



Professional RF Power Amplifier
& System Manufacturer
Solutions Provider



EMC CATALOG



Electromagnetic Compatibility



Worldwide sales hotline
+86-25-84471786-807

COMPANY PROFILE



Founded in 2004, Rflight Communication Electronic Co., Ltd. is a high-new technology company dedicated to R&D, manufacture and system solutions for RF power amplifiers and PIM testing systems. Our major products including various high-power RF power amplifiers, PIM testing systems and Integrated testing system. Application including defense, EMC, space research, high energy physics, wireless communications, calibration inspection, medical etc.

The company is located in Jiangning High-New Technology Development Zone, we have a team of experienced microwave telecom. R&D engineers amongst them 1 researcher, 5 senior engineer, 70 engineer. To cope with customer and market demand for the high quality power amplifiers and systems, our 170 person staff is determined to provide with creative solution that is in the cut-edge of domestic and international technology.

Our major products including various power amplifiers, PIM analyzers etc. Our Power Amplifiers freq. span from 4KHz-100GHz, power rate from 1W-500KW.

R&D, manufacture capability: CNC, Anechoic chamber, Shield room, high-low temperature chamber, vibration table etc, the company is ISO9001 quality management system certified so that to ensure all the quality process has been controlled and secured.

Our products are FCC&CE certified for US & European markets. Our customers spreading around 20 countries all over the world, including China, USA, Germany, Sweden, India, Japan, Korea, Canada, France, Australia etc...

Company target: Domestically based company however with worldwide vision, to establish a leading company and create first class branding! Meeting all defense and commercial customer requests as Power Amplifier and Application System Solution Provider.

To be the best and to be number one!

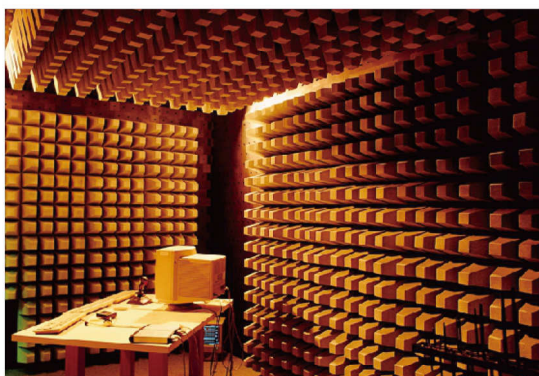


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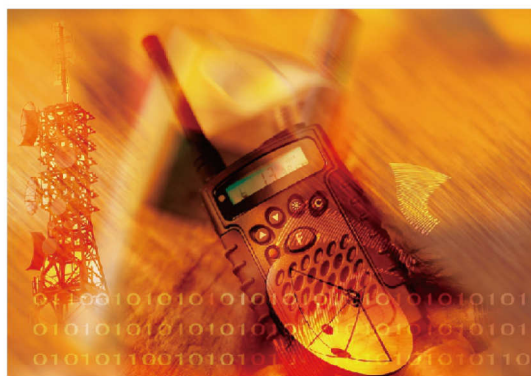
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MAJOR APPLICATIONS

EMC



Telecom



Space research



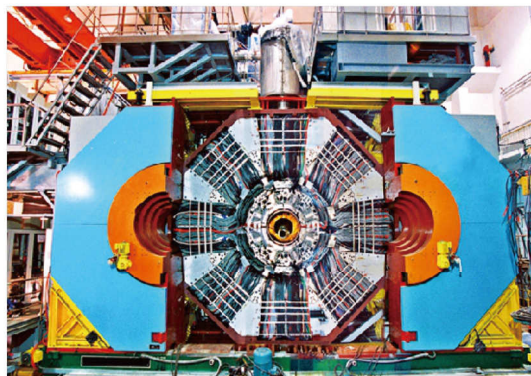
Aerospace, aeronatic & defense



Advanced medical



High-energy physics research





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CREDENTIALS



ISO9001 Certificate



High-Tech Enterprise Certificate



CE Certificate



Keysight Technologies Solutions Partner Certificate



FCC Certificate

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PRODUCTION AND TEST CAPABILITY



Over 5000 square meters of factory floor
and hundreds of test and calibration equipment





