



## Yingtron Microwave Electronics Co., Ltd.

YINGTRON is a high-tech enterprise specializing in R&D, production and sales of second-generation, third-generation, semiconductor microwave millimeter-wave power tubes, power modules, RF front-end chips and high-density packaging modules. We have R & D department, production department, technology department, reliability department, business department, etc. It has strong design, R&D and production capabilities.

We have formed similar power lines and RF front-end chips to companies like Toshiba and Sumitomo. The standardized and serialized shelf system, the product working frequency covers the L to Ku frequency band, and the output power level of the product ranges from watt level to 100 watt level. The company has advanced micro-assembly and electric equipment back-end technology platform to provide users with high density. Packaging module design and production services.

YINGTRON provides high-performance products and high-quality services for radar, communication, electronic countermeasures and other complete machines and sub-systems with solid design capabilities and advanced technology. Adding to China's RF microwave and millimeter wave industry.



# 1、GaAs, GaN internal matching power tube, module

Our self-developed gallium arsenide and gallium nitride internal matching power tubes, modules, and RF front-end chips have high-performance RF microwave modules with broadband, high power, high efficiency, and temperature environmental compatibility requirements.

GaN Internal matching power tube and module						
Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCN7101	0.4-0.47	28	15	50	65	/
YCN7102	0.4-0.47	32	15	55	62	/
YCN8101	0.9-1.2	28	15	53	65	/
YCN8102	0.9-1.2	32	15	55	58	/
YCN009020- P47	0.8-2	28	25	47	45	/
YCN012014- P52	1.2-1.4	28	15	52	60	IK
YCN012014- P54	1.2-1.4	48	15	54	58	/
YCN022023- P51	2.2-2.3	28	14	51	60	IK
YCN022023- P55	2.2-2.3	48	14	55	57	/
YCN027030- P50	2.7-3	28	14	50	60	IK
YCN027030- P53	2.7-3	28	14	53	60	IK
YCN027030- P55	2.7-3	32	14	55	58	IK
YCN027035- P49	2.7-3.5	28	13	49	58	IK
YCN027035- P54	2.7-3.5	32	13	54	55	IK
YCN031035- P40	3.1-3.5	28	13	40	58	IB
YCN031035- P49	3.1-3.5	28	13	49	55	IK

Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCN031035-P51	3.1-3.5	28	13	51	55	IK
YCN031035-P53	3.1-3.5	28	13	53	55	IK
YCN044050-P41	4.4-5.0	28	12	41	55	IB
YCN044050-P48	4.4-5.0	28	12	48	53	IK
YCN044050-P50	4.4-5.0	28	12	50	53	IK
YCN044050-P53	4.4-5.0	28	12	53	50	IK
YCN044050-P55	4.4-5.0	32	11	55	48	IK
YCN053059-P38	5.3-5.9	28	12	38	50	IB
YCN053059-P42	5.3-5.9	28	12	42	50	IB
YCN053059-P48	5.3-5.9	28	12	48	50	IK
YCN053059-P50	5.3-5.9	28	11	50	48	IK
YCN053059-P54	5.3-5.9	32	10	54	45	IK
YCN064072-P49	6.4-7.2	28	10	49	48	IK
YCN064072-P51	6.4-7.2	28	10	51	46	IK
YCN077085-P41	7.7-8.5	28	9	41	45	IB
YCN077085-P46	7.7-8.5	28	9	46	45	IK
YCN077086-P50	7.7-8.5	28	9	50	43	IK
YCN077085-P53	7.7-8.5	28	8	53	40	IK
YCN085096-P39	8.5-9.6	28	9	39	45	IB
YCN085096-P46	8.5-9.6	28	8	46	45	IB
YCN085096-P49	8.5-9.6	28	8	49	45	IB
YCN085096-P50	8.5-9.6	28	8	50	40	IK
YCN085096-P52	8.5-9.6	28	8	52	40	IK

Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCN095105-P40	9.5-10.5	28	8	40	38	IB
YCN095105-P47	9.5-10.5	28	8	47	38	IB
YCN095105-P50	9.5-10.5	28	8	50	35	IK
YCN095105-P52	9.5-10.5	28	8	52	35	IK
YCN137142-P41	13.75-14.25	10	6.5	41	25	IK
YCN137142-P47	13.75-14.25	28	7	47	28	IK

