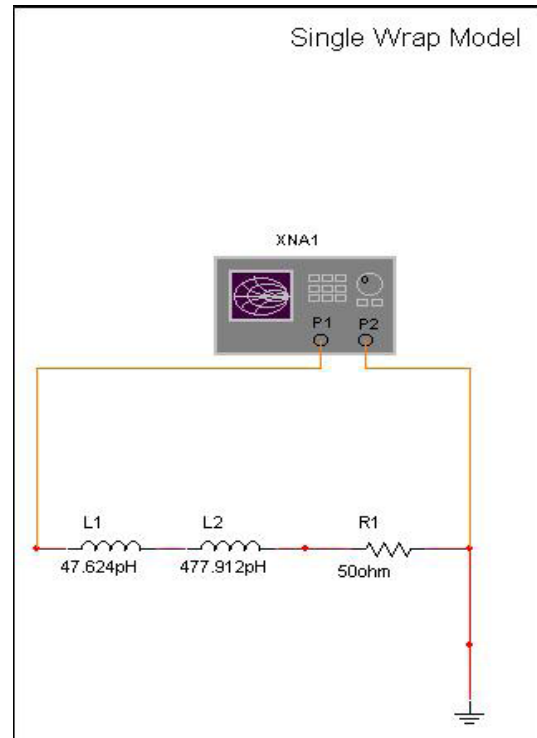


| NG31005SG-WB. | | | |
|------------------------|--------------|---------|------------|
| Resistor Modeling Data | | | |
| FREQ.(GHz) | Return Loss | S11 | Phase(S11) |
| 1.00000 | -29.62908689 | 0.03300 | 88.10876 |
| 1.26174 | -27.61245392 | 0.04163 | 87.61425 |
| 1.52349 | -25.97853887 | 0.05024 | 87.12009 |
| 1.78523 | -24.60551197 | 0.05885 | 86.62637 |
| 2.04698 | -23.42187802 | 0.06744 | 86.13314 |
| 2.30872 | -22.38207685 | 0.07601 | 85.64049 |
| 2.57047 | -21.455279 | 0.08457 | 85.14848 |
| 2.83221 | -20.61964809 | 0.09311 | 84.65719 |
| 3.09396 | -19.85915126 | 0.10163 | 84.16668 |
| 3.35570 | -19.16167427 | 0.11013 | 83.67704 |
| 3.61745 | -18.51783019 | 0.11861 | 83.18831 |
| 3.87919 | -17.92019897 | 0.12705 | 82.70059 |
| 4.14094 | -17.36282322 | 0.13547 | 82.21392 |
| 4.40268 | -16.84083059 | 0.14387 | 81.72838 |
| 4.66443 | -16.35020617 | 0.15223 | 81.24403 |
| 4.92617 | -15.8875774 | 0.16055 | 80.76094 |
| 5.18792 | -15.45010216 | 0.16885 | 80.27918 |
| 5.44966 | -15.03536394 | 0.17711 | 79.79880 |
| 5.71141 | -14.64127296 | 0.18533 | 79.31986 |
| 5.97315 | -14.266026 | 0.19351 | 78.84243 |
| 6.23490 | -13.9080484 | 0.20165 | 78.36656 |
| 6.49664 | -13.56596889 | 0.20975 | 77.89231 |
| 6.75839 | -13.23856334 | 0.21781 | 77.41974 |
| 7.02013 | -12.92475963 | 0.22582 | 76.94891 |
| 7.28188 | -12.62358541 | 0.23379 | 76.47986 |
| 7.54362 | -12.33419028 | 0.24171 | 76.01265 |
| 7.80537 | -12.05580091 | 0.24958 | 75.54733 |
| 8.06711 | -11.78771442 | 0.25740 | 75.08395 |
| 8.32886 | -11.52930259 | 0.26518 | 74.62256 |
| 8.59060 | -11.27998976 | 0.27290 | 74.16321 |
| 8.85235 | -11.03925585 | 0.28057 | 73.70593 |
| 9.11409 | -10.8066238 | 0.28818 | 73.25078 |
| 9.37584 | -10.58165472 | 0.29574 | 72.79779 |
| 9.63758 | -10.36394657 | 0.30325 | 72.34701 |
| 9.89933 | -10.15312741 | 0.31070 | 71.89848 |
| 10.16107 | -9.948854955 | 0.31810 | 71.45223 |
| 10.42282 | -9.750816248 | 0.32543 | 71.00830 |
| 10.68456 | -9.558711631 | 0.33271 | 70.56672 |
| 10.94631 | -9.37227144 | 0.33993 | 70.12753 |
| 11.20805 | -9.191238052 | 0.34709 | 69.69077 |
| 11.46980 | -9.015379543 | 0.35419 | 69.25645 |
| 11.73154 | -8.844468051 | 0.36122 | 68.82462 |
| 11.99329 | -8.678298368 | 0.36820 | 68.39529 |
| 12.25503 | -8.516676648 | 0.37512 | 67.96849 |
| 12.51678 | -8.359419454 | 0.38197 | 67.54425 |
| 12.77852 | -8.206352891 | 0.38876 | 67.12259 |
| 13.04027 | -8.057316219 | 0.39549 | 66.70354 |



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|----------|--------------|---------|----------|