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MAJOR PRODUCTS



NTAMP Series
 High Power Narrowband
 Power Amplifier



NTSWPPA Series
 HighPower Wideband Solidstate
 CW&Pulsed Power Amplifier



NTTWSA Series
 HighPower Wideband TWT
 Power Amplifier



NTWPA Series
 High Power Wideband SolidState
 Power Amplifier



NTTWPPA Series
 HighPower Wideband TWT
 Pulsed Power Amplifier



NTWPPA Series
 HighPower Wideband Solidstate
 Pulsed Amplifier



NTSWPA Series
 HighPower Wideband Solidstate
 Pulsed Power Amplifier Module



NTSPA Series
 Solidstate Power Amplifier Module



NTPIM-E Series
 Portable PIM Test System



NTPIM-D Series
 Desktop PIM Test System



NTPIM Series
 PIM Test System



NTGWPPA Series
 Power Tolerance Test

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PRODUCT FEATURES



Rflight is capable to offer various customized designs based on different frequency, power, duty cycle and special technical requirements.

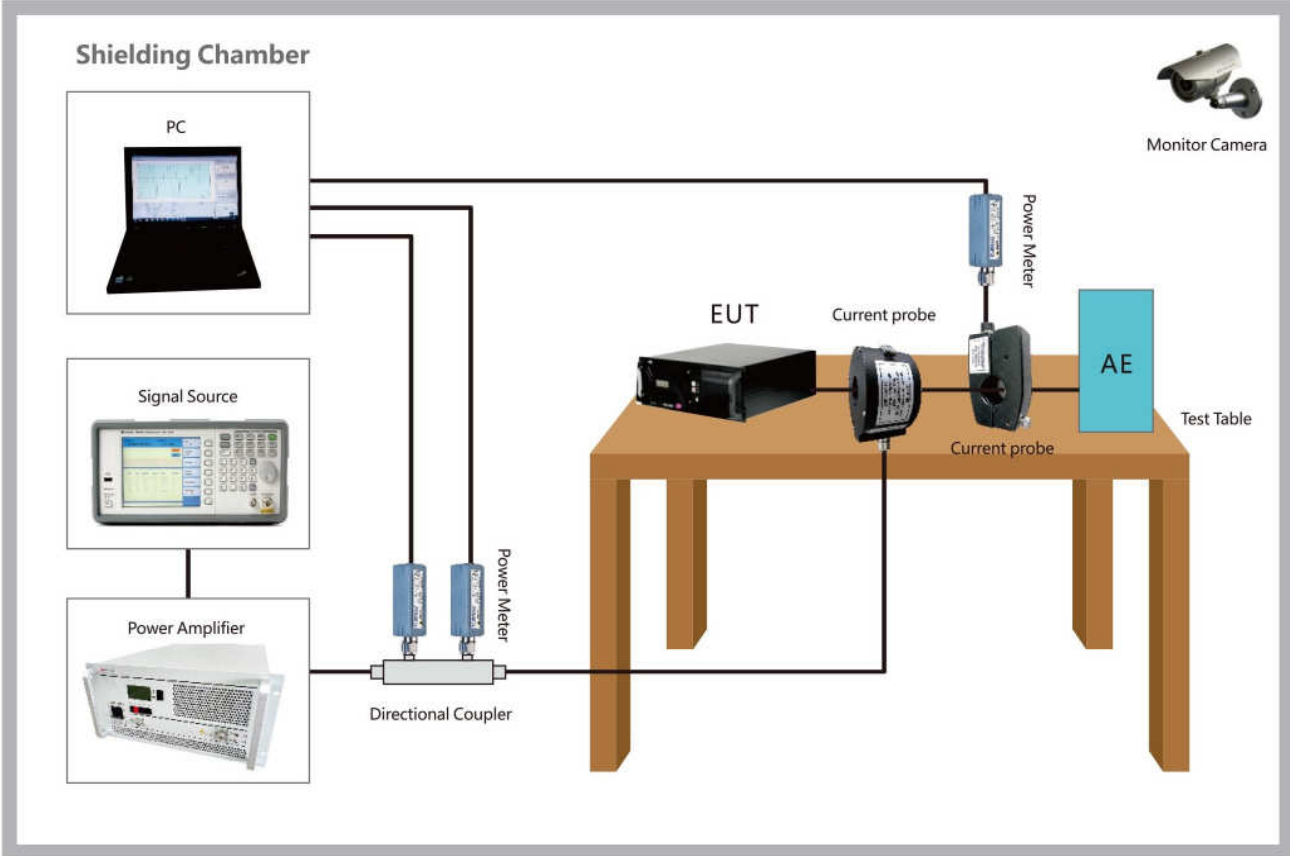
Power Amplifiers	
High Power Narrow Band Power Amplifier	Freq: 4kHz-100GHz
	Avg. Power: 1W-10KW
High Power Narrow Band Pulsed Power Amplifier	Freq: 4kHz-4GHz
	Peak Power: 100W-500kW
High Power Wideband Power Amplifier	Freq: 4kHz-100GHz
	Avg. Power: 1W-1KW
High Power Wideband Pulsed Power Amplifier	Freq: 4kHz-6GHz
	Peak Power: 100W-100kW
High Power Wideband TWT Power Amplifier	Freq: 1GHz-45GHz
	Avg. Power: 1W-10kW
High Power Wideband TWT Pulsed Power Amplifier	Freq: 1GHz-18GHz
	Peak Power: 1W-500kW

