

*Typical Performance Data*

| FREQUENCY<br>(GHz) | INSERTION<br>LOSS<br>(dB) | ATTENUATION RELATIVE TO INSERTION LOSS |        |        |        |        |       |         |
|--------------------|---------------------------|----------------------------------------|--------|--------|--------|--------|-------|---------|
|                    |                           | (dB)                                   |        |        |        |        |       |         |
|                    |                           | @ ATTENUATION SETTING                  |        |        |        |        |       |         |
|                    | 0 dB                      | .5 dB                                  | 1.0 dB | 2.0 dB | 4.0 dB | 8.0 dB | 16 dB | 31.5 dB |
| 0.1                | 1.42                      | 0.48                                   | 0.90   | 2.21   | 4.20   | 8.12   | 16.20 | 32.04   |
| 0.5                | 1.52                      | 0.49                                   | 0.91   | 2.20   | 4.21   | 8.13   | 16.22 | 32.06   |
| 1                  | 1.61                      | 0.49                                   | 0.92   | 2.19   | 4.22   | 8.14   | 16.23 | 32.08   |
| 2                  | 1.76                      | 0.49                                   | 0.91   | 2.20   | 4.21   | 8.13   | 16.22 | 32.08   |
| 3                  | 1.92                      | 0.48                                   | 0.88   | 2.22   | 4.19   | 8.10   | 16.19 | 32.04   |
| 4                  | 2.08                      | 0.46                                   | 0.86   | 2.25   | 4.17   | 8.08   | 16.16 | 32.01   |
| 5                  | 2.26                      | 0.45                                   | 0.83   | 2.29   | 4.15   | 8.06   | 16.13 | 31.99   |
| 6                  | 2.46                      | 0.44                                   | 0.82   | 2.32   | 4.13   | 8.05   | 16.12 | 31.97   |
| 7                  | 2.72                      | 0.43                                   | 0.81   | 2.33   | 4.11   | 8.05   | 16.12 | 31.94   |
| 8                  | 2.99                      | 0.43                                   | 0.82   | 2.31   | 4.09   | 8.06   | 16.13 | 31.90   |
| 9                  | 3.24                      | 0.45                                   | 0.85   | 2.25   | 4.09   | 8.08   | 16.17 | 31.90   |
| 10                 | 3.40                      | 0.47                                   | 0.89   | 2.19   | 4.12   | 8.13   | 16.28 | 31.98   |
| 11                 | 3.45                      | 0.49                                   | 0.92   | 2.15   | 4.18   | 8.19   | 16.40 | 32.07   |
| 12                 | 3.47                      | 0.49                                   | 0.92   | 2.14   | 4.20   | 8.21   | 16.47 | 32.12   |
| 13                 | 3.55                      | 0.47                                   | 0.88   | 2.16   | 4.18   | 8.18   | 16.43 | 32.05   |
| 14                 | 3.65                      | 0.44                                   | 0.85   | 2.19   | 4.14   | 8.14   | 16.37 | 31.96   |
| 15                 | 3.74                      | 0.43                                   | 0.82   | 2.22   | 4.11   | 8.13   | 16.36 | 31.96   |
| 16                 | 3.84                      | 0.42                                   | 0.80   | 2.24   | 4.10   | 8.13   | 16.37 | 31.94   |
| 17                 | 3.95                      | 0.42                                   | 0.80   | 2.24   | 4.10   | 8.15   | 16.40 | 31.96   |
| 18                 | 4.06                      | 0.42                                   | 0.81   | 2.21   | 4.10   | 8.18   | 16.46 | 32.01   |
| 19                 | 4.24                      | 0.42                                   | 0.81   | 2.16   | 4.06   | 8.20   | 16.47 | 32.02   |
| 20                 | 4.41                      | 0.40                                   | 0.80   | 2.14   | 4.03   | 8.18   | 16.46 | 32.01   |
| 21                 | 4.57                      | 0.38                                   | 0.77   | 2.17   | 3.99   | 8.15   | 16.44 | 31.98   |
| 22                 | 4.74                      | 0.36                                   | 0.72   | 2.22   | 3.99   | 8.12   | 16.42 | 31.98   |
| 23                 | 4.89                      | 0.34                                   | 0.69   | 2.28   | 4.00   | 8.14   | 16.41 | 32.00   |
| 24                 | 5.10                      | 0.31                                   | 0.67   | 2.31   | 4.01   | 8.17   | 16.39 | 32.03   |

