



RF and Microwave Amplifiers and Subsystems Selection Guide



All products are designed and manufactured in the USA.



Selection Guide

About WanTcom Inc

WanTcom has offered turnkey high frequency product solutions including super low noise amplifiers, high added power efficiency power amplifiers, and optimized subsystems. With proprietary amplifier technologies and micro electronic assembly capabilities, WanTcom has been able to integrate super low noise, wide bandwidth, exceptional low VSWR, and excellent linearity together into microwave and RF products.

With our in-house strong R&D and high volume manufacturing capabilities in USA facility, WanTcom has established the unique product development and production platform to meet today's shift market demands.

We have provided hundreds of products for our value added customers worldwide in medical magnetic resonance imaging (MRI), telecommunications, defense, fixed wireless, and measurement industry.

Unique Custom Design and Manufacture Capabilities

WanTcom has demonstrated the ability to design and produce custom high performance and high quality amplifiers and subsystems to meet MIL-STD in very short lead-time and lowest cost at any quantity.

Our Commitment to Our Customers

- Reduce the time of new product development to market
- Reduce the time to production
- Reduce the time to the lowest product price
- All products are MADE IN USA!



Selection Guide

Featured Products

WLA15-3525A

- 0.30 dB NF
- 1.42 – 1.67 GHz
- Radio Astronomy



WMA9RA

- 0.40 dB NF
- 9.4T Operation
- MRI Imaging



WBA1225AS

- 0.45 dB NF
- 1.2 – 2.4 GHz
- GPS, PCS, 3G



WBA2060-40A

- 0.8 dB NF
- 2.0 – 6.0 GHz
- 38 dB Gain



WBPA0006A

- 37 dBm P1dB
- 20– 600 MHz
- 47 dBm IP3



WBPA0527A

- 2 Watts P1dB
- 0.4 – 2.7 GHz
- LTE



WHM0035AE

- 1.2 dB NF
- 20 – 3000 MHz
- 15 dB Gain



WHM2060AE

- 0.90 dB NF
- 2.0 – 6.0 GHz
- 26 dB Gain



WHM14-3020AE

- 0.5 dB NF
- 1.2 – 1.6 GHz
- GPS





Selection Guide

Product Series

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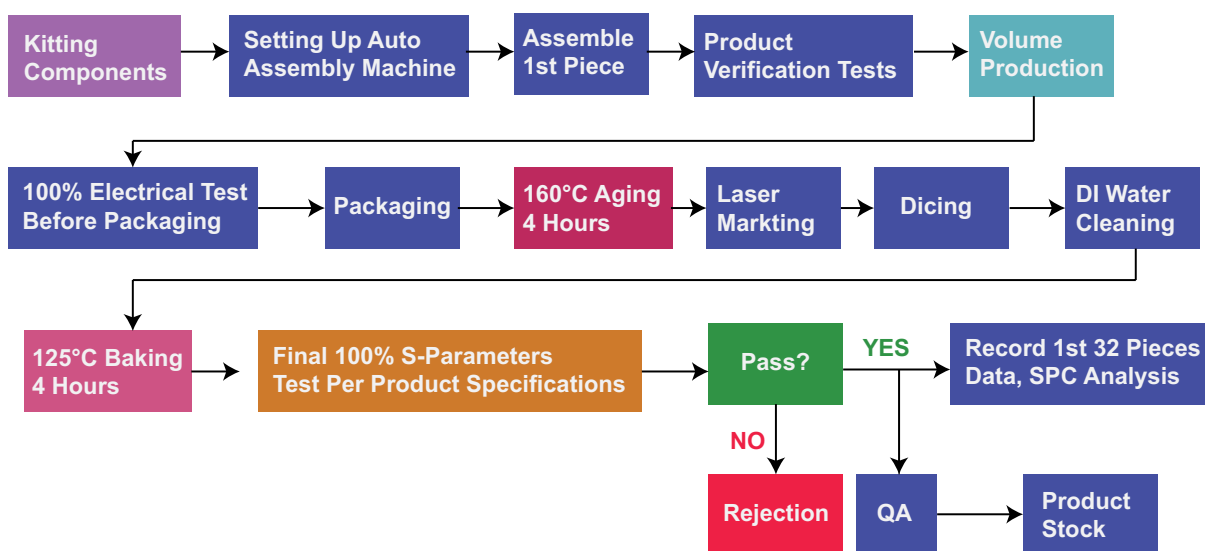


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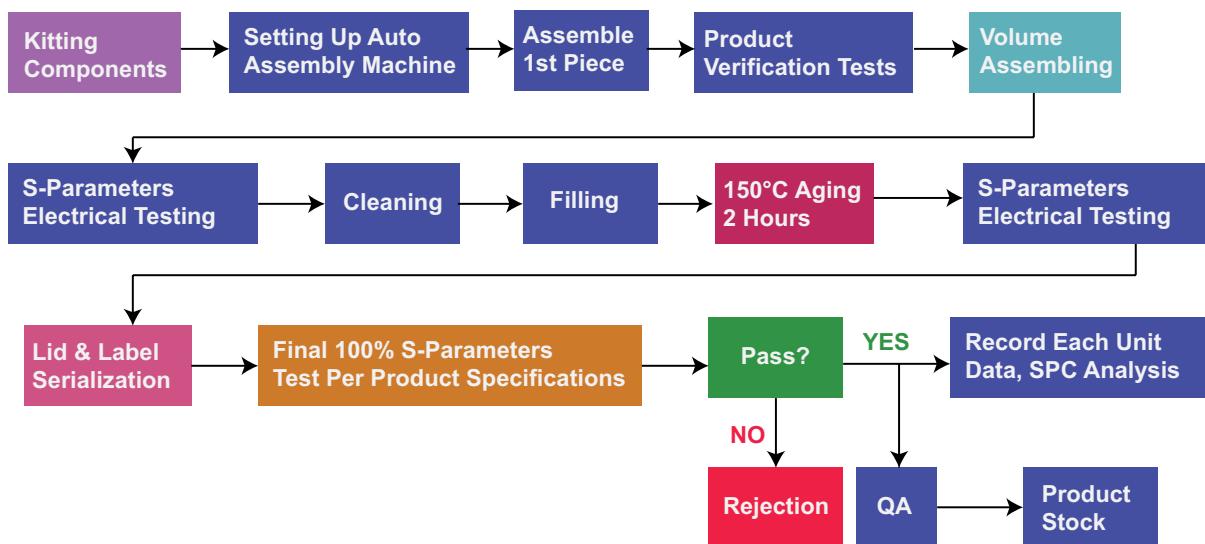
Summary of Production Processes

- Every Product is aged
- Every Product S-parameters are tested

WHM Series SMT LNA:



Connectorized Amplifier:





Selection Guide

WHM Series SMT Low Noise and Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	V _{gg}	R _{th}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	(V)	(°C/ W)	
SMT PA															
WHM0002AE	SW, VHF	0.02	0.23	17.5	3.0	1.8:1	1.8:1	30.0	48.0	--	210	10.0	-1.5	32	WHM-3
WHM0006AE	SW, VHF, UHF, Cellular, GSM, GPS	0.02	0.60	17.2	2.0	1.8:1	1.8:1	28.5	45.0	--	200	8.0	-1.5	32	WHM-3
WHM0010AE	VHF	0.001	0.15	17.4	2.7	1.8:1	1.8:1	30.0	48.0	47	200	10.0	-1.5	32	WHM-3
WHM0013AE	SW, VHF, UHF, Cellular, GSM, GPS	0.02	1.30	13.5	4.5	1.8:1	1.8:1	31.0	45.0	30	320	10.0	-1.5	28	WHM-3
WHM0015AE	SW, VHF, UHF, Cellular, GSM, GPS	0.01	1.50	15.5	4.5	1.8:1	1.8:1	29.0	45.0	--	210	10.0	-1.5	32	WHM-3
WHM005-15AE	VHF, UHF	0.02	0.70	16.5	3.2	2.0:1	2.0:1	30.0	48.0	47	210	10.0	-1.5	32	WHM-3
WHM0104AE	VHF, UHF	0.10	0.40	17.0	3.2	1.5:1	1.5:1	32.0	43.0	--	400	10.0	-1.5	18	WHM-3
WHM0205AE	VHF, UHF	0.15	0.53	17.0	2.0	1.6:1	1.6:1	30.0	45.0	--	200	10.0	-1.5	32	WHM-3
WHM0715AE	UHF, Cellular, GSM, GPS	0.70	1.50	15	2.4	1.8:1	1.8:1	30.0	45.0	45	220	10.0	-1.5	32	WHM-3
SMT LNA															
WHM0003AE	SW, VHF	0.02	0.50	22.0	0.70	1.25:1	1.25:1	16.0	30.0	--	40	3.0	NA	220	WHM-1M
WHM0003BE	SW, VHF	0.02	0.60	21.0	0.80	1.5:1	1.5:1	16.0	28.0	--	40	3.3	NA	215	WHM-1
WHM0005R	SW, VHF	0.03	0.50	24.0	0.8	1.5:1	1.5:1	24.0	38.0	--	140	5.0	NA	110	WHM-5
WHM0012AE	SW, VHF, UHF, Cellular, GSM, GPS	0.02	1.00	32.0	1.25	1.4:1	1.4:1	6.0	20.0	--	35	5.0	NA	215	WHM-4
WHM0012BE	SW, VHF, UHF, Cellular, GSM, GPS	0.001	1.00	32.0	1.0	1.4:1	1.4:1	7.0	20.0	--	35	5.0	NA	215	WHM-4
WHM0020AE	VHF, UHF, GPS, DCS, PCS, 3G	0.02	1.70	17~22	0.65	1.45:1	1.45:1	19.0	32.0	--	60	3.3	NA	220	WHM-5
WHM0035AE	VHF, UHF, GPS, DCS, PCS, 3G, S	0.02	3.0	15	1.2	1.5:1	1.5:1	12.0	25.0	--	25	5.0	NA	220	WHM-5
WHM0105AE	VHF, UHF, Pager	0.20	0.55	43.0	0.5	1.25:1	1.25:1	18.0	35.0	--	90	5.0	NA	220	WHM-4
WHM0110AE	VHF, UHF, Cellular, GSM	0.10	1.10	20.0	0.65	1.25:1	1.3:1	17.0	34.0	--	60	5.0	NA	215	WHM-1
WHM0110N	UHF, GPS	0.90	1.30	18.0	0.5	1.35:1	1.35:1	15.0	30.0	--	50	5.0	NA	215	WHM-1
WHM0206AE	VHF, UHF	0.20	0.60	21.0	1.5	1.5:1	1.5:1	24.0	34.0	--	140	5.0	NA	110	WHM-5
WHM0208AE	VHF, UHF	0.20	0.80	42.0	0.50	1.35:1	1.35:1	20.0	34.0	--	85	5.0	NA	215	WHM-4
WHM0210R	VHF, UHF	0.225	0.90	21.0	1.00	1.4:1	1.4:1	24.0	40.0	--	120	5.0	NA	110	WHM-5
WHM0220R	VHF, UHF, GPS, DCS, PCS, 3G	0.225	2.00	18.0	1.00	1.4:1	1.4:1	19.0	37.0	--	80	5.0	NA	110	WHM-5
WHM02AE	Cellular, GSM, GPS, DCS, PCS, 3G, WiMax, C	0.01	3.0	13 ~ 22	0.70	1.35:1	1.35:1	14.0	27.0	--	5 - 40	2 - 4	NA	220	3x3mm ²
WHM0305AE	VHF, UHF, Pager	0.30	0.50	32.0	1.20	1.5:1	1.5:1	12.0	22.0	--	25	3.3	NA	215	WHM-11
WHM0510AE	VHF, UHF, Cellular, GSM	0.50	1.00	38.0	0.40	1.25:1	1.25:1	19.0	30.0	--	100	5.0	NA	220	WHM-4
WHM0520-18AE	Cellular, GSM, GPS, DCS, PCS, 3G	0.70	2.00	18.0	0.95	1.35:1	1.35:1	14.0	26.0	--	30	5.0	NA	215	WHM-1
WHM0525AE	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.6	2.50	30.0	0.90	1.35:1	1.35:1	14.0	26.0	--	50	5.0	NA	215	WHM-2
WHM0526AE	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.50	2.60	14-20	0.8-1.0	1.45:1	1.45:1	16.0	34.0	--	65	5.0	NA	215	WHM-1S
WHM0530AE	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.50	3.00	15.5	1.00	1.35:1	1.35:1	10.0-14.0	20.0	--	20	5.0	NA	215	WHM-1
WHM0545AE	UHF, GPS, PCS, 3G, S, WiMax, C	0.50	4.00	26.0	1.10	1.6:1	1.6:1	14.0	27.0	--	65	5.0	NA	215	WHM-2