EMC SYSTEM Introduction

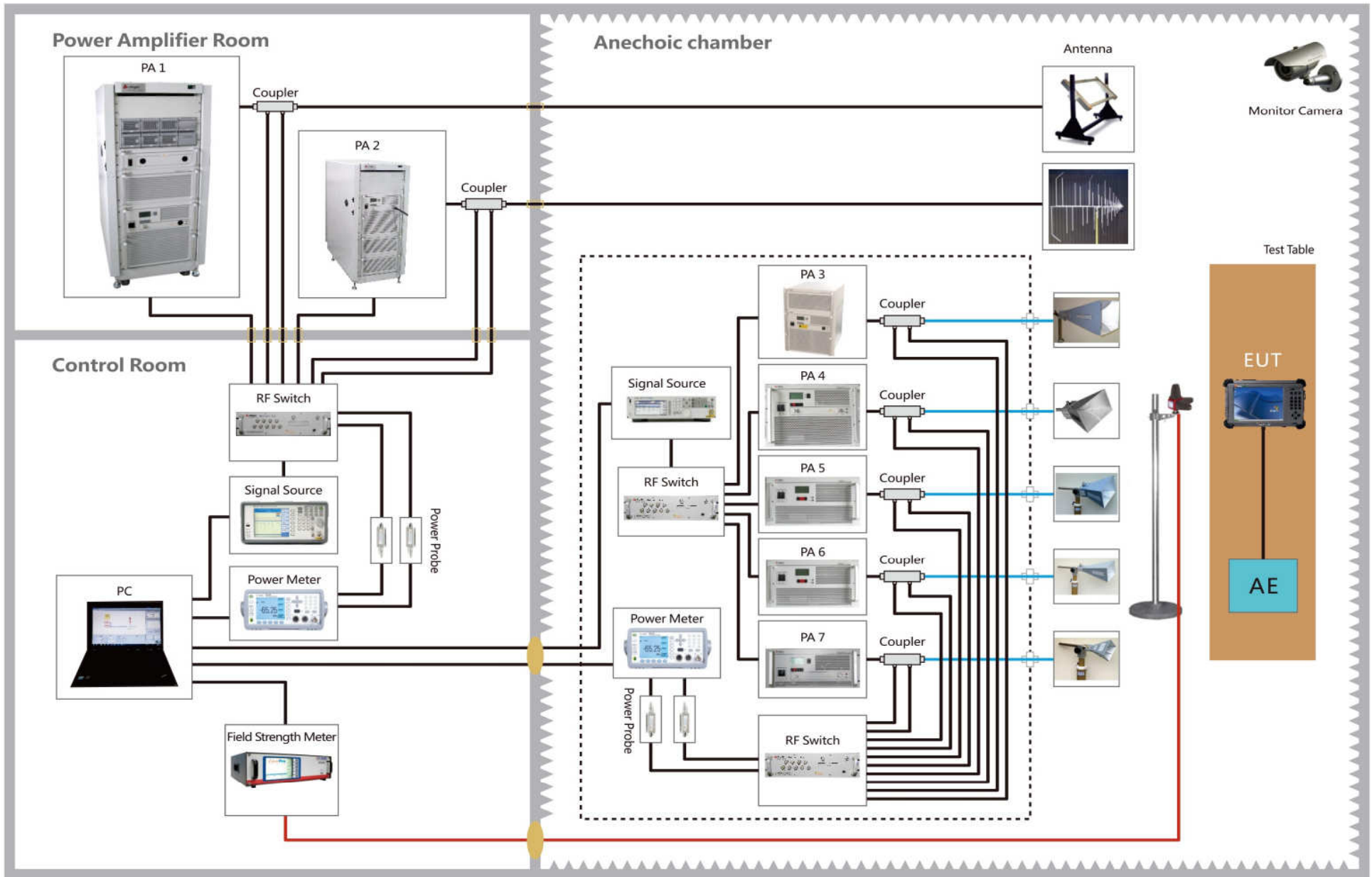
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- There' s interactive interferences between power supply, electronic and telecom equipment when connecting together through physical connection or space coupling. It can bring to the reduced performance and irreversible damage to the product, i.e. the problem of electromagnetic compatibility (EMC).
- EMC in general as for research in two categories: EMI and EMS.
- Based on different types of coupling, EMS can be divided into two categories: conductive and radiative