### GaAs Internal matching power tube and module

Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCC7001	0.4-0.47	10	15	45	52	/
YCC8001	0.9-1.2	10	15	43	52	/
YCC012014-P44	1.2-1.4	10	15	44	50	IK
YCC020023-P45	2.0-2.3	10	13	45	45	IK
YCC022023-P45	2.2-2.3	10	13	45	48	IK
YCC025027-P43	2.5-2.7	10	12	43	40	IK
YCC027030-P33	2.7-3.0	10	14	33	48	IB
YCC027030-P45	2.7-3.0	10	12	45	48	IK
YCC027035-P30	2.7-3.5	10	12	30	50	IB
YCC027035-P42	2.7-3.5	10	12	42	50	IK
YCC031035-P36	3.1-3.5	10	12	36	50	IB
YCC031035-P40	3.1-3.5	10	12	40.5	50	IB/IK
YCC031035-P43	3.1-3.5	10	12	43	45	IK
YCC031035-P45	3.1-3.5	10	12	45	45	IK
YCC034039-P37	3.4-3.9	10	12	36.5	50	IB
YCC034039-P40	3.4-3.9	10	12	40.5	50	IB/IK
YCC034039-P43	3.4-3.9	10	11	43	45	IK
YCC034039-P45	3.4-3.9	10	11	45	40	IK
YCC037042-P36	3.7-4.2	10	12	36.5	50	IB
YCC037042-P40	3.7-4.2	10	12	40.5	50	IB/IK
YCC037042-P43	3.7-4.2	10	11	43	45	IK

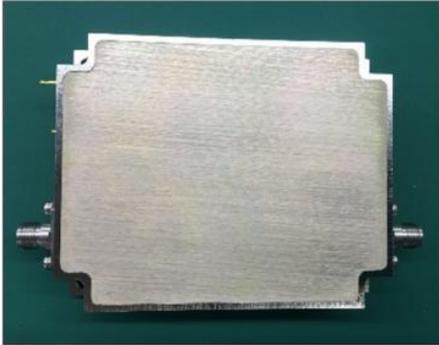
Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCC037042-P45	3.7-4.2	10	11	45	40	IK
YCC044050-P31	4.4-5.0	10	11	31	50	IB
YCC044050-P36	4.4-5.0	10	11	36.5	50	IB
YCC044050-P40	4.4-5.0	10	11	40.5	48	IB/IK
YCC044050-P42	4.4-5.0	10	11	42	48	IK
YCC044050-P44	4.4-5.0	10	10	44	45	IK
YCC044050-P46	4.4-5.0	10	10	46.5	45	IK
YCC050053-P36	5.0-5.3	10	11	36.5	48	IB
YCC050053-P39	5.0-5.3	10	10	39.5	45	IB/IK
YCC050053-P41	5.0-5.3	10	9	41.5	43	IK
YCC050053-P44	5.0-5.3	10	9	44	40	IK
YCC053059-P36	5.3-5.9	10	11	36.5	48	IB
YCC053059-P39	5.3-5.9	10	10	39.5	48	IB
YCC053059-P41	5.3-5.9	10	9	41.5	45	IK
YCC053059-P43	5.3-5.9	10	9	43	45	IK
YCC053059-P45	5.3-5.9	10	8.5	45.5	43	IK
YCC053059-P47	5.3-5.9	10	8.5	46.5	40	IK
YCC059064-P36	5.9-6.4	10	10.5	36.5	42	IB
YCC059064-P39	5.9-6.4	10	10	39.5	40	IB/IK
YCC059064-P41	5.9-6.4	10	9	41.5	40	IK
YCC059064-P43	5.9-6.4	10	8.5	43	38	IK
YCC059064-P45	5.9-6.4	10	8	45	38	IK
YCC059064-P47	5.9-6.4	10	8	46.5	38	IK

Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCC064072-P36	6.4-7.2	10	9	36.5	40	IB
YCC064072-P39	6.4-7.2	10	9	39	40	IB
YCC064072-P40	6.4-7.2	10	9	40.5	40	IK
YCC064072-P44	6.4-7.2	10	8.5	44	38	IK
YCC071079-P36	7.1-7.9	10	9	36.5	38	IB
YCC071079-P39	7.1-7.9	10	8.5	39	38	IB
YCC071079-P41	7.1-7.9	10	8	41.5	35	IK
YCC071079-P43	7.1-7.9	10	8	43	35	IK
YCC071085-P38	7.1-8.5	10	8	38	35	IB
YCC071085-P42	7.1-8.5	10	8	42	33	IK
YCC077085-P30	7.7-8.5	10	9	30	40	IB
YCC077085-P36	7.7-8.5	10	8.5	36.5	38	IB
YCC077085-P39	7.7-8.5	10	8.5	39	38	IB
YCC077085-P41	7.7-8.5	10	8.5	41	35	IK
YCC077085-P43	7.7-8.5	10	8	43	35	IK
YCC077085-P45	7.7-8.5	10	7	45	33	IK
YCC077085-P47	7.7-8.5	10	7	46.5	33	IK
YCC085096-P33	8.5-9.6	10	8	33	35	IB
YCC085096-P36	8.5-9.6	10	8	36	35	IB
YCC085096-P39	8.5-9.6	10	8	39.5	35	IB
YCC085096-P42	8.5-9.6	10	7	42	35	IK
YCC085096-P44	8.5-9.6	10	7	44	35	IK
YCC090100-P36	9.0-10.0	10	8	36	32	IB