Selection Guide

WHM Series SMT Low Noise and Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	V _{gg}	R _{th}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	(V)	(°C/ W)	
WHM06AE	Cellular, GSM, GPS, DCS, PCS, 3G, WiMax, C	0.10	4.0	12-15	1.20	1.5:1	1.5:1	11.0	24.0	--	25	2.5	NA	215	3x3mm ²
WHM0814AE	Cellular, GSM, GPS	0.80	1.40	36.0	0.55	1.25:1	1.25:1	17.0	29.0	--	70	5.0	NA	215	WHM-4
WHM0814BE	Cellular, GSM, GPS	0.80	1.40	35.5	0.55	1.25:1	1.25:1	20.0	31.0	--	85	5.0	NA	215	WHM-4
WHM0815AE	Cellular, GSM, GPS	0.80	1.30	30.0	1.20	1.3:1	1.3:1	6.00	20.0	--	30	3.0	NA	215	WHM-11
WHM0913AE	GSM, GPS	0.90	1.30	18.0	0.70	1.35:1	1.35:1	15.0	30.0	--	50	5.0	NA	215	WHM-11
WHM0913R	GSM, GPS	0.90	1.25	19.5	0.80	1.22:1	1.22:1	19.0	34.0	--	60	5.0	NA	210	WHM-1
WHM1014AE	GSM, GPS	1.10	1.40	18.0	0.55	1.35:1	1.35:1	18.0	34.0	--	45	5.0	NA	215	WHM-11
WHM1030AE	GPS, DCS, PCS, 3G, S Band	1.00	3.00	28.5	0.95	1.5:1	1.5:1	11.0	22.0	--	40	3.3	NA	220	WHM-2
WHM1045AE	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.00	26.0	1.25	1.45:1	1.45:1	12.0	26.0	--	50	5.0	NA	215	WHM-2
WHM1115AE	GPS	1.20	1.60	28.0	0.65	1.35:1	1.35:1	12.5	24.0	--	53	5.0	NA	150	WHM-5
WHM11-2830AE	GSM, GPS	0.90	1.30	28.0	0.80	1.35:1	1.35:1	19.0	30.0	--	85	5.0	NA	150	WHM-4
WHM1318R	GPS, DCS, PCS	1.30	1.85	17.5	1.00	1.3:1	1.3:1	21.0	34.0	--	75	5.0	NA	215	WHM-1
WHM1319AE	GPS, DCS, PCS	1.00	2.00	17.0	0.80	1.35:1	1.35:1	17.0	30.0	--	40	3.3	NA	215	WHM-1S
WHM13-3530A	GPS	1.00	1.40	38.0	0.80	1.35:1	1.35:1	13.0	27.0	--	55	5.0	NA	220	WHM-6
WHM13-3530AE	GPS	1.00	2.00	33.0	0.90	1.35:1	1.35:1	13.0	26.0	--	40	3.0	NA	215	WHM-2
WHM14-3020AE	GPS	1.20	1.60	31.0	0.50	1.22:1	1.22:1	10.0	--	--	40	3.3	NA	215	WHM-4
WHM14-3020BE	GPS	1.20	1.60	32.0	0.50	1.35:1	1.35:1	7.00	--	--	25	3.3	NA	220	WHM-5
WHM14-3535AE	GPS	1.20	1.60	34.0	0.55	1.25:1	1.25:1	15.0	26.0	--	85	5.0	NA	215	WHM-4
WHM1535AE	DCS, PCS, 3G, S Band	1.50	3.20	28.0	1.10	1.4:1	1.4:1	13.0	26.0	--	50	5.0	NA	220	WHM-2
WHM1722AE	PCS, 3G	1.70	2.20	30.0	0.55	1.22:1	1.22:1	19.0	32.0	--	85	5.0	NA	215	WHM-4
WHM19-1730AE	PCS, 3G	1.70	2.20	16.0	0.90	1.25:1	1.3:1	16.0	28.5	--	33	5.0	NA	220	WHM-1
WHM19-3032AE	PCS, 3G	1.70	2.20	30.0	0.80	1.3:1	1.3:1	16.0	31.0	--	95	5.0	NA	220	WHM-2
WHM2025AE	PCS, 3G, ISM	2.00	2.50	30.0	0.55	1.35:1	1.35:1	18.0	30.0	--	80	5.0	NA	220	WHM-9
WHM2026AE	PCS, 3G, ISM	2.00	2.60	26.0	0.60	1.5:1	1.5:1	12.0	26.0	--	55	5.0	NA	215	WHM-4
WHM2040AE	S Band, C Band	1.80	4.00	26.0	1.10	1.35:1	1.35:1	13.0	26.0	--	55	5.0	NA	220	WHM-2
WHM2060AE	S Band, C Band	2.00	6.00	26.0	0.90	1.5:1	1.5:1	12.0	22.0	--	45	5.0	NA	220	9x6mm ²
WHM2227AE	ISM, S band	2.00	2.70	28.0	1.00	1.35:1	1.35:1	14	26.0	--	50	5.0	NA	220	WHM-2
WHM25-1525AE	ISM, S Band	2.45	2.55	15.5	0.90	1.4:1	1.4:1	15.0	25.0	--	23	5.0	NA	215	WHM-1
WHM25-3020AE	3G, ISM	2.20	2.70	27.0	1.00	1.3:1	1.3:1	6.0	16.0	--	50	5.0	NA	220	WHM-2
WHM2535-12AE	ISM, S band	2.50	3.50	14.0	0.90	1.4:1	1.25:1	14.0	31.0	--	30	5.0	NA	215	WHM-1S
WHM2540AE	ISM, S band, C Band	2.50	4.00	28.0	0.80	1.5:1	1.5:1	10.0	24.0	--	45	5.0	NA	110	WHM-5
WHM3035AE	S Band	3.00	3.70	26.0	1.20	1.3:1	1.3:1	13.0	27.0	--	50	5.0	NA	220	WHM-2
WHM3043AE	S Band, C Band	3.00	4.20	25.0	1.10	1.35:1	1.35:1	11.0	--	--	50	5.0	NA	220	WHM-2
WHM3542AE	C-band	3.70	4.20	13.0	1.20	1.35:1	1.35:1	15.0	25.0	--	30	5.0	NA	220	WHM-7
WHM5065AE	WiMAX	5.00	6.50	21.0	0.90	1.5:1	1.5:1	10.0	23.0	--	40	3.0	NA	215	WHM-11





Selection Guide

WHM Series SMT Low Noise and Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	V _{gg}	R _{th}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	(V)	(°C/ W)	
SMT Limiter Amplifier															
WHM0425LE	VHF, UHF, Cellular, GSM, GPS, 3G	0.35	2.40	28.0	1.25	1.35:1	1.35:1	18.0	25~30	24	70	5.0	NA	220	WHM-4
WHM0913LE	GSM, GPS	0.90	1.30	18.0	0.75	1.35:1	1.35:1	15.0	30.0	30	50	3.3	NA	215	WHM-7
WHM1020LE	GPS, DCS, PCS, 3G	0.80	2.30	17.0	1.1	1.35:1	1.35:1	15.0	30.0	30	30	5.0	NA	220	WHM-7
WHM1045LE	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.20	26.0	1.25	1.5:1	1.5:1	15.0	26.0	30	50	5.0	NA	215	WHM-4
WHM1045RLE	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.20	25.0	1.3	1.5:1	1.5:1	15.0	26.0	30	55	3.3	NA	215	WHM-4
WHM1216AE	GPS	1.00	2.00	27.0	0.7	1.25:1	1.25:1	1.00	1.0	30	20	5.0	NA	215	WHM-4
WHM14-2035LE	GPS	1.14	1.62	20.0	1.0	1.5:1	1.5:1	18.0	30.0	20	80	5.0	NA	220	WHM-4
WHM14-3020LE	GPS	1.20	1.60	31.0	0.7	1.22:1	1.22:1	10.0	20.0	30	70	3.3	NA	220	WHM-4
WHM14-3035L	GPS	1.14	1.62	31.0	0.7	1.25:1	1.25:1	20.0	30.0	30	80	5.0	NA	215	WHM-4
WHM14-3035LE	GPS	1.14	1.62	31.0	0.7	1.25:1	1.25:1	20.0	30.0	20	80	5.0	NA	215	WHM-4
WHM2026L	PCS, 3G, ISM	2.10	2.50	30.0	0.70	1.5:1	1.5:1	14.0	26.0	30	55	5.0	NA	220	WHM-4
WHM2535LE	ISM, S band	2.50	3.50	14.0	1.1	1.35:1	1.35:1	14.0	30.0	30	30	5.0	NA	220	WHM-7
WHM30-2525LE	ISM, S band	2.50	3.50	29.0	0.8	1.5:1	1.5:1	8.0	17.0	30	40	5.0	NA	220	WHM-5