Conductive EMS Testing System



Radiative EMS Testing System(10kHz-40GHz 200V/m)



SUCCESSFUL CASE

Power Amplifiers for GJB151A Equipment Level EMC Immunity Test

In the wake of widely using of electronic products in military and civilian industries, Electromagnetic Compatibility (EMC) has increasingly attracted each country' s attention.

In the field of electromagnetic interference test, our NTWPAS-XXXX series & NTTWPAS-XXXX series wideband power amplifiers technically are in the leading position in the domestic market, meeting National Military Standard GJB-151A/GJB-152A (MIL-STD-461F) 200v/m for EMS test. Using our power amplifier to replace the well-know foreign brands, our domestic customers including China Telecommunication Technology Labs (CTTL), State Radio Regulation Committee, CCTL, GRGT, Chengdu Telecommunications Metrology Station, Xi' an Inspection and Testing Center for Radio Communication Products etc.

Below is a typical case of Rflight supplied 10KHz-40GHz, 200V/m EMS test system for a major local EMC lab.



System Requirements(10kHz-40GHz 200V/m)

10kHz-10MHz CW:3000W AND 10MHz-100MHz CW:3000W
/ NTWPAS-0000010013000E

80MHz-300MHz CW:2000W AND 300MHz-1000MHz CW:700W
/ NTWPAS-008102000700E

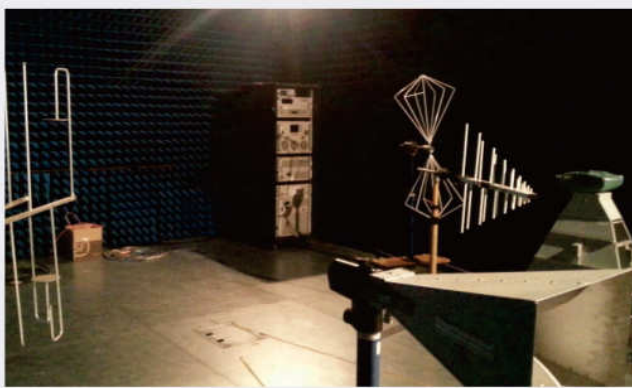
800MHz-2500MHz CW:200W / NTWPAS-0825200

2500MHz-6000MHz CW:200W / NTWPAS-2560200

6GHz-18GHz CW : 200W / NTTWPAS-6018200

18GHz-26.5GHz CW : 50W / NTTWPAS-1826550

26.5GHz-40GHz CW : 40W / NTTWPAS-2654040



SUCCESSFUL CASE



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G Class & L Class Power Amplifiers for RTCA DO-160F

With the development of China's large aircraft project, the domestic aviation industry pays more attention to the airworthiness standards, also there're airworthiness tests being executed following the airworthiness standards, for example RTCA DO-160

RTCA DO-160 sets-up explicit guidelines for EMC immunity test which also gives further requirements for power amplifiers. To cope with these new and stringent requirements, as a professional power amplifier manufacturer in China, Rflight has presented with its own solutions including NTWPPAS-XXXX & NTTWPPAS-XXXX series wideband TWT pulsed wave power amplifiers which are meeting RTCA DO-160F, G Class & L Class EMC immunity test requirements.