Model No.	Frequency (GHz)	Operating leakage voltage (V)	Gain (dB)	Output Power (dBm)	Additional efficiency (%)	Package
YCC090100-P40	9.0-10.0	10	8	40	30	IB/IK
YCC090100-P42	9.0-10.0	10	7	42	32	IK
YCC090100-P44	9.0-10.0	10	7	44	30	IK
YCC095105-P34	9.5-10.5	10	7	34	30	IK
YCC095105-P37	9.5-10.5	10	7	37	30	IK
YCC010110-P36	10.0-11.0	10	7.5	36.5	28	IB
YCC010110-P40	10.0-11.0	10	6.5	40	26	IB/IK
YCC010110-P42	10.0-11.0	10	6	42.5	25	IK
YCC120130-P37	12.0-13.0	10	5.5	37	28	IB
YCC120130-P40	12.0-13.0	10	5.5	40	25	IK
YCC137142-P41	13.75-14.25	10	6.5	41	25	IK

## 2.High-density packaging module

We can develop high-density package module components according to customer requirements. The module integrates micro-electronic hybrid integration process with high sensitivity, large dynamic range, high power, low power consumption, hermetic packaging, small size, light weight and reliability. Higher characteristics.



**EMC Broadband Amplifiers**



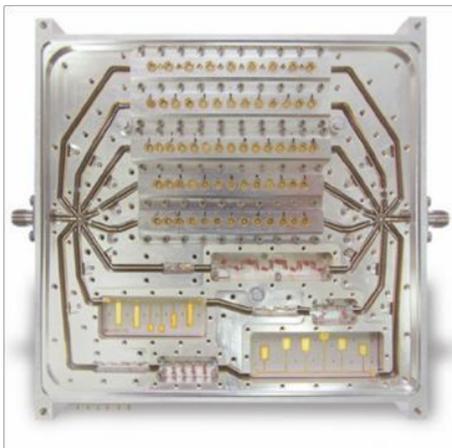
**TR Modules**



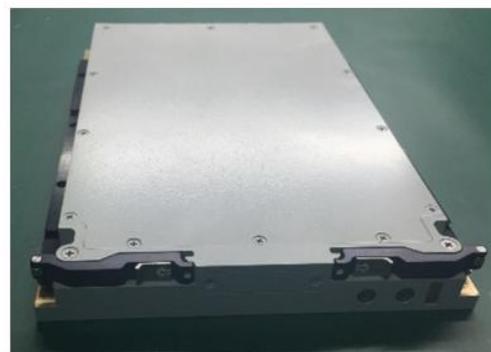
**Transceivers**



**Limited-amplitude  
Receiving Modules**



**Switching Filter Modules**



**Switch Matrix**

### 3.Slide, substrate soaking plate, etc.

Diamond-Cu composites:

Copper has excellent thermal conductivity. Diamond has excellent properties in semiconductor and optical applications. Based on copper matrix and diamond particles as reinforcement, Diamond-Cu composites will be able to design the final thermal conductivity and thermal expansion coefficient by adjusting the ratio of diamond to copper. Diamond-Cu composites are new type of thermal management materials with high thermal conductivity and low expansion coefficient.

#### Properties:

Typical properties		Introductions
Thermal conductivity(W/mK)	$\geq 500$	The thermal conductivity is 1.5~2 times of Cu; 2.5-3 times of MoCu
Density (g/cm <sup>3</sup> )	$< 5.6$	56% of the density of MoCu; 60% of the density of Cu
Coefficient of thermal expansio (ppm/K)	$\leq 6.8$	The coefficient of thermal expansion is adjustable and matches with Si, GaAs and GaN
Bending strength (MPa)	$\geq 350$	Having high strength and stiffness

#### Application:

- Heat sink for solid state lasers
- Heat sink for CPUs
- Base plates in high power electronics
- Heat sink for LED and HB-LEDs
- Heat sink for RF and microwave packages
- Thermal management of high thermally loaded electronics component