WLA Series Connectorized Single-Ended Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(mA)	(V)	
WLA01-6525A	VHF	0.10	0.175	63.0	0.55	1.25:1	1.25:1	13.0	26.0	70	6.0	WP-5
WLA02-3535A	VHF, UHF, Pager	0.20	0.50	35.0	0.60	1.25:1	1.25:1	15.0	35.0	100	7 - 35	WP-6
WLA08-2030A	UHF, Cellular, GSM	0.65	0.80	21.0	0.50	1.35:1	1.35:1	18.0	34.0	65	7-15	WP-5
WLA08-3045A	UHF, Cellular, GSM	0.82	0.98	35.0	0.65	1.25:1	1.25:1	29.0	45.0	280	9.0	WP-5
WLA08-4030A	UHF, Cellular, GSM	0.82	0.98	40.0	0.50	1.25:1	1.25:1	16.0	30.0	100	5.0	WP-5
WLA08-4045A	UHF, Cellular, GSM	0.82	0.85	42.0	0.35	1.15:1	1.15:1	26.0	41.0	220	9.0	WP-5
WLA120-25A	KU Band	11.7	12.8	24.0	1.00	1.5:1	1.5:1	10.0	--	35	3.0	WP-10E
WLA14-2030AC	GPS	1.20	1.60	18.5	0.90	1.25:1	1.25:1	14.0	26.0	30	5.0	WP-5
WLA14-3030A	GPS	1.20	1.60	31.0	0.60	1.25:1	1.25:1	9.0	22.0	35	3.0	WP-5
WLA15-3525A	GPS	1.42	1.67	35.0	0.30	1.5:1	1.5:1	10.0	23.0	45	5.0	WP-30
WLA19-3030A	DCS, PCS, 3G, ISM	1.70	2.30	30.0	0.70	1.25:1	1.25:1	16.0	32.0	100	5.0	WP-5





Selection Guide

WLA Series Connectorized Single-Ended Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(mA)	(V)	
WA0304A	UHF	0.35	0.40	22.0	0.8	1.35:1	1.35:1	26.0	39.0	240	9-16	WP-15
WA0405A	UHF	0.38	0.53	22.0	0.8	1.15:1	1.15:1	26.0	39.0	220	12.0	WP-15
WA0510A	UHF	0.47	0.96	20.0	0.8	1.22:1	1.22:1	25.0	38.0	240	9-16	WP-15
WA08-2433A	Cellular, GSM	0.82	0.98	21.0	0.6	1.22:1	1.22:1	18.0	38.0	125	7-15	WP-1
WA19-1733A	DCS, PCS, 3G	1.75	2.05	17.0	0.65	1.22:1	1.22:1	18.0	36.0	125	7-30	WP-1
WA19-3038A	DCS, PCS, 3G	1.70	2.00	30.0	0.8	1.22:1	1.22:1	20.0	38.0	200	7-15	WP-1
WA55-1520A	ISM, 5.2 - 5.8 GHz	5.00	6.00	15.0	1.0	1.35:1	1.35:1	12.0	22.0	45	5.0	WP-6

WBA Series Connectorized Wide Band Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	OIP ₂	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(dBc)	(mA)	(V)	
WBA0180210A	VHF	0.18	0.21	27.0	0.27	1.25:1	1.25:1	10	23	--	25	12	WP-11
WBA0001A	LW, SW	0.001	0.30	28.0	0.5-1.5	1.5:1	1.5:1	22	33	--	75	5.0	WP-11
WBA0002M	LW, SW	0.012	0.03	34.0	0.70	1.5:1	1.5:1	10	22	--	50	10	WP-5
WBA0003A	LW, SW, VHF	1KHz	0.30	30.0	1.25	1.25:1	1.25:1	9.5	--	--	45	5.0	WP-5
WBA0005-40A	VHF, UHF	0.07	0.50	40.0	0.60	1.5:1	1.5:1	12.0	--	--	70	5.0	WP-11
WBA0005A	VHF, UHF	0.07	0.50	30.0	0.80	1.5:1	1.5:1	12.0	--	--	60	5.0	WP-11
WBA0006-65A	SW, VHF, UHF	0.01	0.60	66.0	0.65	1.35:1	1.35:1	18.0	33.0	--	100	5.0	WP-5
WBA0006-65B	SW, VHF, UHF	0.01	0.60	66.0	0.65	1.35:1	1.35:1	18.0	33.0	--	100	7-16	WP-5
WBA0010A	VHF, UHF, Cellular, GSM	0.01	1.00	35.0	0.65-1.5	1.5:1	1.5:1	21.0	36.0	--	150	5.0	WP-11
WBA0010-45A	VHF, UHF, Cellular, GSM	0.01	1.00	44.0	0.60	1.25:1	1.25:1	20.0	35.0	--	85	5.0	WP-11
WBA0016A	SW, VHF, UHF, Cellular, GPS.	100KHz	1.60	12.0	2.0	1.4:1	1.4:1	10.0	22.0	--	30	7-30	WP-6
WBA0022A	SW, VHF, UHF, Cellular, GPS, PCS, 3G	0.03	2.00	30.0	1.0	1.35:1	1.35:1	20.0	30.0	--	140	5.0	WP-5
WBA0030-15A	SW, VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.01	3.00	14.0	1.8	1.5:1	1.6:1	19.0	31.0	--	70	5.0	WP-6
WBA0030-30A	SW, VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.001	3.00	29.0	1.2	1.5:1	1.5:1	14.0	26.0	--	50	5.0	WP-5
WBA0030A	SW, VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.02	3.00	23.0	3.0	1.6:1	1.6:1	24.0	40.0	--	225	10.0	WP-5
WBA0102A	VHF	0.13	0.18	22.0	1.6	1.35:1	1.35:1	27.0	44.0	--	210	12.0	WP-15
WBA0105A	VHF, UHF	0.10	0.50	17.0	2.5	1.6:1	1.6:1	30.0	51.0	--	280	12.0	WP-5
WBA0105B	VHF, UHF	0.10	0.55	35.0	0.80	1.25:1	1.25:1	30.0	44.0	--	260	12.0	WP-5
WBA0105-45R	VHF, UHF	0.15	0.55	44.0	0.50	1.35:1	1.35:1	18.0	35.0	--	95	7-16	WP-5
WBA0110A	SW, VHF, UHF, Cellular, GPS	0.10	1.00	23	0.55	1.35:1	1.35:1	19.0	34.0	--	60	5.0	WP-5
WBA0110B	SW, VHF, UHF, Cellular, GPS	0.10	1.00	23	0.60	1.4:1	1.4:1	19.0	32.0	--	65	11-16	WP-15
WBA0115A	SW, VHF, UHF, Cellular, GPS	0.10	1.40	20.0	0.70	1.35:1	1.35:1	17.0	35.0	--	60	12.0	WP-11





Selection Guide

WBA Series Connectorized Wide Band Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	OIP ₂	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(dBc)	(mA)	(V)	
WBA01180A	0.10 – 18.0 GHz	0.10	18.0	14.0	2.50	1.5:1	1.5:1	14.0	28.0	--	80	12.0	WP-11
WBA0121A	VHF, UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.10	2.10	25-35	0.8-1.5	1.25:1	1.3:1	15.0	30.0	--	100	5.0	WP-6
WBA0130-45A	VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.10	3.0	47.0	1.1	1.5:1	1.5:1	12.0	25.0	--	75	15	WP-5
WBA0145A	VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX, C Band	0.20	4.20	16.0	1.30	1.5:1	1.5:1	14.0	27.0	--	30	5.0	WP-5
WBA0180A	0.1 - 8.0GHz	0.20	8.00	23.0	1.70	1.5:1	1.5:1	10.0	23.0	--	40	5.0	WP-5
WBA0204A	VHF, UHF	0.225	0.40	18.5	1.40	1.5:1	1.5:1	30.0	45.0	--	220	10.0	WP-5
WBA0204B	VHF, UHF	0.225	0.40	18.0	1.40	1.5:1	1.5:1	30.0	45.0	--	220	15	WP-5
WBA0205A	VHF, UHF	0.20	0.65	23.0	0.6	1.35:1	1.35:1	16.0	29.0	--	35	5.0	WP-11
WBA0212A	VHF,UHF, Cellular, GSM	0.20	1.10	33.0	0.60	1.25:1	1.25:1	16.0	31.0	--	100	7 - 35	WP-6
WBA0235A	VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.20	3.30	17.0	1.00	1.4:1	1.4:1	12.0	24.0	--	30	7 - 35	WP-5
WBA0242A	VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX, C Band	0.20	4.20	29.0	1.20	1.5:1	1.5:1	14.0	26.0	--	50	5.0	WP-5
WBA0308A	VHF, UHF, Cellular, GSM	0.34	0.82	31.0	0.40	1.4:1	1.4:1	26.0	43.0	--	160	9.0	WP-5
WBA0308B	VHF, UHF, Cellular, GSM	0.34	0.82	31.0	0.40	1.4:1	1.4:1	26.0	43.0	--	160	12.0	WP-5
WBA0510A	VHF,UHF, Cellular, GSM	0.50	1.00	38.0	0.50	1.25:1	1.25:1	15.0	30.0	--	100	5.0	WP-5
WBA0510AS	VHF,UHF, Cellular, GSM	0.50	1.00	38.0	0.40	1.25:1	1.25:1	15.0	30.0	--	100	5.0	WP-5
WBA0512AS	VHF,UHF, Cellular, GSM, GPS	0.50	1.25	39.0	0.30	1.25:1	1.25:1	20.0	30.0	--	100	5.0	WP-5
WBA0520-45A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.50	2.00	45.0	0.65	1.5:1	1.5:1	13.0	28.0	--	75	15.0	WP-5
WBA0520-45AS	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.50	2.00	45.0	0.50	1.5:1	1.35:1	13.0	28.0	--	75	15.0	WP-5
WBA0520B	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.50	2.00	16-19	1.00	1.5:1	1.5:1	20.0	30.0	--	70	5.0	WP-5
WBA0520P	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.50	2.10	25.0	1.80	1.8:1	1.8:1	18.0	30.0	50	120	5.0	WP-6
WBA0530A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.50	2.80	28.0	0.80	1.4:1	1.4:1	20.0	36.0	--	160	5.0	WP-11
WBA0812A	X-band, Ku-Band	8.00	13.0	28.0	4.50	1.5:1	1.5:1	20.0	--	--	220	5.0	WP-10
WBA0820A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.80	2.00	19.0	1.00	1.5:1	1.5:1	15.0	28.0	--	35	5.0	WP-5
WBA0822A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.80	2.20	29.0	0.80	1.3:1	1.3:1	18.0	29.5	--	105	5.0	WP-5
WBA0824A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.80	2.40	23.0	1.80	1.5:1	1.5:1	25.0	42.0	--	220	10.0	WP-5
WBA0824B	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.80	2.40	29.0	1.00	1.5:1	1.5:1	25.0	42.0	--	220	10.0	WP-5
WBA0915-60A	UHF, Cellular, GSM, GPS	0.95	1.45	61.0	0.40	1.35:1	1.35:1	14.0	26.0	--	85	5.0	WP-5
WBA0918A	UHF, Cellular, GSM, GPS, DCS	0.95	1.70	19.5	1.00	1.35:1	1.35:1	18.0	32.0	--	65	5.0	WP-5
WBA1020-20A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	1.00	2.00	19.0	0.90	1.5:1	1.5:1	15.0	30.0	--	38	5.0	WP-10