0.1-18GHz G Class & L Class Power Amplifiers for RTCA DO-160F

NTWPAS-0120100E	0.1GHz-1GHz/1GHz-2GHz	CW: 100W
NTWPAS-2060100	2GHz-6GHz	CW: 100W
NTWPAS-60180100	6GHz-18GHz	CW: 100W
NTWPPAS-04101500	0.4GHz-1GHz	PW:1500W
NTWPPAS-10206000	1GHz-2GHz	PW:6000W
NTWPPAS-204012000	2GHz-4GHz	PW:12000W
NTTWPPAS-408012000	4GHz-8GHz	PW:12000W
NTTWPPAS-8018012000	8GHz-18GHz	PW:12000W
NTTWPPAS-102020000	1GHz-2GHz	PW:20KW
NTTWPPAS-204020000	2GHz-4GHz	PW:20KW



DEFENSE APPLICATION

Power Amplifiers for GJB1389A System Level EMC Immunity Test



With the wide application of information technology and rapid development of weaponry, the military equipment is in a more rigid EMC environment as amongst land, sea, air, space, electronic etc. EMC is getting as a bottle neck for the successful R&D of the weaponry. To satisfy the operation of large combat platform and integrated information weaponry under complicated EMC environment, It's necessary to follow GJB1389A standard to verify the EMC test. Compare to GJB151B equipment level test, GJB1389A has higher requirements regarding to RF sensitive-ness, weaponry hazard, safety redundancy, spectrum compatibility. For example the test field strength under GJB1389A is 27460V/m (peak), 2620V/m (CW), which is much higher than 200V/m of GJB151B. Rflight provides total solution for the system level EMC immunity test.



Power Amplifier Application for GJB1389A System Level EMC Immunity Test

NTWPAS-0000010110000E	10KHz-10MHz/10Mz-100MHz	CW: 10KW
NTWPAS-01105000E	0.1GHz-0.4GHz/0.4GHz-1GHz	CW: 5000W
NTWPAS-102010000	1GHz-2GHz	CW: 10KW
NTWPAS-20402000	2GHz-4GHz	CW: 2000W
NTWPAS-40602000	4GHz-6GHz	CW: 2000W
NTTWPAS-60180200	6GHz-18GHz	CW: 200W
NTWPPAS-092010000	0.9GHz-2GHz	PW:10KW
NTWPPAS-2040110000	2GHz-4GHz	PW:10KW
NTTWPPAS-092020000	0.9GHz-2GHz	PW:20KW
NTTWPPAS-204020000	2GHz-4GHz	PW:20KW
NTTWPPAS-0920500000E	0.9GHz-2GHz	PW:500KW
NTTWPPAS-2040100000E	2GHz-4GHz	PW:100KW



DEFENSE APPLICATION



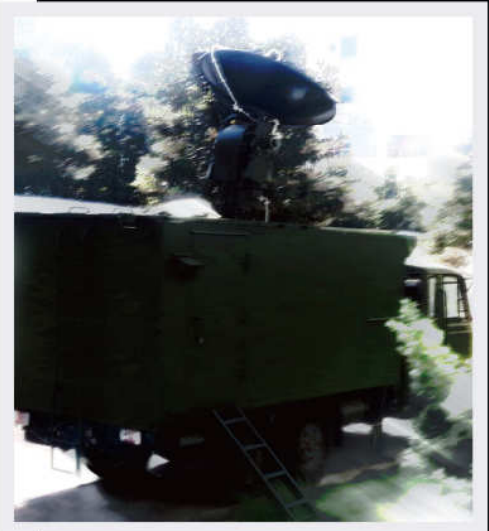
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Power Amplifiers for Military Electronic Jamming & Antenna Measurement System

In the field of military electronic jamming & Antenna Measurement systems, our NTWPAS-XXXX and NTTWPAS-XXXX series wideband amplifier technology is in the domestic leading position, providing a variety of power amplifiers for military electronic jamming systems or electronic decoy systems as well as antenna measurement system.