*Typical Performance Data*

| FREQUENCY<br>(GHz) | INPUT RETURN LOSS<br>(dB)<br>@ ATTENUATION SETTING |        |        |        |        |        |       |         |
|--------------------|----------------------------------------------------|--------|--------|--------|--------|--------|-------|---------|
|                    | 0 dB                                               | 0.5 dB | 1.0 dB | 2.0 dB | 4.0 dB | 8.0 dB | 16 dB | 31.5 dB |
|                    |                                                    |        |        |        |        |        |       |         |
| 0.1                | 17.06                                              | 20.51  | 26.37  | 11.82  | 19.19  | 48.88  | 38.83 | 38.33   |
| 0.5                | 16.57                                              | 19.77  | 24.96  | 11.66  | 18.79  | 40.40  | 38.80 | 38.48   |
| 1                  | 16.38                                              | 19.49  | 24.45  | 11.64  | 18.67  | 37.58  | 36.75 | 36.57   |
| 2                  | 16.85                                              | 20.08  | 25.40  | 11.94  | 19.11  | 36.76  | 34.07 | 33.91   |
| 3                  | 18.04                                              | 21.66  | 27.96  | 12.51  | 20.04  | 37.90  | 33.25 | 33.04   |
| 4                  | 19.12                                              | 23.08  | 29.96  | 12.94  | 20.64  | 40.29  | 34.51 | 34.36   |
| 5                  | 19.89                                              | 24.01  | 32.05  | 13.12  | 20.63  | 40.02  | 35.59 | 35.71   |
| 6                  | 20.13                                              | 23.73  | 31.81  | 13.13  | 20.14  | 31.45  | 30.12 | 30.33   |
| 7                  | 19.39                                              | 21.53  | 25.35  | 13.19  | 19.51  | 25.45  | 24.94 | 25.12   |
| 8                  | 18.11                                              | 19.08  | 20.84  | 13.54  | 19.01  | 21.54  | 21.34 | 21.46   |
| 9                  | 17.99                                              | 18.43  | 19.44  | 14.42  | 19.30  | 19.44  | 19.20 | 19.24   |
| 10                 | 20.82                                              | 20.85  | 21.04  | 16.34  | 21.51  | 18.60  | 18.08 | 18.01   |
| 11                 | 30.58                                              | 29.60  | 24.34  | 18.93  | 27.09  | 18.58  | 17.87 | 17.70   |
| 12                 | 25.32                                              | 27.76  | 22.48  | 19.09  | 32.08  | 19.24  | 18.71 | 18.48   |
| 13                 | 20.27                                              | 22.13  | 20.11  | 17.12  | 26.53  | 20.72  | 20.80 | 20.56   |
| 14                 | 19.84                                              | 22.27  | 21.13  | 15.60  | 24.52  | 24.40  | 25.45 | 25.19   |
| 15                 | 21.19                                              | 24.98  | 26.19  | 14.77  | 23.15  | 36.53  | 41.36 | 39.27   |
| 16                 | 22.93                                              | 26.36  | 38.39  | 14.69  | 21.58  | 29.50  | 27.22 | 26.98   |
| 17                 | 24.59                                              | 24.13  | 25.58  | 15.68  | 20.43  | 21.52  | 20.67 | 20.46   |
| 18                 | 23.75                                              | 20.98  | 19.82  | 18.12  | 19.79  | 18.00  | 17.60 | 17.40   |
| 19                 | 21.03                                              | 18.71  | 17.02  | 22.67  | 19.61  | 16.30  | 16.19 | 16.01   |
| 20                 | 19.23                                              | 17.62  | 15.79  | 32.11  | 19.97  | 15.78  | 15.86 | 15.69   |
| 21                 | 18.15                                              | 17.09  | 15.28  | 41.61  | 20.58  | 15.95  | 16.22 | 16.07   |
| 22                 | 17.03                                              | 16.24  | 14.64  | 34.71  | 20.33  | 15.98  | 16.41 | 16.28   |
| 23                 | 14.74                                              | 14.14  | 12.96  | 26.67  | 17.93  | 14.73  | 15.26 | 15.18   |
| 24                 | 12.02                                              | 11.63  | 10.79  | 19.33  | 14.83  | 12.70  | 13.27 | 13.27   |