Selection Guide

WBA Series Connectorized Wide Band Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	OIP ₂	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(dBc)	(mA)	(V)	
WBA1020-50A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	1.00	2.00	50.0	0.55	1.35:1	1.35:1	14.0	28.0	--	75	5.0	WP-5
WBA1030A	Cellular, GSM, GPS, DCS, PCS, 3G, WiMAX	1.00	3.00	32.0	1.10	1.5:1	1.5:1	22.0	35.0	--	160	5.0	WP-5
WBA1040A	UHF, Cellular, GPS, PCS, 3G, WiMAX, C	1.00	4.00	45.0	0.70	1.5:1	1.5:1	13.0	24.0	--	65	5.0	WP-5
WBA1045B	UHF, Cellular, GPS, PCS, 3G, WiMAX, C	0.70	4.00	35.0	1.00	1.5:1	1.5:1	15.0	27.0	--	100	5.0	WP-5
WBA120160A	Ku Band	12.0	16.0	35.0	2.00	1.6:1	1.6:1	19.0	--	--	150	5.0	WP-10D
WBA1216A	GPS	1.20	1.60	35.0	0.45	1.35:1	1.35:1	20.0	28.0	--	120	5.0	WP-5
WBA1216AS	GPS	1.20	1.60	35.0	0.35	1.35:1	1.35:1	20.0	28.0	--	120	5.0	WP-5
WBA1225A	GPS, PCS, 3G	1.20	2.40	35.0	0.50	1.35:1	1.35:1	20.0	28.0	--	100	5.0	WP-5
WBA1225AS	GPS, PCS, 3G	1.20	2.40	35.0	0.40	1.35:1	1.35:1	20.0	28.0	--	100	5.0	WP-5
WBA1225-45AS	GPS, PCS, 3G	1.20	2.40	45.0	0.50	1.5:1	1.5:1	18.0	28.0	--	100	5.0	WP-5
WBA1330A	GPS, PCS, 3G, WiMAX	1.20	2.80	28.5	0.90	1.45:1	1.20:1	20.0	35.0	--	150	5.0	WP-5
WBA1530A	GPS, DCS, PCS, 3G, ISM	1.40	3.00	22.0	1.00	1.45:1	1.45:1	26.0	42.0	--	220	9.0	WP-5
WBA1535-25A	GPS, DCS, PCS, 3G, ISM	1.50	3.30	25.0	0.85	1.5:1	1.4:1	13.0	26.0	--	50	5.0	WP-5
WBA1722A	PCS, 3G	1.70	2.20	32.0	0.55	1.25:1	1.25:1	18.0	33.0	--	90	5.0	WP-5
WBA1722AS	PCS, 3G	1.70	2.20	32.0	0.37	1.25:1	1.25:1	18.0	33.0	--	90	5.0	WP-5
WBA1725A	PCS, 3G, WiMAX	1.70	2.50	17.0	0.95	1.35:1	1.35:1	14.0	26.0	--	33	3~16	WP-11
WBA1730-40A	DCS, PCS, 3G, ISM	1.70	3.00	40.0	0.80	1.5:1	1.35:1	16.0	26.0	--	100	5.0	WP-5
WBA2026A	3G, ISM	2.00	2.60	30.0	0.50	1.25:1	1.25:1	15.0	27.0	--	55	5.0	WP-5
WBA2040-35A	3G, S Band	2.00	4.00	36.0	0.65	1.5:1	1.35:1	2.00	--	--	45	7-25	WP-5
WBA2040-35B	3G, S Band	2.00	4.00	36.0	0.80	1.5:1	1.35:1	12.0	28.0	--	55	7-18	WP-5
WBA2060-30A	PCS, 3G, WiMAX, C	2.00	6.00	30.0	0.85	1.5:1	1.5:1	2.00	--	--	45	5.0	WP-5
WBA2060-40A	PCS, 3G, WiMAX, C	2.00	6.00	38.0	0.80	1.5:1	1.5:1	13.0	24.0	--	65	5.0	WP-5
WBA2060A	PCS, 3G, WiMAX, C	2.00	6.00	27.0	0.75	1.5:1	1.5:1	12.0	22.0	--	40	5.0	WP-30
WBA2080-35A	2.0 – 8.0 GHz	2.00	8.00	34.0	1.00	1.5:1	1.5:1	5.00	15.0	--	40	5.0	WP-5
WBA2080A	PCS, 3G, WiMAX, C, X-Band	2.00	8.00	23.0	1.00	1.5:1	1.5:1	5.00	--	--	37.0	5.0	WP-30
WBA2237-40A	DCS, PCS, 3G, ISM	2.20	3.70	39.0	0.80	1.4:1	1.4:1	13.0	26.0	--	65	5.0	WP-5
WBA2535-12A	WiMAX, S-Band	2.50	3.50	14.0	1.00	1.35:1	1.35:1	15.0	--	--	30	7 - 25	WP-5
WBA2730A	S Band	2.70	3.00	29.0	0.60	1.35:1	1.35:1	13.0	28.0	--	65	5.0	WP-5
WBA3090A	WiMAX, C, X-Band	3.0	9.0	22.0	1.0	1.5:1	1.5:1	5.0	--	--	38	5.0	WP-30
WBA3343-40A	DCS, PCS, 3G, ISM, C Band	3.30	4.30	40.0	1.00	1.35:1	1.35:1	14.0	25.0	--	105	5.0	WP-5
WBA4060A	C Band, ISM Band	4.40	6.00	28.0	0.70	1.5:1	1.5:1	12.0	24.0	--	52	5.0	WP-30
WBA5060A	C Band, ISM Band	4.50	6.00	27.0	0.80	1.35:1	1.35:1	10.0	22.0	--	45	5.0	WP-5
WBA5060-30L	C Band, ISM Band	5.00	6.00	30.0	1.00	1.5:1	1.5:1	2.0	--	--	45	5.0	WP-5
WBA80130A	8.0 - 13.0 GHz	8.00	13.00	22.0	2.00	1.8:1	1.8:1	10.0	--	--	60	5.0	WP-10E
WBA80180B	8.0 - 18.0 GHz	8.00	18.00	35.0	2.00	1.8:1	1.8:1	19.0	--	--	160	5.0	WP-10D
WBA80180C	7.0 - 18.0 GHz	7.00	18.00	23.0	2.00	2:1	2:1	10	--	--	55	5.0	WP-10





Selection Guide

WBPA Series Connectorized Wide Band Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	
WBPA0003A	SW, VHF, UHF	0.03	0.25	38.0	2 ~ 4	1.35:1	1.5:1	35.0	49.0	--	950	10.0	WP-6
WBPA0006A	SW, VHF, UHF	0.02	0.60	18.0	3.0	1.5:1	1.5:1	37.0	47.0	--	50	28.0	WP-11
WBPA0010A	0.03-0.09 GHz	0.03	0.09	20	--	1.22:1	1.5:1	36.0	50.0	--	850	10	WP-6
WBPA0030A	VHF, UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.02	2.80	36.0	2.2	1.5:1	1.5:1	32.0	45.0	--	600	12.0	WP-9
WBPA0105A	UHF	0.10	0.50	17.0	4.5	1.6:1	1.5:1	32.0	48.0	30	420	12.0	WP-5
WBPA0112A	UHF, Cellular, GSM	0.10	1.00	35.0	1.0	1.25:1	1.35:1	30.0	45.0	--	300	10.0	WP-5
WBPA0112B	UHF, Cellular, GSM	0.10	1.00	30.0	5.8	1.25:1	1.5:1	30.0	46.0	--	300	10.0	WP-5
WBPA0130M	VHF	0.001	0.09	43.0	1.5	1.25:1	1.25:1	30.0	43.0	--	260	10.0	WP-5
WBPA04-2045A	UHF	0.38	0.53	20.0	--	1.5:1	1.5:1	36.0	45.0	40.0	800	10.0	WP-6
WBPA0438A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G, S, C Band	0.40	3.80	36.0	1.2	1.5:1	1.5:1	27.0	45.0	--	400	15.0	WP-9
WBPA0510A	UHF, Cellular, GSM	0.47	0.96	31	3.0	1.5:1	1.5:1	35.0	48.0	--	950	10.0	WP-6
WBPA0520A	0.5 - 2.0 GHz	0.50	2.00	28.0	1.30	1.35:1	1.5:1	26.0	43.0	--	220	12.0	WP-5
WBPA0527A	Wide Band PA	0.40	2.70	36.0	2.2	1.8:1	1.8:1	33	45.0	--	620	12.0	WP-9
WBPA0527B	UHF, Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.50	2.70	27.0	1.3	1.5:1	1.5:1	27.0	42.0	--	220	12.0	WP-5
WBPA0538A	UHF, Cellular, GSM, GPS, PCS, 3G, S	0.50	3.8	35	1.20	1.5:1	1.5:1	27.0	43.0	--	300	10.0	WP-6
WBPA0540A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G, S, C	0.45	3.80	45.0	1.2	1.5:1	1.5:1	24.0	40.0	--	230	12.0	WP-9
WBPA0540L	UHF, Cellular, GSM, GPS, DCS, PCS, 3G, S, C	0.45	3.80	45.0	1.3	1.5:1	1.5:1	24.0	40.0	--	230	11-	
15	WP-9												
WBPA0735A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G, S	0.70	3.40	26.0	--	1.6:1	1.6:1	32.0	--	--	500	10.0	WP-11
WBPA0921A	UHF, Cellular, GSM, GPS, DCS, PCS, 3G	0.80	2.10	20	2	1.4:1	1.4:1	32.0	43.0	--	500	10.0	WP-5
WBPA1116A	GPS	1.10	1.63	28.0	--	1.6:1	1.6:1	36.0	48.0	--	900	10.0	WP-6
WBPA1315A	GPS	1.30	1.50	31.0	--	1.5:1	1.5:1	36.5	48.0	--	1000	10.0	WP-6
WBPA1517A	GPS	1.50	1.70	27.0	1.7	1.5:1	1.5:1	36.0	51.0	33	1150	10.0	WP-6
WBPA1530A	GPS, DCS, PCS, 3G, ISM	1.50	2.80	38.0	1.5	1.5:1	1.6:1	33	45	--	600	10.0	WP-9