System Requirements

1MHz-1GHz CW:100W / NTWPAS-000110100
800MHz-2.5GHz CW:100W / NTWPAS-0825100
1GHz-4GHz CW:100W / NTWPAS-1040100
2GHz-6GHz CW:100W / NTWPAS-2060100
6GHz-18GHz CW : 100W / NTTWPAS-6018100
18GHz-26.5GHz CW : 50W / NTTWPAS-1826550
26.5GHz-40GHz CW : 20W / NTTWPAS-2654020



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EQUIPMENT SELECTION



Below power amplifiers mostly are solid state or TWT, TWT indicates travel wave tube. Customization is allowed based on customer request.



EMC CW Power Amplifier							
Product	Model	Band frequency	Gain Min(dB)	Avg. Power Min(W)	Gain Flatness Max(±dB)	VSWR	Size(mm)
Wideband Solidstate	NTPAS-4K001100	4k-10MHz	50	100	4.0	2.0	448*600*135
Wideband Solidstate	NTPAS-0000102100	100k-250MHz	50	100	4.0	2.0	448*600*135
Wideband Solidstate	NTPAS-0000102200	100k-250MHz	53	200	4.0	2.0	448*600*225
Wideband Solidstate	NTPAS-0000104100	100k-400MHz	50	100	4.0	2.0	448*600*135
Wideband Solidstate	NTPAS-00000104100	10k-400MHz	50	100	5.0	2.0	448*600*177
Wideband Solidstate	NTPAS-0000010011000E	10k-10MHz/10M-100MHz	60	1000	5.0	2.0	448*600*450
Wideband Solidstate	NTPAS-0000010012000E	10k-10MHz/10M-100MHz	63	2000	5.0	2.0	600*600*720
Wideband Solidstate	NTPAS-0000010013500E	10k-10MHz/10M-100MHz	65	3500	5.0	2.0	600*600*900
Wideband Solidstate	NTPAS-00000100150003000E	10k-10MHz/10M-100MHz	67/65	5000/3000	5.0	2.0	600*600*1200
Wideband Solidstate	NTPAS-0000010021000E	10k-10MHz/10M-100MHz /100M-250MHz	60	1000	5.0	2.0	600*600*720
Wideband Solidstate	NTPAS-0000010022000E	10k-10MHz/10M-100MHz /100M-250MHz	63	2000	5.0	2.0	600*600*900
Wideband Solidstate	NTPAS-0000010023500E	10k-10MHz/10M-100MHz /100M-250MHz	65	3500	5.0	2.0	600*600*1200
Wideband Solidstate	NTPAS-0105500	100M-500MHz	57	500	3.0	2.0	448*600*270
Wideband Solidstate	NTPAS-01051000	100M-500MHz	60	1000	3.0	2.0	448*600*450
Wideband Solidstate	NTPAS-01053000	100M-500MHz	65	3000	3.0	2.0	600*600*900
Wideband Solidstate	NTPAS-0510500	500M-1GHz	57	500	3.0	2.0	448*600*360
Wideband Solidstate	NTPAS-05101000	500M-1GHz	60	1000	3.0	2.0	448*600*450
Wideband Solidstate	NTPAS-05103000	500M-1GHz	65	3000	3.0	2.0	600*600*900
Wideband Solidstate	NTPAS-0210500	200M-1GHz	57	500	4.0	2.0	448*600*450
Wideband Solidstate	NTPAS-02101000	200M-1GHz	60	1000	4.0	2.0	600*600*720
Wideband Solidstate	NTPAS-02102000	200M-1GHz	63	2000	4.0	2.0	600*600*720
Wideband Solidstate	NTPAS-00810100	80M-1GHz	50	100	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-00810200	80M-1GHz	53	200	3.0	2.0	448*600*270
Wideband Solidstate	NTPAS-00810500E	80M-300MHz/300M-1GHz	57	500	3.0	2.0	448*600*360
Wideband Solidstate	NTPAS-008101000E	80M-300MHz/300M-1GHz	60	1000	3.0	2.0	448*600*450
Wideband Solidstate	NTPAS-008102000700E	80M-300MHz/300M-1GHz	63/59	2000/700	3.0	2.0	600*600*720
Wideband Solidstate	NTPAS-0081020001000E	80M-300MHz/300M-1GHz	63/60	2000/1000	3.0	2.0	600*600*720
Narrowband Solidstate	NTAMPS-1214800	1.2-1.4 GHz	59	800	1.0	1.5	448*600*450
Narrowband Solidstate	NTAMPS-2731500	2.7-3.1 GHz	57	500	1.0	1.5	600*600*720
Wideband Solidstate	NTPAS-1020200	1.0-2.0 GHz	50	100	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-1020500	1.0-2.0 GHz	57	500	3.0	2.0	448*600*360
Wideband Solidstate	NTPAS-10201000	1.0-2.0 GHz	60	1000	3.0	2.0	600*600*720
Wideband Solidstate	NTPAS-1025100	1.0-2.5 GHz	50	100	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-1025200	1.0-2.5 GHz	53	200	3.0	2.0	448*600*270
Wideband Solidstate	NTPAS-1025500	1.0-2.5 GHz	57	500	3.0	2.0	448*600*450
Wideband Solidstate	NTPAS-0825100	800M-2.5 GHz	50	100	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-0825200	800M-2.5 GHz	53	200	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-0825400	800M-2.5 GHz	56	400	3.0	2.0	448*600*360
Wideband Solidstate	NTPAS-1030100	1.0-3.0 GHz	50	100	3.0	2.0	448*600*225
Wideband Solidstate	NTPAS-2040100	2.0-4.0 GHz	50	100	2.5	2.0	448*600*225
Wideband Solidstate	NTPAS-2040150	2.0-4.0 GHz	52	150	2.5	2.0	448*600*270
Wideband Solidstate	NTPAS-2040500	2.0-4.0 GHz	57	500	2.5	2.0	448*600*450
Wideband Solidstate	NTPAS-20401000	2.0-4.0 GHz	60	1000	2.5	2.0	600*600*720
Wideband Solidstate	NTPAS-2560100	2.5-6.0 GHz	50	100	4.0	2.0	448*600*270
Wideband Solidstate	NTPAS-2560200	2.5-6.0 GHz	53	200	4.0	2.0	448*600*360
Wideband Solidstate	NTPAS-2560300	2.5-6.0 GHz	55	300	4.0	2.0	448*600*450
Wideband Solidstate	NTPAS-2060100	2.0-6.0 GHz	50	100	4.0	2.0	448*600*270

