

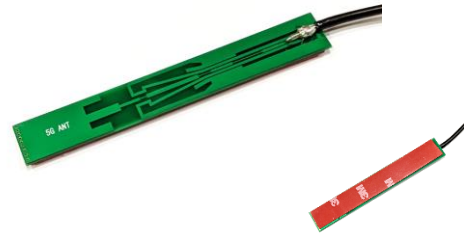
5G-P1

Multiband PCB Antenna: Industrial Cellular 5G NR / C-Band & LTE Bands FR4 Wideband Antenna



Product Description

5G-P1 covers all cellular frequencies in 700-3000 MHz spectrum with excellent performance efficiency: higher than 50%. The ground plane independent antenna is designed for Cellular, 2.4GHz Wi-Fi, NB-IoT and ISM wireless applications and can be easily installed inside the enclosure of the device by double-side adhesive sticker. Customized antenna design service is welcome to discuss.



Highlight

- ✓ Wideband covering 5G bands and LTE
- ✓ High radiation efficiency
- ✓ Suitable for embedded systems
- ✓ Ground Plane Independent
- ✓ Thin and small-size
- ✓ Easy installation
- ✓ RoHS Compliant

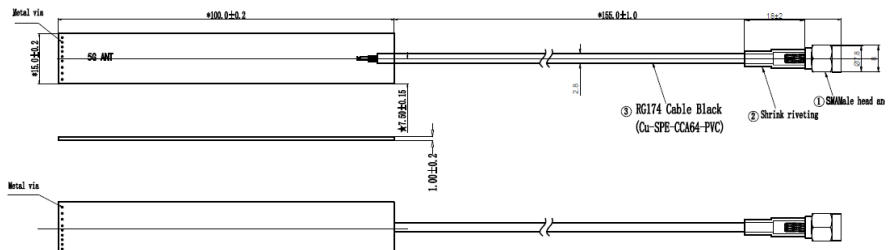
Electrical Specifications

Frequency	698 ~ 960MHz 1710 ~ 2690MHz 3300 ~ 3800MHz 3700 ~ 4000MHz (C-Band)
Gain (Peak)	1.31 dBi @ 698 ~ 960MHz 2.96 dBi @ 1710 ~ 2690MHz 3.91 dBi @ 3300 ~ 3800MHz 1.72 dBi @ 3700 ~ 4000MHz
Efficiency (Peak)	53.85% @ 698 ~ 960MHz 64.59% @ 1710 ~ 2690MHz 57.81% @ 3300 ~ 3800MHz 54.97% @ 3700 ~ 4000MHz
VSWR	<3.18 @ 698 ~ 960MHz <2.85 @ 1710 ~ 2690MHz <2.51 @ 3300 ~ 3800MHz <2.99 @ 3700 ~ 4000MHz
Polarization	Vertical
Impedance	50Ω

Mechanical Specifications

Dimension	100.0(L) x 15.0(W) mm
Connector	SMA or Other RF Connectors
Cable	RG-174, LMR-100 or other RF Cables
Mounting	3M Tape or without tape
Operation Temperature	-30° ~ +70°C
Storage Temperature	-30° ~ +75°C
RoHS	Compliant

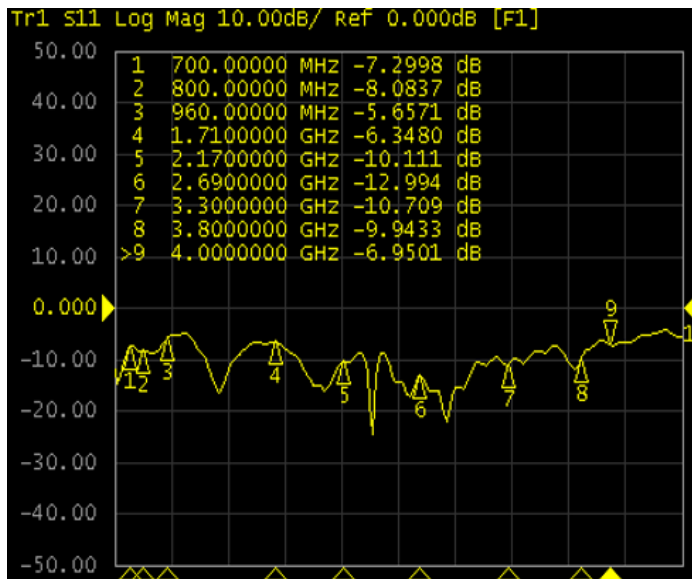
Internal Antenna Drawing:



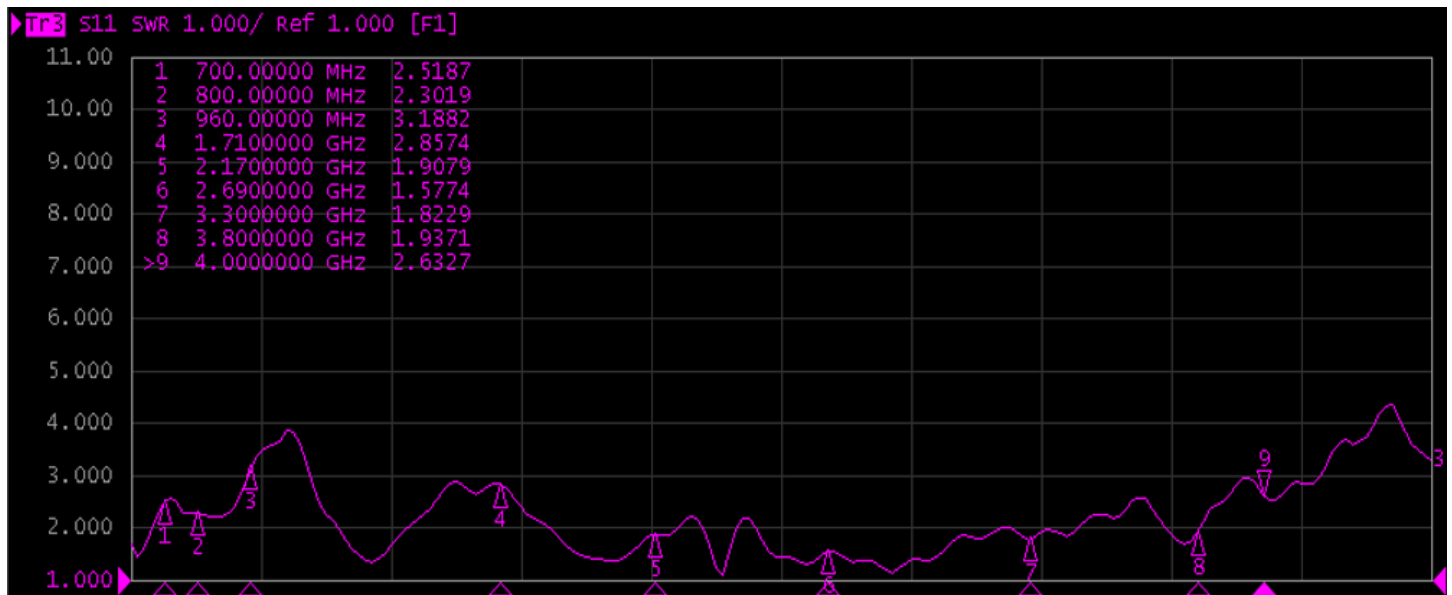


VSWR & Return Loss

Return Loss Curve

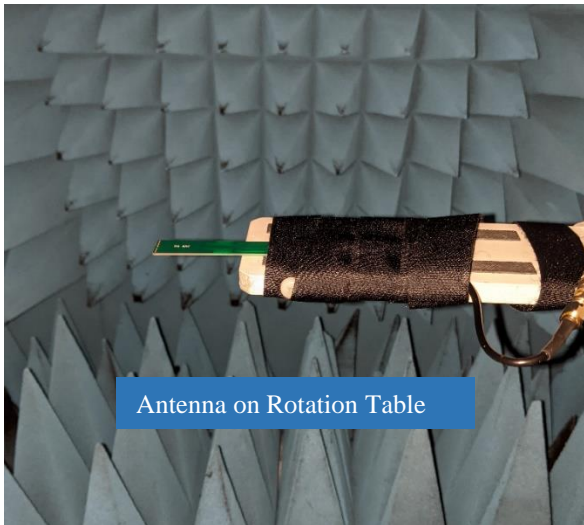


VSWR Curve

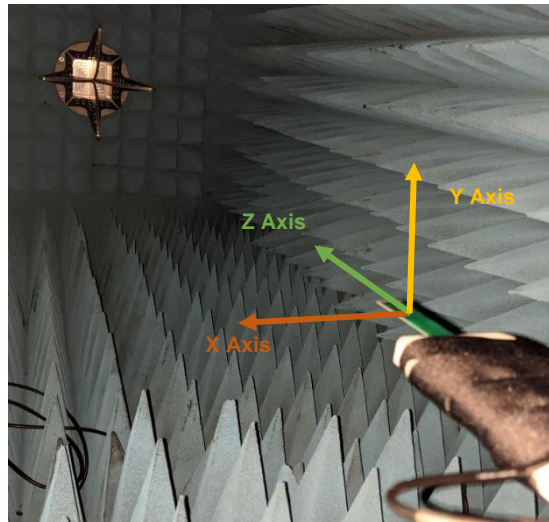




Antenna Testing & Setup in Anechoic Chamber



Antenna on Rotation Table



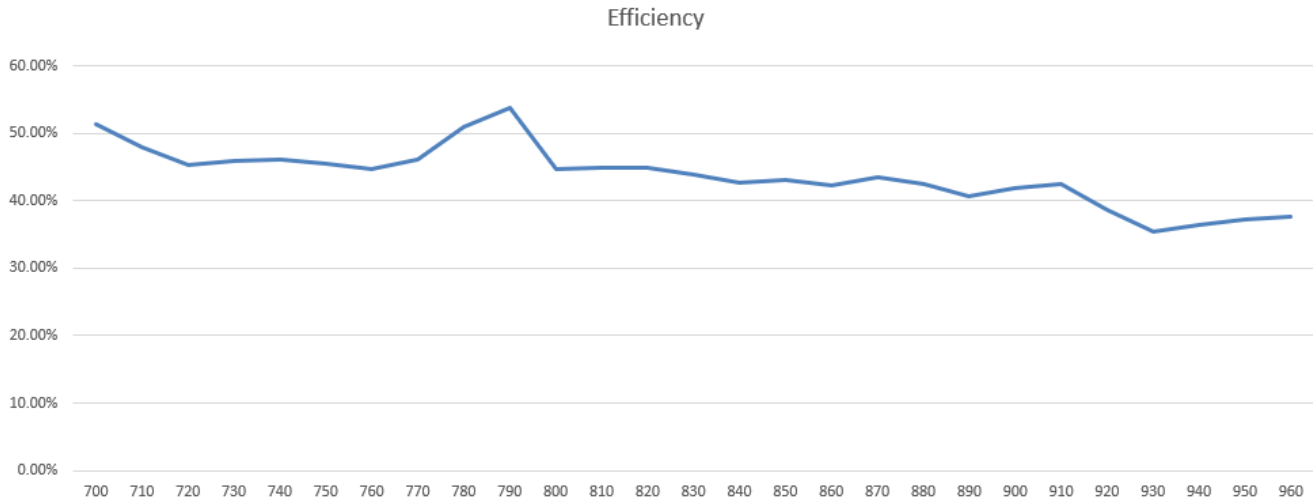
Antenna Efficiency Chart

Frequency	Efficiency	Gain	Frequency	Efficiency	Gain	Frequency	Efficiency	Gain	Frequency	Efficiency	Gain
700	51.49%	0.70	1700	50.48%	1.36	2340	57.19%	3.00	3480	52.78%	2.83
710	47.96%	0.62	1720	50.61%	1.48	2360	57.24%	2.96	3500	52.00%	2.64
720	45.23%	0.16	1740	51.60%	1.38	2380	57.09%	2.93	3520	51.36%	2.54
730	45.89%	0.04	1760	51.44%	1.44	2400	54.51%	2.80	3540	49.82%	2.30
740	46.15%	0.36	1780	52.30%	1.38	2420	50.09%	2.21	3560	48.24%	2.07
750	45.60%	0.34	1800	53.17%	1.36	2440	50.57%	0.51	3580	47.82%	2.08
760	44.70%	0.08	1820	53.03%	1.32	2460	46.09%	0.22	3600	47.57%	2.09
770	46.16%	0.75	1840	53.26%	1.19	2480	47.94%	0.74	3620	48.08%	2.12
780	51.05%	1.14	1860	54.25%	0.80	2500	47.69%	1.17	3640	47.95%	2.07
790	53.85%	1.31	1880	52.54%	0.68	2520	48.56%	1.57	3660	48.30%	1.98
800	44.80%	0.30	1900	49.37%	0.60	2540	48.37%	1.83	3680	48.21%	1.89