Selection Guide

WBPA Series Connectorized Wide Band Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	
WBPA1719B	DCS, PCS, 3G	1.70	1.90	12.0	--	1.35:1	1.35:1	39.0	50.0	--	1600	10.0	WP-6
WBPA1822A	DCS, PCS, 3G	1.80	2.20	24.0	1.5	1.5:1	1.5:1	36.0	47.0	33	1100	10.0	WP-6
WBPA2040A	DCS, PCS, 3G, S, C	2.00	4.00	35.0	2.5	1.6:1	1.6:1	32.0	44	--	550	10.0	WP-6
WBPA2060A	3G, ISM Band	2.00	6.00	25.0	1.40	1.5:1	1.5:1	20.0	27.0	--	90	9.0	WP-11
WBPA2127A	ISM	2.10	2.70	40.0	1.50	1.25:1	1.25:1	39.0	48.0	27.0	2200	12.0	WP-9
WBPA2224A	ISM	2.30	2.50	11.0	--	1.5:1	1.5:1	39.0	50.0	--	1500	10.0	WP-6
WBPA2225A	ISM	2.20	2.50	23.0	1.50	1.5:1	1.5:1	36.0	49.0	--	1050	10.0	WP-6
WBPA2426A	ISM	2.40	2.60	21.0	1.5	1.25:1	1.25:1	35.0	49.0	28	1100	10.0	WP-6
WBPA2426B	ISM	2.40	2.60	34.0	1	1.25:1	1.25:1	35.0	49.0	--	1100	10.0	WP-6
WBPA2429A	ISM, S	2.40	2.80	39.0	1.50	1.25:1	1.25:1	39.0	48.0	--	2200	10.0	WP-9L
WBPA2735A	ISM, S	2.70	3.40	24.0	--	1.5:1	1.5:1	32.0	--	--	500	10.0	WP-5
WBPA90160A	X, Ku Band	9.5	16.5	32.0	4.5	1.5:1	1.5:1	30.0	--	--	730	5.0	WP-10

WLPA Series Connectorized Low Noise Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(mA)	(V)	
WLPA08-1555A	UHF, Cellular, GSM	0.82	0.96	16.0	1.1	1.25:1	1.25:1	33.0	53.0	450	12	WP-1
WLPA08-1850A	UHF, Cellular, GSM	0.82	0.93	18.0	1	1.25:1	1.25:1	26.0	48.0	250	12	WP-1
WLPA08-2040C	UHF, Cellular, GSM	0.80	1.00	19.0	0.8	1.15:1	1.15:1	25.0	39.0	220	12	WP-15
WLPA15-3045A	GPS, DCS	1.00	1.75	30.0	0.7	1.25:1	1.25:1	32.0	45.0	480	12	WP-1
WLPA19-3048A	DCS, PCS, 3G	1.75	2.05	30.0	0.6	1.25:1	1.25:1	27	48.0	350	12	WP-1

Series Connectorized High Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	Isolator	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)		
WPA0510A	UHF, Cellular	0.47	0.96	50.0	0.9	1.25:1	1.25:1	40	52	--	1600	28	Yes	Pallet
WPA07-5055A	Cellular, GSM	0.70	0.90	50	1.5	1.22:1	1.22:1	46.0	55.0	30	0.7	28	Yes	WP-1D
WPA0810-45A	Cellular, GSM	0.82	0.96	43	2.5	1.25:1	1.25:1	47.0	54.0	50	0.63	28.0	Yes	WP-1M
WPA09-4555A	Cellular, GSM	0.92	0.96	43	2.5	1.22:1	1.22:1	47.0	55.0	50	0.63	28.0	Yes	WP-1M
WPA09-5055G	Cellular, GSM	0.90	1.0	50	4.3	1.35:1	1.35:1	44.0	55.0	55	0.33	28.0	Yes	WP-2
WPA18-4555G	DCS, PCS	1.80	1.88	47	3.5	1.22:1	1.22:1	43.0	55.0	50	0.30	28.0	Yes	WP-2
WPA21-4555G	3G	2.11	2.17	46	1.9	1.22:1	1.22:1	43.0	55.0	50	0.30	28.0	Yes	WP-2
WPA25-3560C	ISM	2.40	2.60	42	2.0	1.25:1	1.25:1	45.0	60.0	45	0.75	28.0	Yes	WP-1M





Selection Guide

WPM Series Flange Mount Power Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	PAE	I _{dd}	V _{dd}	Isolator	R _{th}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)		(°C/ W)	
WPM0002F	VHF	0.05	0.15	35.0	1.8	1.35:1	1.35:1	33.0	43.0	--	465	10	NO	20.0	WPM-3
WPM0003F	VHF, UHF	0.03	0.25	38.0	2 ~ 4	1.35:1	1.5:1	35.0	49.0	--	950	10	NO	8.0	WPM-5
WPM0006A	VHF, UHF	0.02	0.60	18.0	3.0	1.5:1	1.5:1	37.0	47.0	45.0	50	28	NO	9.0	WPM-3
WPM0010A	SW, VHF	0.001	0.15	17.4	2.7	1.8:1	1.8:1	30.0	48.0	47.0	210	10	NO	32.0	WPM-3
WPM0015A	SW, VHF, UHF,...GPS	0.01	1.50	15.5	4.5	1.8:1	1.8:1	29.0	45.0	--	210	10	NO	32.0	WPM-3
WPM005-15A	SW, VHF, UHF	0.02	0.70	16.5	3.2	1.8:1	1.8:1	30.0	46.0	47.0	210	10	NO	32.0	WPM-3
WPM0104A	VHF, UHF	0.10	0.40	36.0	2.50	1.5:1	1.5:1	35.0	49.0	--	950	10	NO	8.0	WPM-5
WPM0105A	VHF, UHF	0.10	0.42	17.0	3.3	1.5:1	1.5:1	32.0	43.0	--	400	10	NO	18.0	WPM-3
WPM0130M	SW, VHF	0.001	0.09	43.0	1.5	1.25:1	1.25:1	30.0	43.0	--	260	10	NO	30.0	WPM-3
WPM0509AE	UHF, Cellular	0.47	0.96	31.0	3.0	1.5:1	1.5:1	35.0	49.0	27.0	950	10	NO	9.0	WPM-2
WPM0521A	UHF, Cellular, GPS, PCS, 3G	0.50	2.10	36.0	2.2	1.5:1	1.5:1	32.0	45.0	--	600	10	NO	18.0	WPM-4
WPM0527A	UHF, Cellular, GPS, PCS, 3G, ISM	0.50	2.70	36.0	2.2	1.5:1	1.5:1	32.0	45.0	--	600	10	NO	18.0	WPM-4
WPM0715A	UHF, Cellular, GPS	0.70	1.50	15.0	2.4	1.8:1	1.8:1	30.0	45.0	45.0	220	10	NO	32.0	WPM-3
WPM0913C	GSM, GPS	0.95	1.30	28.0	2.50	1.3:1	1.3:1	38.0	50.0	26.0	1800	10	YES	8.0	WPM-4
WPM0913L	GSM, GPS	0.95	1.30	28.0	2.50	1.5:1	1.5:1	36.0	48.0	--	950	10	NO	8.0	WPM-3
WPM1114B	GPS	1.20	1.40	28.0	4.0	1.3:1	1.3:1	39.0	51.0	26.0	1800	10	YES	2.5	WPM-4
WPM1216A	GPS	1.20	1.60	36.0	2.0	1.5:1	1.5:1	32.0	45.0	--	470	10	NO	8.0	WPM-3
WPM1822A	PCS, 3G	1.80	2.20	24.0	1.50	1.5:1	1.5:1	36.0	48.0	--	1100	10	NO	9.0	WPM-5
WPM2225F	PCS, 3G, ISM	2.20	2.50	23.0	1.50	1.5:1	1.5:1	36.0	49.0	--	1050	10	NO	7.0	WPM-5
WPM2426A	ISM	2.40	2.60	22.0	1.50	1.5:1	1.5:1	36.0	46.0	--	1050	10	NO	7.0	WPM-5

WLLA Series Connectorized Low Noise Limiter Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	P _{in,MAX}	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	%	(mA)	(V)	
WLLA0110A	VHF, UHF, Cellular, GPS	0.10	1.10	22.0	0.60	1.22:1	1.22:1	18.0	34.0	30.0	60	5.0	WP-10E
WLLA0520A	UHF, GPS, DCS, PCS, 3G	0.50	1.80	19.5	0.90	1.35:1	1.35:1	19.0	30.0	30.0	60	5.0	WP-10E
WLLA0530A	UHF, GPS, DCS, PCS, 3G, S Band, C Band	0.40	3.00	15.0	1.20	1.5:1	1.5:1	10.0	20.0	30.0	25	5.0	WP-30
WLLA08-3535A	Cellular, GSM	0.80	1.00	35.0	0.55	1.25:1	1.25:1	20.0	30.0	24.0	110	5.0	WP-5
WLLA08-3535AS	Cellular, GSM	0.80	1.00	35.0	0.45	1.25:1	1.25:1	20.0	30.0	24.0	110	5.0	WP-5
WLLA1045A	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.20	26.0	1.3	1.5:1	1.5:1	15.0	26.0	30.0	55	5.0	WP-5
WLLA14-3030A	GPS	1.15	1.60	34.0	0.45	1.35:1	1.35:1	13.0	26.0	30.0	50	5.0	WP-5
WLLA14-3535A	GPS	1.10	1.60	35.0	0.50	1.25:1	1.35:1	17.0	32.0	30.0	85	5.0	WP-5
WLLA14-3535C	GPS	1.10	1.60	35.0	0.45	1.25:1	1.25:1	14.0	27.0	30.0	75	12.0	WP-5
WLLA30-3025A	ISM, S, C Band	2.5	3.5	29.0	0.75	1.5:1	1.5:1	9.0	20.0	30.0	45	5.0	WP-30
WLLA5060A	C Band, ISM Band	4.4	6.5	27.0	0.95	1.5:1	1.5:1	9.0	18.0	30.0	45	5.0	WP-30



Selection Guide

WCA Series Connectorized 75 Ohm Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	P _{in,MAX}	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	%	(mA)	(V)	
WCA05300A	VHF, CATV	0.05	0.2	24	0.45	1.45:1	1.45:1	8.0	5	40	7-25	WP-6
WCA05300B	VHF, CATV	0.05	0.2	24	0.45	1.45:1	1.45:1	8.0	30	40	7-25	WP-6

WEA Series Connectorized Economic Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(mA)	(V)	
WEA101	SW Band, VHF	0.02	0.50	20.0	1.00	1.4:1	1.4:1	16.0	30.0	40	5.0	WP-6
WEA101B	SW Band, VHF	0.02	0.50	22.0	1.00	1.35:1	1.35:1	15.0	30.0	40	12.0	WP-6
WEA101C	SW Band, VHF	100KHz	0.20	22.0	1.00	1.35:1	1.35:1	15.0	30.0	40	5.0	WP-6
WEA101D	SW Band, VHF	100KHz	0.20	22.0	1.00	1.35:1	1.35:1	15.0	30.0	40	7-12	WP-6
WEA102	VHF, UHF, Cellular, GSM	0.10	1.10	20.0	0.80	1.4:1	1.4:1	18.0	34.0	60	5.0	WP-10E
WEA103	Cellular, GSM, GPS, DCS, PCS, 3G	0.70	1.60	17.0	1.00	1.5:1	1.5:1	13.0	26.0	30	5.0	WP-10E
WEA104	ISM Band	2.20	2.70	15.0	1.10	1.25:1	1.25:1	13.0	26.0	23	5.0	WP-10E
WEA105	GPS	1.00	2.00	33.0	1.00	1.4:1	1.4:1	13.0	25.0	50	5.0	WP-10E
WEA106	PCS, 3G	1.70	2.20	29.0	0.90	1.35:1	1.35:1	16.0	31.0	95	5.0	WP-10E
WEA107	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.60	2.50	30.0	1.00	1.5:1	1.5:1	14.0	26.0	50	5.0	WP-10E
WEA108	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.50	3.00	15.5	1.00	1.35:1	1.35:1	9-15	20.0	20	5.0	WP-10E
WEA109	S Band	1.50	3.20	28.0	1.20	1.5:1	1.5:1	15.0	26.0	50	5.0	WP-10E
WEA110	S Band	3.00	3.50	25.0	1.20	1.5:1	1.5:1	13.0	26.0	55	5.0	WP-10E
WEA111	S Band, C Band	1.80	4.00	25.0	1.20	1.45:1	1.45:1	13.0	25.0	55	5.0	WP-10E
WEA112	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.20	25.0	1.30	1.35:1	1.35:1	13.0	25.0	50	5.0	WP-10E
WEA113	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.75	2.20	18.0	0.80	1.35:1	1.35:1	19.0	34.0	60	5.0	WP-10E
WEA114	GSM, GPS	0.75	1.25	20.0	1.00	1.35:1	1.35:1	20.0	34.0	70	5.0	WP-10E
WEA115	UHF, GPS, DCS, PCS, 3G, S, WiMAX, C	0.50	4.00	26.0	1.20	1.5:1	1.35:1	14.0	26.0	65	5.0	WP-5
WEA116	3G, ISM	2.20	2.70	27.0	1.10	1.5:1	1.5:1	7.0	17.0	25	5.0	WP-10E