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EQUIPMENT SELECTION



Below power amplifiers mostly are solid state or TWT, TWT indicates travel wave tube. Customization is allowed based on customer request.



EMC CW Power Amplifier

Product	Model	Band frequency	Gain Min(dB)	Avg. Power Min(W)	Gain Flatness Max(±dB)	VSWR	Size(mm)
Wideband Solidstate	NTWPAS-60180020	6.0-18.0 GHz	43	20	2.0	2.0	448*600*135
Wideband Solidstate	NTWPAS-60180050	6.0-18.0 GHz	47	50	2.0	2.0	448*600*225
Wideband Solidstate	NTWPAS-60180100	6.0-18.0 GHz	50	100	2.0	2.0	448*600*360
Wideband TWT	NTTWPAS-60180050	6.0-18.0 GHz	47	50	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-60180100	6.0-18.0 GHz	50	100	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-60180200	6.0-18.0 GHz	53	200	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-180265020	18.0-26.5 GHz	43	20	2.0	2.0	448*600*135
Wideband TWT	NTTWPAS-180265050	18.0-26.5 GHz	47	50	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-180265100	18.0-26.5 GHz	50	100	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-265400020	26.5-40.0 GHz	43	20	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-265400040	26.5-40.0 GHz	46	40	2.0	2.0	448*600*177
Wideband TWT	NTTWPAS-180400020	18.0-40.0 GHz	43	20	4.0	2.0	448*600*177

