4) **WGL** series termination load.

**WGS Series Waveguide Straight Specifications:**

| Model No.* | WG Type | Freq Range (GHz) | Length (Inch) | Return Loss (dB) | RF Connector    | Outline |
|------------|---------|------------------|---------------|------------------|-----------------|---------|
| WGS-xx-00  | WR-42   | 18 to 26.5       | 2.0"          | -40              | Coax or UG595-U |         |
|            | WR-34   | 22 to 33         |               |                  | Coax or UG595-U |         |
|            | WR-28   | 26.5 to 40       |               |                  | Coax or UG599-U |         |
|            | WR-22   | 33 to 50         | 1.5"          |                  | Coax or UG383-U |         |
|            | WR-19   | 40 to 60         |               |                  |                 |         |
|            | WR-15   | 50 to 75         | 1"            |                  |                 |         |
|            | WR-12   | 60 to 90         |               |                  |                 |         |
|            | WR-10   | 75 to 110        |               |                  |                 |         |

\* Please see "how to order" for the model number details

**How to Order:**



**WGT Series 90° Waveguide Twist Specifications:**

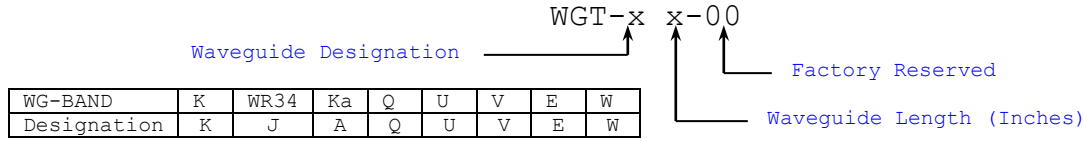
| Model No.* | WG Type | Freq Range (GHz) | Length (Inch) | Return Loss (dB) | RF Connector    | Outline |
|------------|---------|------------------|---------------|------------------|-----------------|---------|
| WGS-xx-00  | WR-42   | 18 to 26.5       | 2.0"          | -30              | Coax or UG595-U |         |
|            | WR-34   | 22 to 33         |               |                  | Coax or UG595-U |         |
|            | WR-28   | 26.5 to 40       |               |                  | Coax or UG599-U |         |
|            | WR-22   | 33 to 50         | 1.5"          |                  | Coax or UG383-U |         |
|            | WR-19   | 40 to 60         |               |                  |                 |         |
|            | WR-15   | 50 to 75         | 1"            |                  |                 |         |
|            | WR-12   | 60 to 90         |               |                  |                 |         |
|            | WR-10   | 75 to 110        |               |                  |                 |         |



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**How to Order:**

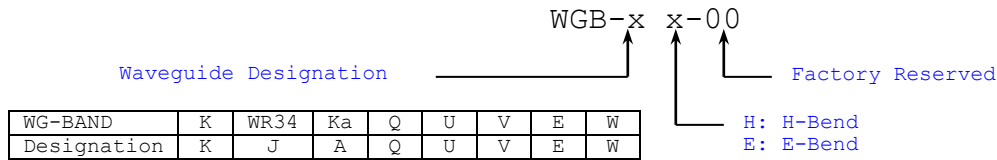


**WGB Series Waveguide Bend Specifications:**

| Model No.* | WG Type | Freq Range (GHz) | Length (Inch) | Return Loss (dB) | RF Connector    | Outline |
|------------|---------|------------------|---------------|------------------|-----------------|---------|
| WGB-xx-00  | WR-42   | 18 to 26.5       | 2.0           | -30              | Coax or UG595-U |         |
|            | WR-34   | 22 to 33         |               |                  | Coax or UG595-U |         |
|            | WR-28   | 26.5 to 40       |               |                  | Coax or UG599-U |         |
|            | WR-22   | 33 to 50         | 1.5           |                  | Coax or UG383-U |         |
|            | WR-19   | 40 to 60         | 1.0           |                  |                 |         |
|            | WR-15   | 50 to 75         |               |                  |                 |         |
|            | WR-12   | 60 to 90         |               |                  |                 |         |
|            | WR-10   | 75 to 110        |               |                  |                 |         |

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**How to Order:**

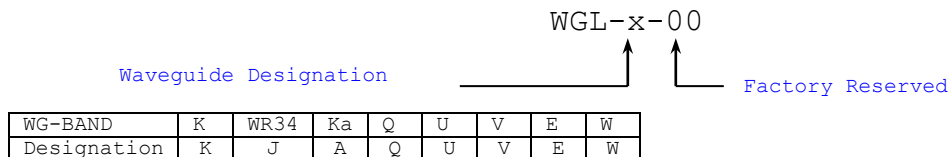


**WGL Series Waveguide Termination load Specifications:**

| Model No.* | WG Type | Freq Range (GHz) | Power Handling (W) | Return Loss (dB) | RF Connector    | Outline |
|------------|---------|------------------|--------------------|------------------|-----------------|---------|
| WGL-xx-00  | WR-42   | 18 to 26.5       | 1.0                | -31              | Coax or UG595-U |         |
|            | WR-34   | 22 to 33         |                    |                  | Coax or UG595-U |         |
|            | WR-28   | 26.5 to 40       |                    |                  | Coax or UG599-U |         |
|            | WR-22   | 33 to 50         | 0.8                |                  | Coax or UG383-U |         |
|            | WR-19   | 40 to 60         | 0.5                |                  |                 |         |
|            | WR-15   | 50 to 75         |                    |                  |                 |         |
|            | WR-12   | 60 to 90         |                    |                  |                 |         |
|            | WR-10   | 75 to 110        |                    |                  |                 |         |

\* Please see "how to order" for the model number details

**How to Order:**



**Outlines:**

Please see Section 4-11, Page 4-22 for the outline details