Selection Guide

WZA Series Connectorized Economic Low Noise Amplifiers

Model Number	Application	Freq (GHz)		Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	I _{dd}	V _{dd}	Package
		Min	Max	(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(mA)	(V)	
WZA101	SW Band, VHF	0.02	0.50	20.0	0.80	1.5:1	1.5:1	12.0	25.0	25	5.0	WP-30
WZA102	VHF, UHF, Cellular, GSM	0.10	1.00	19.0	0.80	1.4:1	1.4:1	12.0	25.0	25	5.0	WP-30
WZA103	VHF, UHF, Cellular, GSM, GPS	0.10	1.60	19.0	0.90	1.5:1	1.5:1	12.0	25.0	25	5.0	WP-30
WZA104	UHF, Cellular, GSM, GPS	0.80	1.30	17.0	0.90	1.5:1	1.5:1	12.0	25.0	25	5.0	WP-30
WZA105	GPS	1.20	1.60	16.0	1.00	1.5:1	1.5:1	12.0	26.0	25	5.0	WP-30
WZA106	PCS, 3G	1.70	2.20	15.0	0.90	1.5:1	1.5:1	12.0	25.0	25	5.0	WP-30
WZA107	ISM	2.20	2.70	15.0	0.80	1.5:1	1.5:1	12.0	25.0	25	5.0	WP-30
WZA108	ISM, C-band	2.70	3.50	14.0	1.00	1.5:1	1.5:1	12.0	26.0	30	5.0	WP-30
WZA109	3G, ISM, C-band	2.00	4.00	12.0	1.25	1.5:1	1.5:1	12.0	24.0	20	5.0	WP-30
WZA110	GPS, 3G, ISM, C-band	1.00	4.00	12.0	1.25	1.5:1	1.5:1	12.0	24.0	20	5.0	WP-30
WZA111	SW, VHF, UHF, Cellular, GPS, PCS, 3G, WiMAX	0.02	3.00	16.0	1.10	1.5:1	1.35:1	16.0	30.0	50	5.0	WP-30
WZA112	SW, VHF, UHF	0.001	0.50	20.0	0.80	1.5:1	1.35:1	12.0	25.0	25	5.0	WP-30
WZA201	SW Band, VHF	0.02	0.50	22.0	0.90	1.5:1	1.5:1	19.0	35.0	65	5.0	WP-30
WZA202	VHF, UHF, Cellular, GSM	0.10	1.00	20.0	0.70	1.35:1	1.35:1	19.0	34.0	60	5.0	WP-30
WZA203	VHF, UHF, Cellular, GSM, GPS	0.10	1.60	20.0	0.70	1.5:1	1.5:1	19.0	33.0	60	5.0	WP-30
WZA204	UHF, Cellular, GSM, GPS	0.80	1.30	19.0	0.70	1.5:1	1.5:1	20.0	31.0	60	5.0	WP-30
WZA205	GPS	1.10	1.60	17.0	0.75	1.4:1	1.4:1	19.0	33.0	60	5.0	WP-30
WZA206	PCS, 3G	1.70	2.20	16.0	0.90	1.5:1	1.5:1	19.0	34.0	60	5.0	WP-30
WZA207	ISM	2.20	2.70	14.0	1.00	1.4:1	1.4:1	14.0	35.0	60	5.0	WP-30
WZA301	GPS, PCS, 3G	1.00	2.00	33.0	0.90	1.35:1	1.35:1	11.0	23.0	40	3.0	WP-30
WZA302	Cellular, GSM, GPS	0.80	1.50	27.0	1.30	1.25:1	1.25:1	0.00	13.0	20	5.0	WP-30
WZA303	GPS	1.20	1.60	32.0	0.50	1.35:1	1.35:1	5.00	18.0	25	5.0	WP-30
WZA304	Cellular, GSM, GPS, DCS, PCS, 3G, ISM	0.50	2.50	30.0	0.90	1.3:1	1.3:1	14.0	27.0	50	5.0	WP-30
WZA305	S Band	1.50	3.20	27.0	1.20	1.35:1	1.35:1	14.0	25.0	55	5.0	WP-30
WZA306	S Band	3.00	3.70	25.0	1.20	1.45:1	1.45:1	13.0	25.0	50	5.0	WP-30
WZA307	GPS, DCS, PCS, 3G, S Band, C Band	1.00	4.00	25.0	1.25	1.5:1	1.5:1	13.0	25.0	55	5.0	WP-30
WZA308	UHF,GPS, DCS, PCS, 3G, S, WiMax, C	0.50	4.00	25.0	1.20	1.5:1	1.5:1	13.0	25.0	60	5.0	WP-30
WZA309	S Band, C Band	1.80	4.00	25.0	1.20	1.3:1	1.3:1	13.0	25.0	55	5.0	WP-30
WZA310	UHF,GPS, DCS, PCS, 3G,	0.10	2.00	19.0	0.90	1.5:1	1.5:1	18.0	35.0	60	5.0	WP-30
WZA311	VHF, UHF,GPS, DCS, PCS, 3G, S, WiMax	0.02	3.00	15.0	1.30	1.5:1	1.5:1	10.0	24.0	25	5.0	WP-30





Selection Guide

WMA Series SMT Magnetic Resonance Imaging (MRI) Pre-Amplifiers

Model Number	Application	Freq (MHz)	Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	Z _{in}	I _{dd}	V _{dd}	Package
			(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(Ohm)	(mA)	(V)	
WMA123.5A	MRI	123.5	28.0	0.40	--	1.2:1	10	20	1.5	18	7-11	0.6"x0.4"
WMA123.5A-R5	MRI	123.5	28.0	0.40	--	1.2:1	10	20	0.5	18	7-11	0.6"x0.4"
WMA17C	MRI	17.0	28.0	0.7	--	1.2:1	9.0	22	3.5	16	7-11	0.5"x0.4"
WMA1R0C	MRI	42.5	28.0	0.45	--	1.2:1	10.0	23	1.5	18	7-11	0.5"x0.4"
WMA1R5A	MRI	63.8	28.0	0.45	--	1.2:1	10.0	20	1.5	18	7-11	0.6"x0.4"
WMA1R5A-R5	MRI	63.8	28.5	0.45	--	1.2:1	10.0	20	0.5	18	7-11	0.6"x0.4"
WMA1T5AE	MRI	63.8	28.0	0.50	--	1.2:1	8.0	24	1.5	14	7-11	0.4"x0.25"
WMA32A	MRI	32.19	28.0	0.5	--	1.2:1	9.0	21	2.0	16	7-11	0.6"x0.4"
WMA32C	MRI	32.19	28.0	0.7	--	1.2:1	9.0	23	3.0	18	7-11	0.5"x0.4"
WMA3RA	MRI	127.8	28.0	0.40	--	1.2:1	10.0	20	1.5	18	7-11	0.6"x0.4"
WMA3RA-R1	MRI	127.8	28.0	0.40	--	1.2:1	10	20	0.1	18	7-11	0.6"x0.4"
WMA3RA-R5	MRI	127.8	28.0	0.40	--	1.2:1	10.0	20	0.5	18	7-11	0.6"x0.4"
WMA3TAE	MRI	123.5-128	28.0	0.45	--	1.2:1	8.0	24.0	1.5	14	7-11	0.4"x0.25"
WMA4R7A	MRI	200	28.0	0.40	--	1.2:1	12.0	23.0	1.5	18	7-11	0.6"x0.4"
WMA4R7A-R5	MRI	200	28.0	0.40	--	1.2:1	12.0	23.0	0.5	18	7-11	0.6"x0.4"
WMA500A	MRI	500.0	28.0	0.40	--	1.2:1	10.0	22	1.5	15	7-11	0.6"x0.4"
WMA50A1R5	MRI	48-65	26.0	0.45	1.6:1	1.3:1	12.0	26.0	50	40	7-13	WP-6
WMA50A1R5-00	MRI	48-65	26.0	0.45	1.6:1	1.3:1	12.0	26.0	50	40	7-13	PCB Only
WMA50A-2A	MRI	198 - 302	27.0	0.40	1.2:1	1.2:1	10.0	22.0	50	45	7-16	WP-5
WMA50A-2B	MRI	198 - 302	27.0	0.40	1.2:1	1.2:1	10.0	22.0	50	45	5.0	WP-5
WMA50A3R	MRI	120-130	26.0	0.45	1.6:1	1.3:1	12.0	26.0	50	40	7-13	WP-6
WMA50A3R-00	MRI	120-130	26.0	0.45	1.6:1	1.3:1	12.0	26.0	50	40	7-13	PCB Only
WMA600A	MRI	599.4	28.0	0.40	--	1.2:1	10.0	22.0	1.5	15	7-11	0.6"x0.4"
WMA60A	MRI	60.1	28.0	0.45	--	1.2:1	15.0	24.0	1.5	16	7-11	0.6"x0.4"
WMA74A	MRI	74.9	28.0	0.50	--	1.2:1	10.0	24.0	1.5	18	7-11	0.6"x0.4"
WMA7RA	MRI	298.0	28.0	0.40	--	1.2:1	10.0	20.0	1.5	18	7-11	0.6"x0.4"
WMA7RA-R5	MRI	298.0	28.0	0.40	--	1.2:1	10.0	20.0	0.5	18	7-11	0.6"x0.4"
WMA7RC	MRI	298.0	28.0	0.40	--	1.2:1	10.0	18.0	1.0	18	7-11	0.5"x0.4"
WMA85A	MRI	85.0	28.0	0.45	--	1.2:1	10.0	20.0	1.5	18	7-11	0.6"x0.4"
WMA9RA	MRI	400.4	28.0	0.40	--	1.2:1	10.0	21.0	1.5	18	7-11	0.6"x0.4"
WMA9RA-R5	MRI	400.4	28.0	0.40	--	1.2:1	10.0	21.0	0.5	18	7-11	0.6"x0.4"