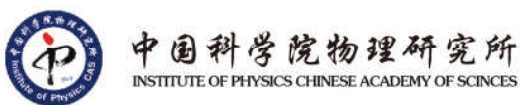
EMC Pulsed Power Amplifier

Product	Model	Band freq(GHz)	Gain Min(dB)	Peak Power Min(W)	Gain Flatness Max(±dB)	Duty Cycle	VSWR	Size(mm)
Wideband Solidstate	NTWPPAS-10201000	1.0-2.0	60	1000	2.0	1-4%	2.5	448x600x270
Wideband Solidstate	NTWPPAS-10202000	1.0-2.0	63	2000	2.0	1-4%	2.5	448x600x450
Wideband Solidstate	NTWPPAS-10205000	1.0-2.0	67	5000	2.0	1-4%	2.5	600x600x900
Wideband Solidstate	NTWPPAS-102010000	1.0-2.0	70	10000	2.0	1-4%	2.5	600x600x2000
Wideband Solidstate	NTWPPAS-102020000	1.0-2.0	73	20000	2.0	1-4%	2.5	600x600x2000x2
Wideband TWT	NTTWPAS-10201000	1.0-2.0	60	1000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-10202000	1.0-2.0	63	2000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-102010000	1.0-2.0	70	10000	2.0	1-4%	2.5	448x600x450
Narrowband Solidstate	NTWPAS-12141000	1.2-1.4	60	1000	1.0	1-4%	1.5	448x600x450
Narrowband Solidstate	NTWPAS-2731500	2.7-3.1	57	500	2.0	1-4%	2.0	448x600x450
Wideband Solidstate	NTWPPAS-20401000	2.0~4.0	60	1000	2.0	1-4%	2.5	448x600x450
Wideband Solidstate	NTWPPAS-20402000	2.0~4.0	63	2000	2.0	1-4%	2.5	600x600x720
Wideband Solidstate	NTWPPAS-204010000	2.0~4.0	70	10000	2.0	1-4%	2.5	600x600x2000x2
Wideband Solidstate	NTWPPAS-204012000	2.0~4.0	71	12000	2.0	1-4%	2.5	600x600x2000x2
Wideband TWT	NTTWPAS-20401000	2.0~4.0	60	1000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-20402000	2.0~4.0	63	2000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-204010000	2.0~4.0	70	10000	2.0	1-4%	2.5	600x600x1600x2
Wideband TWT	NTTWPAS-40801000	4.0~8.0	60	1000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-40802000	4.0~8.0	63	2000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-408012000	4.0~8.0	71	12000	2.0	1-4%	2.5	600x600x2000x2
Wideband TWT	NTTWPAS-801801000	8.0~18.0	60	1000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-801802000	8.0~18.0	63	2000	2.0	1-4%	2.5	448x600x450
Wideband TWT	NTTWPAS-8018012000	8.0~18.0	71	12000	2.0	1-4%	2.5	600x600x2000x2

EMC Low Noise Power Amplifier

Product	Model	Band frequency	Gain Min(dB)	Noise Figure Min(dB)	Gain Flatness Max(±dB)	VSWR	Size(mm)
Wideband Solidstate	NTWLNA-00000110	9kHz-1GHz	30	3.5	3.0	2.5	70 x 65 x 60
Wideband Solidstate	NTWLNA-00310	30MHz-1GHz	30	3.5	3.0	2.5	70 x 65 x 60
Wideband Solidstate	NTWLNA-00330	30MHz-3GHz	30	3.5	3.0	2.5	70 x 65 x 60
Wideband Solidstate	NTWLNA-000160	1MHz-6GHz	26	3.5	3.0	2.5	70 x 65 x 60
Wideband Solidstate	NTWLNA-10180	1GHz-18GHz	36	3.5	3.0	2.5	70 x 65 x 60
Wideband Solidstate	NTWLNA-180265	18GHz-26.5GHz	40	3.5	4.0	2.3	80 x 65 x 50
Wideband Solidstate	NTWLNA-265400	26.5GHz-40GHz	45	3.5	5.0	2.3	80 x 65 x 50

CUSTOMERS





Professional RF Power Amplifier & System Manufacturer

EMC CATALOG

RFLIGHT

Solutions Provider

RFLIGHT COMMUNICATION ELECTRONIC CO.,LTD



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<http://www.rflight.cn>

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