*Typical Performance Data*

| FREQUENCY<br>(GHz) | OUTPUT RETURN LOSS<br>(dB)<br>@ ATTENUATION SETTING |        |        |        |        |        |       |         |
|--------------------|-----------------------------------------------------|--------|--------|--------|--------|--------|-------|---------|
|                    | 0 dB                                                | 0.5 dB | 1.0 dB | 2.0 dB | 4.0 dB | 8.0 dB | 16 dB | 31.5 dB |
|                    |                                                     |        |        |        |        |        |       |         |
| 0.1                | 17.07                                               | 19.90  | 22.94  | 12.74  | 29.91  | 20.60  | 37.47 | 33.56   |
| 0.5                | 16.63                                               | 19.27  | 22.01  | 12.59  | 28.52  | 20.19  | 33.96 | 34.29   |
| 1                  | 16.63                                               | 19.23  | 21.85  | 12.68  | 28.50  | 20.17  | 32.16 | 33.18   |
| 2                  | 17.58                                               | 20.41  | 23.19  | 13.27  | 31.27  | 20.80  | 31.81 | 31.38   |
| 3                  | 19.02                                               | 22.29  | 25.58  | 14.02  | 34.78  | 21.66  | 33.63 | 30.52   |
| 4                  | 19.53                                               | 22.83  | 26.04  | 14.22  | 31.24  | 21.30  | 35.91 | 32.29   |
| 5                  | 19.20                                               | 22.04  | 24.21  | 14.00  | 27.97  | 19.77  | 30.93 | 36.63   |
| 6                  | 18.64                                               | 20.64  | 21.32  | 13.92  | 26.51  | 18.11  | 25.37 | 36.71   |
| 7                  | 17.71                                               | 18.67  | 18.30  | 14.31  | 24.88  | 16.97  | 21.80 | 28.98   |
| 8                  | 16.78                                               | 17.02  | 16.26  | 15.33  | 23.08  | 16.69  | 19.74 | 24.44   |
| 9                  | 16.84                                               | 16.72  | 15.74  | 17.19  | 22.41  | 17.46  | 18.78 | 21.64   |
| 10                 | 19.21                                               | 18.77  | 17.34  | 20.37  | 23.80  | 19.74  | 18.79 | 20.04   |
| 11                 | 25.11                                               | 25.08  | 22.04  | 22.19  | 25.62  | 24.76  | 19.89 | 19.49   |
| 12                 | 24.83                                               | 31.42  | 30.59  | 18.94  | 23.59  | 32.22  | 22.39 | 19.91   |
| 13                 | 20.62                                               | 24.16  | 26.47  | 16.43  | 21.50  | 24.94  | 27.82 | 21.31   |
| 14                 | 19.28                                               | 21.68  | 21.95  | 15.61  | 21.29  | 20.07  | 43.82 | 23.97   |
| 15                 | 18.57                                               | 19.82  | 18.77  | 15.78  | 22.12  | 17.50  | 26.89 | 27.84   |
| 16                 | 17.87                                               | 18.15  | 16.67  | 16.73  | 23.13  | 16.37  | 21.36 | 29.80   |
| 17                 | 18.16                                               | 17.80  | 16.11  | 18.70  | 24.43  | 16.42  | 18.83 | 26.51   |
| 18                 | 20.39                                               | 19.23  | 17.13  | 22.73  | 27.24  | 17.59  | 17.70 | 23.64   |
| 19                 | 25.35                                               | 22.45  | 19.58  | 30.03  | 30.64  | 19.77  | 17.56 | 22.39   |
| 20                 | 32.85                                               | 25.97  | 22.67  | 31.59  | 29.03  | 22.42  | 17.73 | 21.83   |
| 21                 | 28.13                                               | 24.83  | 23.84  | 26.89  | 25.51  | 24.15  | 17.33 | 20.92   |
| 22                 | 21.49                                               | 20.66  | 21.89  | 21.49  | 21.22  | 24.63  | 16.16 | 18.80   |
| 23                 | 16.86                                               | 16.92  | 18.75  | 16.50  | 16.98  | 22.08  | 14.80 | 16.09   |
| 24                 | 14.10                                               | 14.57  | 16.27  | 13.25  | 13.99  | 17.96  | 13.97 | 13.94   |