Selection Guide

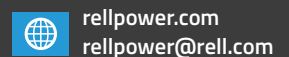
WMM Series SMT Magnetic Resonance Imaging (MRI) Pre-Amplifiers

Model Number	Application	Freq (MHz)	Gain	NF	SWR ₁	SWR ₂	P _{1dB}	OIP ₃	Z _{in}	I _{dd}	V _{dd}	6-Pin Package
			(dB)	(dB)	Ratio	Ratio	(dBm)	(dBm)	(Ohm)	(mA)	(V)	
WMM116P	MRI	115.9	28.0	0.45	--	1.2:1	15	24	1.5	16	7-15	0.72"x0.64"
WMM120P	MRI	120.76	28.0	0.45	--	1.2:1	15	24	1.5	16	7-15	0.72"x0.64"
WMM123P	MRI	123.2	28.0	0.45	--	1.2:1	13	24	1.5	16	7-15	0.72"x0.64"
WMM13P	MRI	12.9	28.0	0.70	--	1.2:1	14	24	2.5	17	7-15	0.72"x0.64"
WMM15P	MRI	15	28.0	0.70	--	1.2:1	14	24	2.0	18	7-15	0.72"x0.64"
WMM1R0P	MRI	42.5	28.0	0.45	--	1.2:1	14	24	1.5	17	7-15	0.72"x0.64"
WMM1R5P	MRI	63.8	28.0	0.45	--	1.2:1	14	24	1.5	16	7-15	0.72"x0.64"
WMM31P	MRI	30.9	28.0	0.55	--	1.2:1	13.0	23.0	1.5	16	7-15	0.72"x0.64"
WMM32P	MRI	32.1	28.0	0.50	--	1.2:1	14	23	2.5	16	7-15	0.72"x0.64"
WMM3RP	MRI	127.7	28.0	0.45	--	1.2:1	14	24	1.5	17	7-15	0.72"x0.64"
WMM4R7P	MRI	200	28.0	0.45	--	1.2:1	14	22	1.5	16	7-15	0.72"x0.64"
WMM50P	MRI	49.9	28.0	0.50	--	1.2:1	14	24	1.5	17	7-15	0.72"x0.64"
WMM75P	MRI	74.9	28.0	0.45	--	1.2:1	14	24	1.5	16	7-15	0.72"x0.64"
WMM7RP	MRI	298	28.0	0.50	--	1.2:1	14	22	1.5	17	7-15	0.72"x0.64"
WMM85P	MRI	85	28.0	0.45	--	1.2:1	14	22	1.5	16	7-15	0.72"x0.64"
WMM9RP	MRI	400.4	28.0	0.45	--	1.2:1	14	22	1.5	17	7-15	0.72"x0.64"





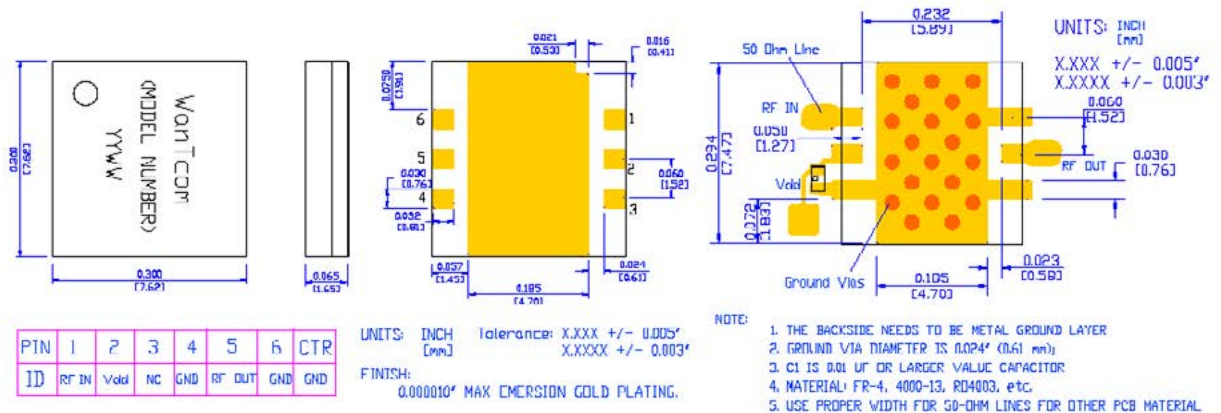
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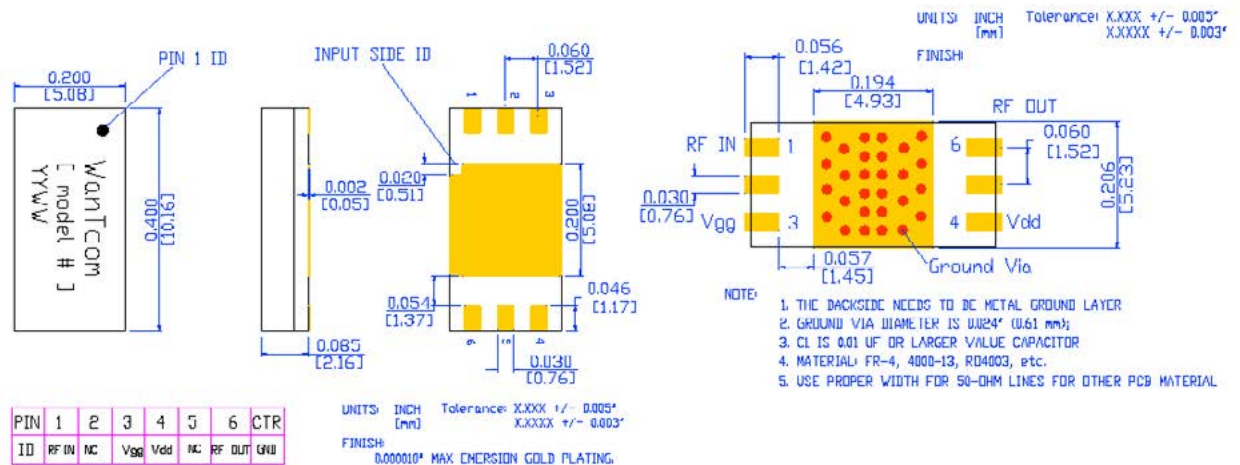


Selection Guide

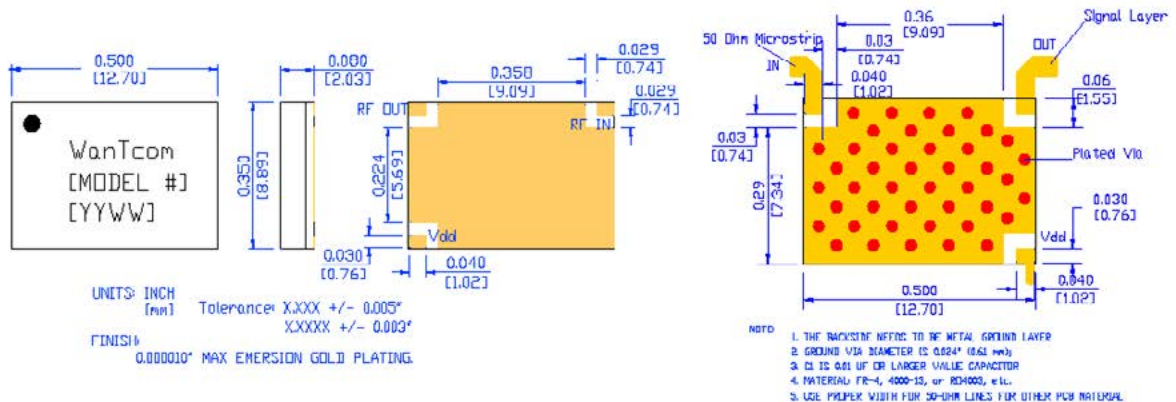
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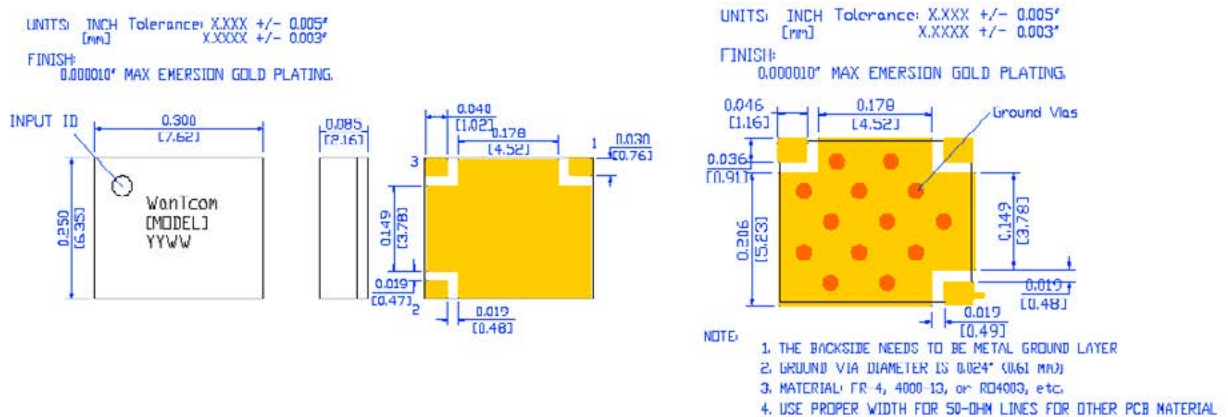
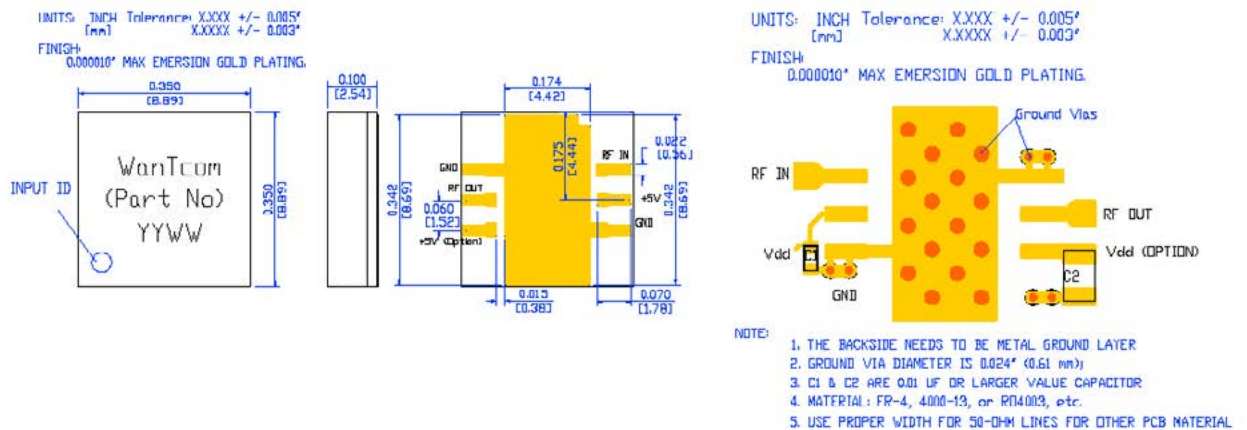
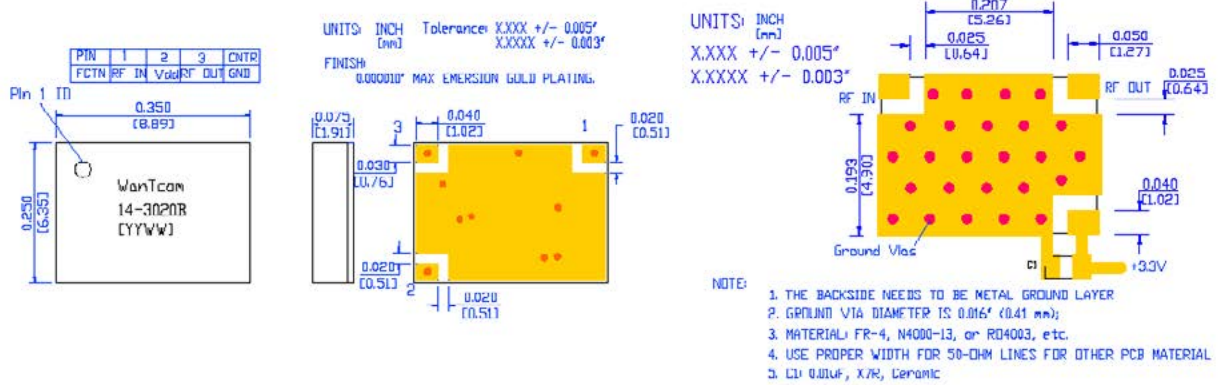


