

# RF Conversion dBm - volts - watts (50-Ohm)

| dBm | V     | P <sub>o</sub> | dBm        | V         | P <sub>o</sub> | dBm        | mV        | P <sub>o</sub> | dBm        | μV        | P <sub>o</sub> |
|-----|-------|----------------|------------|-----------|----------------|------------|-----------|----------------|------------|-----------|----------------|
| +53 | 100.0 | 200W           | 0          | .225      | 1.0 mW         | -49        | 0.80      |                | -98        | 2.9       |                |
| +50 | 70.7  | 100W           | -1         | .200      | .80 mW         | -50        | 0.71      | .01 μW         | -99        | 2.51      |                |
| +49 | 64.0  | 80W            | -2         | .180      | .64 mW         | -51        | 0.64      |                | -100       | 2.25      | .1 pW          |
| +48 | 58.0  | 64W            | -3         | .160      | .50 mW         | -52        | 0.57      |                | -101       | 2.0       |                |
| +47 | 50.0  | 50W            | -4         | .141      | .40 mW         | -53        | 0.50      |                | -102       | 1.8       |                |
| +46 | 44.5  | 40W            | -5         | .125      | .32 mW         | -54        | 0.45      |                | -103       | 1.6       |                |
| +45 | 40.0  | 32W            | -6         | .115      | .25 mW         | -55        | 0.40      |                | -104       | 1.41      |                |
| +44 | 32.5  | 25W            | -7         | .100      | .20 mW         | -56        | 0.351     |                | -105       | 1.27      |                |
| +43 | 32.0  | 20W            | -8         | .090      | .16 mW         | -57        | 0.32      |                | -106       | 1.18      |                |
| +42 | 28.0  | 16W            | -9         | .080      | .125 mW        | -58        | 0.286     |                |            |           |                |
| +41 | 26.2  | 12.5W          | -10        | .071      | .10 mW         | -59        | 0.251     |                | <b>dBm</b> | <b>nV</b> |                |
| +40 | 22.5  | 10W            | -11        | .064      |                | -60        | 0.225     | .001 μW        | -107       | 1000      |                |
| +39 | 20.0  | 8W             | -12        | .058      |                | -61        | 0.200     |                | -108       | 900       |                |
| +38 | 18.0  | 6.4W           | -13        | .050      |                | -62        | 0.180     |                | -109       | 800       |                |
| +37 | 16.0  | 5W             | -14        | .045      |                | -63        | 0.160     |                | -110       | 710       | .01 pW         |
| +36 | 14.1  | 4W             | -15        | .040      |                | -64        | 0.141     |                | -109       | 640       |                |
| +35 | 12.5  | 3.2W           | -16        | .0355     |                |            |           |                | -112       | 580       |                |
| +34 | 11.5  | 2.5W           |            |           |                | <b>dBm</b> | <b>μV</b> |                | -113       | 500       |                |
| +33 | 10.0  | 2W             | <b>dBm</b> | <b>mV</b> |                | -65        | 128       |                | -114       | 450       |                |
| +32 | 9.0   | 1.6W           | -17        | 31.5      |                | -66        | 115       |                | -115       | 400       |                |
| +31 | 8.0   | 1.25W          | -18        | 28.5      |                | -67        | 100       |                | -116       | 355       |                |
| +30 | 7.10  | 1.0W           | -19        | 25.1      |                | -68        | 90        |                | -117       | 825       |                |
| +29 | 6.40  | 800 mW         | -20        | 22.5      | .01 mW         | -69        | 80        |                | -118       | 285       |                |
| +28 | 5.80  | 640 mW         | -21        | 20.0      |                | -70        | 71        | .1nW           | -119       | 251       |                |
| +27 | 5.00  | 500 mW         | -22        | 17.9      |                | -71        | 65        |                | -120       | 225       | .001 pW        |