| 13.30201 | -7.912154305 | 0.40215 | 66.28710 |
| 13.56376 | -7.770725688 | 0.40876 | 65.87331 |
| 13.82550 | -7.63289105 | 0.41529 | 65.46218 |
| 14.08725 | -7.498523356 | 0.42177 | 65.05373 |
| 14.34899 | -7.367496786 | 0.42818 | 64.64796 |
| 14.61074 | -7.239696639 | 0.43453 | 64.24490 |
| 14.87248 | -7.115012616 | 0.44081 | 63.84456 |
| 15.13423 | -6.993338503 | 0.44703 | 63.44695 |
| 15.39597 | -6.874575715 | 0.45318 | 63.05207 |
| 15.65772 | -6.758625206 | 0.45927 | 62.65995 |
| 15.91946 | -6.645400552 | 0.46530 | 62.27057 |
| 16.18121 | -6.534812382 | 0.47126 | 61.88397 |
| 16.44295 | -6.426775832 | 0.47716 | 61.50012 |
| 16.70470 | -6.321215639 | 0.48299 | 61.11905 |
| 16.96644 | -6.218053112 | 0.48876 | 60.74076 |
| 17.22819 | -6.1172151 | 0.49447 | 60.36525 |
| 17.48993 | -6.01863365 | 0.50011 | 59.99251 |
| 17.75168 | -5.922240549 | 0.50569 | 59.62255 |
| 18.01342 | -5.827972409 | 0.51121 | 59.25538 |
| 18.27517 | -5.735765354 | 0.51667 | 58.89098 |
| 18.53691 | -5.645563335 | 0.52206 | 58.52935 |
| 18.79866 | -5.557307836 | 0.52739 | 58.17050 |
| 19.06040 | -5.470944493 | 0.53266 | 57.81442 |
| 19.32215 | -5.386421264 | 0.53787 | 57.46110 |
| 19.58389 | -5.303685091 | 0.54302 | 57.11054 |
| 19.84564 | -5.222688274 | 0.54811 | 56.76274 |
| 20.10738 | -5.143383489 | 0.55313 | 56.41768 |
| 20.36913 | -5.065726867 | 0.55810 | 56.07535 |
| 20.63087 | -4.989671655 | 0.56301 | 55.73576 |
| 20.89262 | -4.915177497 | 0.56786 | 55.39888 |
| 21.15436 | -4.842202565 | 0.57265 | 55.06472 |
| 21.41611 | -4.770708111 | 0.57738 | 54.73325 |
| 21.67785 | -4.700653854 | 0.58206 | 54.40448 |
| 21.93960 | -4.632005425 | 0.58668 | 54.07839 |
| 22.20134 | -4.564726772 | 0.59124 | 53.75496 |
| 22.46309 | -4.498781673 | 0.59575 | 53.43419 |
| 22.72483 | -4.434136618 | 0.60020 | 53.11606 |
| 22.98658 | -4.370760695 | 0.60459 | 52.80056 |
| 23.24832 | -4.308622628 | 0.60893 | 52.48767 |
| 23.51007 | -4.247689365 | 0.61322 | 52.17739 |
| 23.77181 | -4.187934559 | 0.61745 | 51.86969 |
| 24.03356 | -4.129328554 | 0.62163 | 51.56457 |
| 24.29530 | -4.07184264 | 0.62576 | 51.26200 |
| 24.55705 | -4.015450394 | 0.62984 | 50.96197 |
| 24.81879 | -3.960124852 | 0.63386 | 50.66447 |
| 25.08054 | -3.905843961 | 0.63783 | 50.36949 |
| 25.34228 | -3.85257959 | 0.64176 | 50.07699 |
| 25.60403 | -3.800308466 | 0.64563 | 49.78698 |
| 25.86577 | -3.749009345 | 0.64946 | 49.49942 |
| 26.12752 | -3.698657619 | 0.65323 | 49.21431 |
| 26.38926 | -3.649232023 | 0.65696 | 48.93163 |

| | | | |
|----------|--------------|---------|----------|
| 26.65101 | -3.600711893 | 0.66064 | 48.65135 |
