

With the compliments of Marconi Instruments Limited, Sanders Division

# Waveguide Frequency Ranges, Dimensions and Designations

| Range         | Internal       | Internal      | Official Designations |             | Commercial Designations |            |     |     |     |     |          |          |     |
|---------------|----------------|---------------|-----------------------|-------------|-------------------------|------------|-----|-----|-----|-----|----------|----------|-----|
| GHz           | (inches)       | (mm. approx)  | I.E.C.                | U.K. (RCSC) | U.S. (EIA)              | U.S. (JAN) | U K | D-B | H-P | MRI | Narda    | Philips  | TRG |
| 0.32 - 0.49   | 23.0 x 11.0    | 584.0 x 292.0 |                       | WG00        | WR2300                  |            |     |     |     |     |          |          |     |
| 0.35 - 0.53   | 21.0 x 10.5    | 533.0 x 267.0 |                       | WG0         | WR2100                  |            |     |     |     |     |          |          |     |
| 0.41 - 0.625  | 18.0 x 9.0     | 457.0 x 229.0 |                       | WG1         | WR1800                  | RG-201/U   |     |     |     |     |          |          |     |
| 0.49 - 0.75   | 15.0 x 7.5     | 381.0 x 191.0 |                       | WG2         | WR1500                  | RG-202/U   |     |     |     |     |          |          |     |
| 0.64 - 0.96   | 11.5 x 5.75    | 292.0 x 146.0 |                       | WG3         | WR1150                  | RG-203/U   |     |     |     |     |          |          |     |
| 0.75 - 1.12   | 9.75 x 4.875   | 248.0 x 124.0 |                       | WG4         | WR975                   | RG-204/U   |     |     | P   |     |          |          |     |
| 0.96 - 1.45   | 7.7 x 3.85     | 196.0 x 98.0  |                       | WG5         | WR770                   | RG-205/U   |     |     |     |     |          |          |     |
| 1.12 - 1.7    | 6.5 x 3.25     | 165.0 x 83.0  | R14                   | WG6         | WR650                   | RG-69/U    | L   |     | L   | L   | L        | L(25cm)  | L   |
| 1.45 - 2.2    | 5.1 x 2.55     | 131.0 x 65.0  | R18                   | WG7         | WR510                   |            |     |     |     |     |          | D        |     |
| 1.7 - 2.6     | 4.3 x 2.15     | 109.0 x 55.0  | R22                   | WG8         | WR430                   | RG-104/U   |     |     |     | M   | LS       |          |     |
| 2.2 - 3.3     | 3.4 x 1.7      | 86.0 x 43.0   | R26                   | WG9A        | WR340                   | RG-112/U   |     |     |     |     |          |          |     |
| 2.6 - 3.95    | 2.84 x 1.34    | 72.0 x 34.0   | R32                   | WG10        | WR284                   | RG-48/U    | S   | L   | S   | S   | S        | S(10cm)  | S   |
| 3.3 - 4.9     | 2.29 x 1.145   | 59.0 x 29.0   | R40                   | WG11A       | WR229                   |            |     |     |     |     | A(7.5cm) |          |     |
| 3.95 - 5.85   | 1.872 x 0.872  | 48.0 x 22.0   | R48                   | WG12        | WR187                   | RG-49/U    | C   | K   | G   | C   | C        | C(6cm)   | C   |
| 4.9 - 7.05    | 1.59 x 0.795   | 40.0 x 20.0   | R58                   | WG13        | WR159                   |            |     | C   |     |     |          | C        |     |
| 5.85 - 8.2    | 1.372 x 0.622  | 35.0 x 16.0   | R70                   | WG14        | WR137                   | RG-50/U    |     | J   | J   | XB  | XN       | J(4.5cm) |     |
| 7.05 - 10.0   | 1.122 x 0.497  | 29.0 x 13.0   | R84                   | WG15        | WR112                   | RG-51/U    |     | H   | H   | XL  | XB       | H(3.5cm) | XL  |
| 8.2 - 12.4    | 0.9 x 0.4      | 23.0 x 10.0   | R100                  | WG16        | WR90                    | RG-52/U    | X   | G   | X   | X   | X        | X(3cm)   | X   |
| 10.0 - 15.0   | 0.75 x 0.375   | 19.0 x 9.5    | R120                  | WG17        | WR75                    |            |     | FA  | M   |     |          |          |     |
| 12.4 - 18.0   | 0.622 x 0.311  | 16.0 x 7.9    | R140                  | WG18        | WR62                    | RG-91/U    | J   | FA  | P   | KU  | KU       | P(2cm)   | Ku  |
| 15.0 - 22.0   | 0.510 x 0.255  | 13.0 x 5.8    | R180                  | WG19        | WR51                    |            |     | N   | K   |     |          |          |     |
| 18.0 - 26.5   | 0.420 x 0.170  | 11.0 x 4.3    | R220                  | WG20        | WR42                    | RG-53/U    |     | E   | K   |     | K        |          | K   |
| 22.0 - 33.0   | 0.340 x 0.170  | 8.6 x 4.3     | R260                  | WG21        | WR34                    |            |     |     |     | I   |          |          |     |
| 26.5 - 40.0   | 0.280 x 0.140  | 7.1 x 3.6     | R320                  | WG22        | WR28                    | RG-96/U    | Q   | D   | R   |     | V        | Q(8mm)   | A   |
| 33.0 - 50.0   | 0.224 x 0.112  | 5.7 x 2.9     | R400                  | WG23        | WR22                    | RG-97/U    |     | C   |     |     | Q        |          | B   |
| 40.0 - 60.0   | 0.188 x 0.094  | 4.8 x 2.4     | R500                  | WG24        | WR19                    |            |     |     |     |     |          |          | U   |
| 50.0 - 75.0   | 0.148 x 0.074  | 3.8 x 1.9     | R620                  | WG25        | WR15                    | RG-98/U    |     | B   |     |     | M        |          | V   |
| 60.0 - 90.0   | 0.122 x 0.061  | 3.1 x 1.6     | R740                  | WG26        | WR 12                   | RG-99/U    | O   | A   |     |     | E        | E(4mm)   | E   |
| 75.0 - 110.0  | 0.100 x 0.050  | 2.4 x 1.3     | R900                  | WG27        | WR10                    |            |     |     |     |     |          |          | W   |
| 90.0 - 140.0  | 0.080 x 0.040  | 2.0 x 1.0     | R1200                 | WG28        | WR8                     | RG-138/U   |     | W   |     |     | N        |          | F   |
| 110.0 - 170.0 | 0.065 x 0.0325 | 1.7 x 0.82    |                       | WG29        | WR7                     | RG-136/U   |     |     |     |     |          | B(2mm)   | D   |
| 140.0 - 220.0 | 0.051 x 0.0255 | 1.3 x 0.65    |                       | WG30        | WR5                     | RG-135/U   |     |     |     |     | A(7.5cm) |          | G   |
| 170.0 - 260.0 | 0.043 x 0.0215 | 1.1 x 0.55    |                       | WG31        | WR4                     | RG-137/U   |     |     |     |     |          |          | H   |
| 220.0 - 325.0 | 0.034 x 0.017  | 0.87 x 0.44   |                       | WG32        | WR3                     | RG-139/U   |     |     |     |     | R        |          | J   |

NOTE: Every care has been taken to ensure the information contained in this table is correct, but the company cannot accept any liability for errors.

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