| +26 | 4.45  | 400 mW         | -23        | 15.9      |                | -72        | 58        |                | -121       | 200       |                |
| +25 | 4.00  | 320 mW         | -24        | 14.1      |                | -73        | 50        |                | -122       | 180       |                |
| +24 | 3.55  | 250 mW         | -25        | 12.8      |                | -74        | 45        |                | -123       | 160       |                |
| +23 | 3.20  | 200 mW         | -26        | 11.5      |                | -75        | 40        |                | -124       | 141       |                |
| +22 | 2.80  | 160 mW         | -27        | 10.0      |                | -76        | 35        |                | -125       | 128       |                |
| +21 | 2.52  | 125 mW         | -28        | 8.9       |                | -77        | 32        |                | -126       | 117       |                |
| +20 | 2.25  | 100 mW         | -29        | 8.0       |                | -78        | 29        |                | -127       | 100       |                |
| +19 | 2.00  | 80 mW          | -30        | 7.1       | .001mW         | -79        | 25        |                | -128       | 90        |                |
| +18 | 1.80  | 64 mW          | -31        | 6.25      |                | -80        | 22.5      | .01 nW         | -129       | 80        |                |
| +17 | 1.60  | 50 mW          | -32        | 5.8       |                | -81        | 20.0      |                | -130       | 71        | .1fW           |
| +16 | 1.41  | 40 mW          | -33        | 5.0       |                | -82        | 18.0      |                | -131       | 61        |                |
| +15 | 1.25  | 32 mW          | -34        | 4.5       |                | -83        | 16.0      |                | -132       | 58        |                |
| +14 | 1.15  | 25 mW          | -35        | 4.0       |                | -84        | 11.1      |                | -133       | 50        |                |
| +13 | 1.00  | 20 mW          | -36        | 3.5       |                | -85        | 12.9      |                | -134       | 45        |                |
| +12 | .90   | 16 mW          | -37        | 3.2       |                | -86        | 11.5      |                | -135       | 40        |                |
| +11 | .80   | 12.5 mW        | -38        | 2.85      |                | -87        | 10.0      |                | -136       | 35        |                |
| +10 | .71   | 10 mW          | -39        | 2.5       |                | -88        | 9.0       |                | -137       | 33        |                |
| +9  | .64   | 8 mW           | -40        | 2.25      | .1μW           | -89        | 8.0       |                | -138       | 29        |                |
| +8  | .58   | 6.4 mW         | -41        | 2.0       |                | -90        | 7.1       | .001 nW        | -139       | 25        |                |
| +7  | .500  | 5 mW           | -42        | 1.8       |                | -91        | 6.1       |                | -140       | 23        | .01fW          |
| +6  | .445  | 4 mW           | -43        | 1.6       |                | -92        | 5.75      |                |            |           |                |
| +5  | .400  | 3.2 mW         | -44        | 1.4       |                | -93        | 5.0       |                |            |           |                |
| +4  | .355  | 2.5 mW         | -45        | 1.25      |                | -94        | 4.5       |                |            |           |                |
| +3  | .320  | 2.0 mW         | -46        | 1.18      |                | -95        | 4.0       |                |            |           |                |
| +2  | .280  | 1.6 mW         | -47        | 1.00      |                | -96        | 3.51      |                |            |           |                |
| +1  | .252  | 1.25 mW        | -48        | 0.90      |                | -97        | 3.2       |                |            |           |                |

# RF - Puissance réfléchie en VSWR

| RETURN<br>LOSS<br>(dB) | VSWR | RETURN<br>LOSS<br>(dB) | VSWR | RETURN<br>LOSS<br>(dB) | VSWR | RETURN<br>LOSS<br>(dB) | VSWR | RETURN<br>LOSS<br>(dB) | VSWR |