| 26.91275 | -3.553075836 | 0.66427 | 48.37347 |
| 27.17450 | -3.506304343 | 0.66786 | 48.09797 |
| 27.43624 | -3.460377143 | 0.67140 | 47.82482 |
| 27.69799 | -3.415275787 | 0.67490 | 47.55401 |
| 27.95973 | -3.370982314 | 0.67835 | 47.28552 |
| 28.22148 | -3.327476683 | 0.68175 | 47.01933 |
| 28.48322 | -3.284744423 | 0.68511 | 46.75543 |
| 28.74497 | -3.242765138 | 0.68843 | 46.49380 |
| 29.00671 | -3.201525193 | 0.69171 | 46.23441 |
| 29.26846 | -3.161006306 | 0.69494 | 45.97726 |
| 29.53020 | -3.121193112 | 0.69814 | 45.72231 |
| 29.79195 | -3.08207061 | 0.70129 | 45.46956 |
| 30.05369 | -3.043625385 | 0.70440 | 45.21899 |
| 30.31544 | -3.005840658 | 0.70747 | 44.97057 |
| 30.57718 | -2.968703685 | 0.71050 | 44.72429 |
| 30.83893 | -2.93219958 | 0.71349 | 44.48013 |
| 31.10067 | -2.896314993 | 0.71645 | 44.23806 |
| 31.36242 | -2.861038072 | 0.71936 | 43.99809 |
| 31.62416 | -2.82635482 | 0.72224 | 43.76017 |
| 31.88591 | -2.792253926 | 0.72508 | 43.52430 |
| 32.14765 | -2.758721934 | 0.72789 | 43.29046 |
| 32.40940 | -2.725746844 | 0.73066 | 43.05863 |
| 32.67114 | -2.693318087 | 0.73339 | 42.82878 |
| 32.93289 | -2.661425305 | 0.73609 | 42.60091 |
| 33.19463 | -2.630056001 | 0.73875 | 42.37500 |
| 33.45638 | -2.599199082 | 0.74138 | 42.15101 |
| 33.71812 | -2.568844834 | 0.74397 | 41.92895 |
| 33.97987 | -2.538983728 | 0.74654 | 41.70879 |
| 34.24161 | -2.509604099 | 0.74907 | 41.49051 |
| 34.50336 | -2.480697952 | 0.75156 | 41.27409 |
| 34.76510 | -2.452255143 | 0.75403 | 41.05952 |
| 35.02685 | -2.424265705 | 0.75646 | 40.84678 |
| 35.28859 | -2.396722131 | 0.75886 | 40.63586 |
| 35.55034 | -2.36961477 | 0.76124 | 40.42672 |
| 35.81208 | -2.342934132 | 0.76358 | 40.21937 |
| 36.07383 | -2.316672018 | 0.76589 | 40.01377 |
| 36.33557 | -2.290821494 | 0.76817 | 39.80991 |
| 36.59732 | -2.265374621 | 0.77043 | 39.60778 |
| 36.85906 | -2.240321338 | 0.77265 | 39.40736 |
| 37.12081 | -2.21565622 | 0.77485 | 39.20864 |
| 37.38255 | -2.191370584 | 0.77702 | 39.01158 |
| 37.64430 | -2.167456989 | 0.77916 | 38.81619 |
| 37.90604 | -2.14390922 | 0.78128 | 38.62244 |
| 38.16779 | -2.120720051 | 0.78336 | 38.43032 |
| 38.42953 | -2.097882362 | 0.78543 | 38.23980 |
| 38.69128 | -2.075389138 | 0.78746 | 38.05088 |
| 38.95302 | -2.053234562 | 0.78947 | 37.86354 |
| 39.21477 | -2.031411806 | 0.79146 | 37.67776 |
| 39.47651 | -2.009914137 | 0.79342 | 37.49353 |
| 39.73826 | -1.988737097 | 0.79536 | 37.31083 |

| | | | |
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| 40.00000 | -1.967873027 | 0.79727 | 37.12964 |
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