810	44.96%	0.36	1920	52.77%	0.96	2560	52.17%	2.09	3700	47.12%	1.72
820	45.01%	0.46	1940	56.47%	1.32	2580	54.80%	2.34	3720	45.88%	1.51
830	43.93%	0.41	1960	60.21%	1.72	2600	56.95%	2.50	3740	44.93%	1.29
840	42.71%	0.35	1980	63.69%	2.05	2620	57.51%	2.69	3760	46.90%	1.11
850	43.16%	0.14	2000	64.59%	2.22	2640	58.01%	2.78	3780	53.91%	1.24
860	42.35%	0.02	2020	63.63%	2.48	2660	59.20%	2.90	3800	54.97%	1.31
870	43.61%	0.16	2040	60.20%	2.69	2680	59.89%	3.14	3820	54.54%	1.21
880	42.44%	0.17	2060	56.78%	2.78	2700	61.07%	3.29	3840	54.36%	1.16
890	40.69%	0.15	2080	55.16%	2.84	3300	57.58%	3.91	3860	54.58%	1.12
900	41.82%	0.21	2100	54.90%	2.80	3320	57.81%	3.88	3880	51.43%	1.85
910	42.53%	0.20	2120	54.88%	2.81	3340	56.57%	3.73	3900	52.28%	0.90
920	38.58%	0.08	2140	53.63%	2.77	3360	56.51%	3.78	3920	50.45%	0.71
930	35.42%	0.01	2160	52.75%	2.68	3380	55.39%	3.69	3940	47.93%	0.43
940	36.52%	0.09	2180	52.54%	2.73	3400	56.52%	3.67	3960	46.62%	0.31
950	37.26%	0.17	2200	52.70%	2.69	3420	54.83%	3.41	3980	44.76%	0.22
960	37.74%	0.20	2300	53.98%	2.76	3440	55.03%	3.22	4000	43.79%	0.22
			2320	56.49%	2.93	3460	53.20%	2.97	4020	43.38%	0.27



Antenna Efficiency Curve

- 700 ~ 960MHz



- 1700 ~ 4020MHz