|------------------------|------|------------------------|------|------------------------|------|------------------------|------|------------------------|------|
| 46.064                 | 1.01 | 13.842                 | 1.51 | 9.485                  | 2.01 | 7.327                  | 2.51 | 5.999                  | 3.01 |
| 40.086                 | 1.02 | 13.708                 | 1.52 | 9.428                  | 2.02 | 7.294                  | 2.52 | 5.970                  | 3.02 |
| 36.607                 | 1.03 | 13.577                 | 1.53 | 9.372                  | 2.03 | 7.262                  | 2.53 | 5.956                  | 3.03 |
| 34.151                 | 1.04 | 13.449                 | 1.54 | 9.317                  | 2.04 | 7.230                  | 2.54 | 5.935                  | 3.04 |
| 32.256                 | 1.05 | 13.324                 | 1.55 | 9.262                  | 2.05 | 7.198                  | 2.55 | 5.914                  | 3.05 |
| 30.714                 | 1.06 | 13.201                 | 1.56 | 9.208                  | 2.06 | 7.167                  | 2.56 | 5.893                  | 3.06 |
| 29.417                 | 1.07 | 13.081                 | 1.57 | 9.155                  | 2.07 | 7.135                  | 2.57 | 5.872                  | 3.07 |
| 28.299                 | 1.08 | 12.964                 | 1.58 | 9.103                  | 2.08 | 7.105                  | 2.58 | 5.852                  | 3.08 |
| 27.318                 | 1.09 | 12.849                 | 1.59 | 9.051                  | 2.09 | 7.074                  | 2.59 | 5.832                  | 3.09 |
| 26.444                 | 1.10 | 12.736                 | 1.60 | 8.999                  | 2.10 | 7.044                  | 2.60 | 5.811                  | 3.10 |
| 25.658                 | 1.11 | 12.625                 | 1.61 | 8.949                  | 2.11 | 7.014                  | 2.61 | 5.791                  | 3.11 |
| 24.943                 | 1.12 | 12.518                 | 1.62 | 8.899                  | 2.12 | 6.984                  | 2.62 | 5.771                  | 3.12 |
| 24.289                 | 1.13 | 12.412                 | 1.63 | 8.849                  | 2.13 | 6.954                  | 2.63 | 5.751                  | 3.13 |
| 23.686                 | 1.14 | 12.308                 | 1.64 | 8.800                  | 2.14 | 6.925                  | 2.64 | 5.732                  | 3.14 |
| 23.127                 | 1.15 | 12.207                 | 1.65 | 8.752                  | 2.15 | 6.896                  | 2.65 | 5.712                  | 3.15 |
| 22.607                 | 1.16 | 12.107                 | 1.66 | 8.705                  | 2.16 | 6.867                  | 2.66 | 5.693                  | 3.16 |
| 22.120                 | 1.17 | 12.009                 | 1.67 | 8.657                  | 2.17 | 6.839                  | 2.67 | 5.674                  | 3.17 |
| 21.664                 | 1.18 | 11.913                 | 1.68 | 8.611                  | 2.18 | 6.811                  | 2.68 | 5.654                  | 3.18 |
| 21.234                 | 1.19 | 11.818                 | 1.69 | 8.565                  | 2.19 | 6.783                  | 2.69 | 5.635                  | 3.19 |
| 20.828                 | 1.20 | 11.725                 | 1.70 | 8.519                  | 2.20 | 6.755                  | 2.70 | 5.617                  | 3.20 |
| 20.443                 | 1.21 | 11.634                 | 1.71 | 8.474                  | 2.21 | 6.728                  | 2.71 | 5.598                  | 3.21 |
| 20.079                 | 1.22 | 11.545                 | 1.72 | 8.430                  | 2.22 | 6.700                  | 2.72 | 5.579                  | 3.22 |
| 19.732                 | 1.23 | 11.457                 | 1.73 | 8.386                  | 2.23 | 6.673                  | 2.73 | 5.561                  | 3.23 |
| 19.401                 | 1.24 | 11.370                 | 1.74 | 8.342                  | 2.24 | 6.646                  | 2.74 | 5.542                  | 3.24 |
| 19.085                 | 1.25 | 11.285                 | 1.75 | 8.299                  | 2.25 | 6.620                  | 2.75 | 5.524                  | 3.25 |
| 18.783                 | 1.26 | 11.202                 | 1.76 | 8.257                  | 2.26 | 6.594                  | 2.76 | 5.506                  | 3.26 |
| 18.493                 | 1.27 | 11.120                 | 1.77 | 8.215                  | 2.27 | 6.567                  | 2.77 | 5.488                  | 3.27 |
| 18.216                 | 1.28 | 11.039                 | 1.78 | 8.173                  | 2.28 | 6.541                  | 2.78 | 5.470                  | 3.28 |
| 17.949                 | 1.29 | 10.960                 | 1.79 | 8.138                  | 2.29 | 6.516                  | 2.79 | 5.452                  | 3.29 |
| 17.690                 | 1.30 | 10.881                 | 1.80 | 8.091                  | 2.30 | 6.490                  | 2.80 | 5.435                  | 3.30 |
| 17.445                 | 1.31 | 10.804                 | 1.81 | 8.051                  | 2.31 | 6.465                  | 2.81 | 5.417                  | 3.31 |
| 17.207                 | 1.32 | 10.729                 | 1.82 | 8.011                  | 2.32 | 6.440                  | 2.82 | 5.400                  | 3.32 |
| 16.977                 | 1.33 | 10.654                 | 1.83 | 7.972                  | 2.33 | 6.415                  | 2.83 | 5.383                  | 3.33 |
| 16.755                 | 1.34 | 10.581                 | 1.84 | 7.933                  | 2.34 | 6.390                  | 2.84 | 5.365                  | 3.34 |
| 16.540                 | 1.35 | 10.509                 | 1.85 | 7.894                  | 2.35 | 6.366                  | 2.85 | 5.348                  | 3.35 |
| 16.332                 | 1.36 | 10.437                 | 1.86 | 7.856                  | 2.36 | 6.341                  | 2.86 | 5.331                  | 3.36 |
| 16.131                 | 1.37 | 10.367                 | 1.87 | 7.818                  | 2.37 | 6.317                  | 2.87 | 5.315                  | 3.37 |
| 15.936                 | 1.38 | 10.298                 | 1.88 | 7.781                  | 2.38 | 6.293                  | 2.88 | 5.298                  | 3.38 |
| 15.747                 | 1.39 | 10.230                 | 1.89 | 7.744                  | 2.39 | 6.270                  | 2.89 | 5.281                  | 3.39 |
| 15.563                 | 1.40 | 10.163                 | 1.90 | 7.707                  | 2.40 | 6.246                  | 2.90 | 5.265                  | 3.40 |
| 15.385                 | 1.41 | 10.097                 | 1.91 | 7.671                  | 2.41 | 6.223                  | 2.91 | 5.248                  | 3.41 |
| 15.211                 | 1.42 | 10.032                 | 1.92 | 7.635                  | 2.42 | 6.200                  | 2.92 | 5.232                  | 3.42 |
| 15.043                 | 1.43 | 9.968                  | 1.93 | 7.599                  | 2.43 | 6.177                  | 2.93 | 5.216                  | 3.43 |
| 14.879                 | 1.44 | 9.904                  | 1.94 | 7.564                  | 2.44 | 6.154                  | 2.94 | 5.200                  | 3.44 |
| 14.719                 | 1.45 | 9.842                  | 1.95 | 7.529                  | 2.45 | 6.131                  | 2.95 | 5.184                  | 3.45 |
| 14.564                 | 1.46 | 9.780                  | 1.96 | 7.494                  | 2.46 | 6.109                  | 2.96 | 5.168                  | 3.46 |
| 14.412                 | 1.47 | 9.720                  | 1.97 | 7.460                  | 2.47 | 6.086                  | 2.97 | 5.152                  | 3.47 |
| 14.264                 | 1.48 | 9.660                  | 1.98 | 7.426                  | 2.48 | 6.064                  | 2.98 | 5.137                  | 3.48 |
| 14.120                 | 1.49 | 9.601                  | 1.99 | 7.393                  | 2.49 | 6.042                  | 2.99 | 5.121                  | 3.49 |
| 13.979                 | 1.50 | 9.542                  | 2.00 | 7.360                  | 2.50 | 6.021                  | 3.00 | 5.105                  | 3.50 |

Definition Technique: (RF) radio frequency - (Return Loss) puissance réfléchie - (dBm) décibels relatifs au milliwatt

VSWR (Voltage Standing Wave Ratio) représente le rapport des tensions maximale et minimale dans l'onde stationnaire formée par l'interférence des ondes émises et réfléchies.