5. WHM-3



6. WHM-4

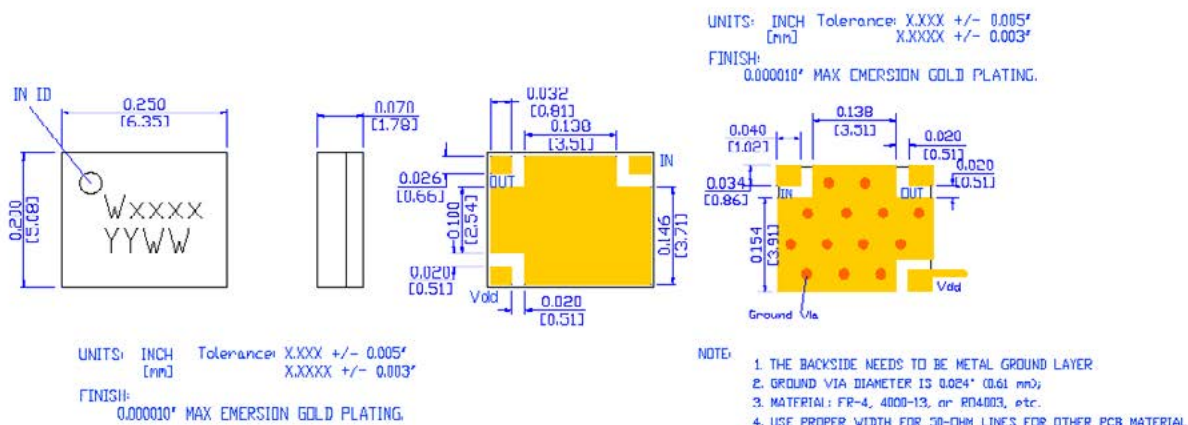




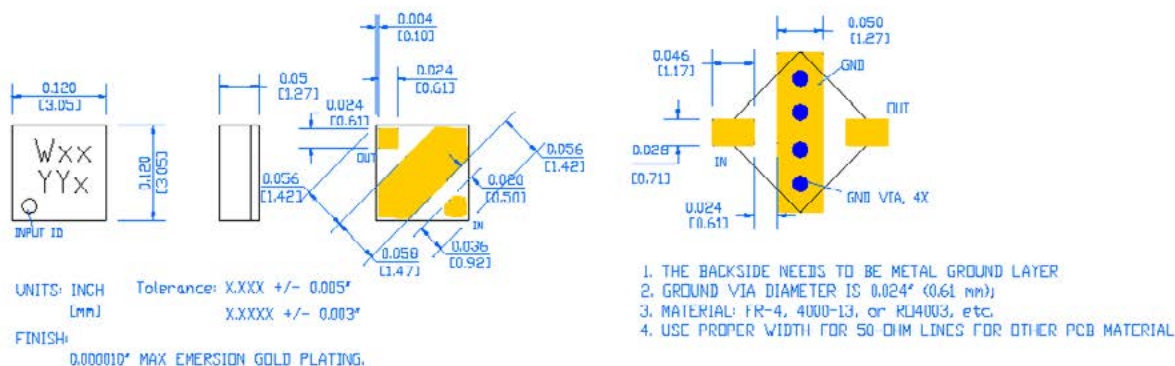


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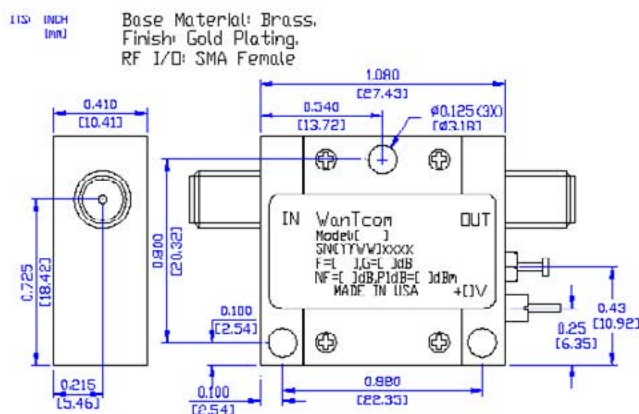
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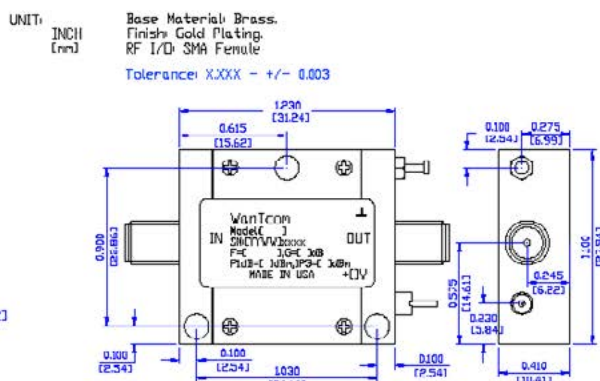
11. 3 x 3 mm2



12. WP-5



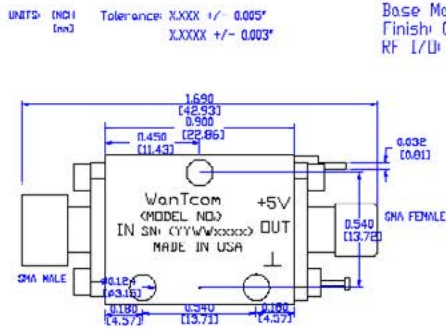
13. WP-6



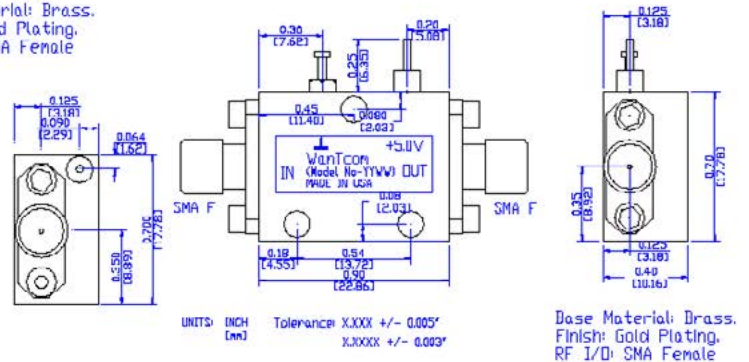


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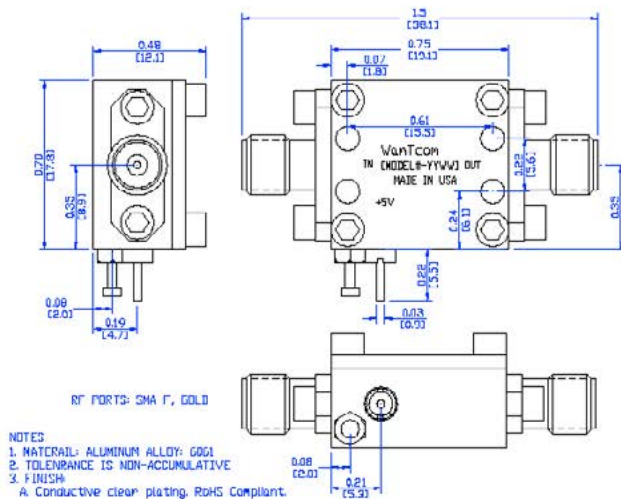
14. WP-10



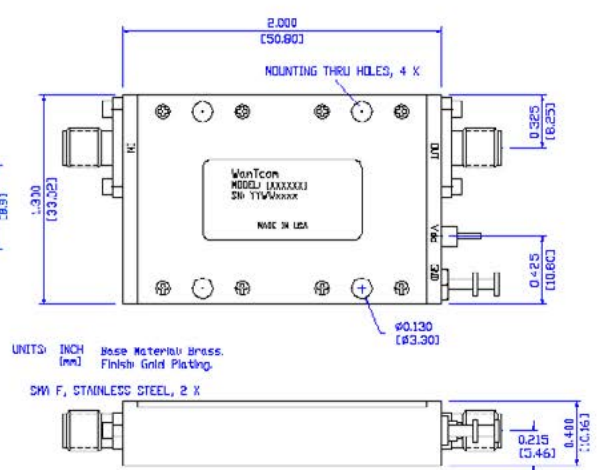
15. WP-10E



16. WP-30



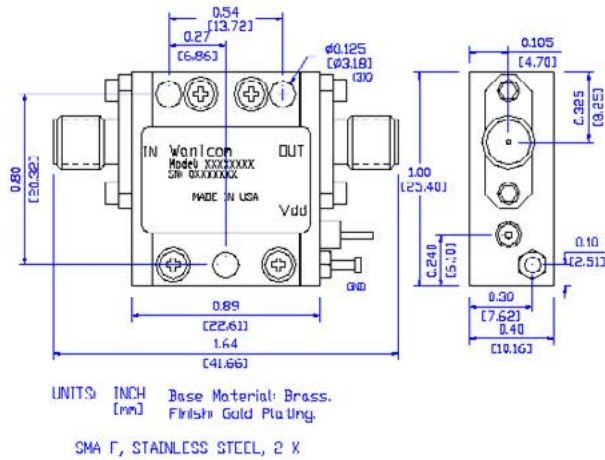
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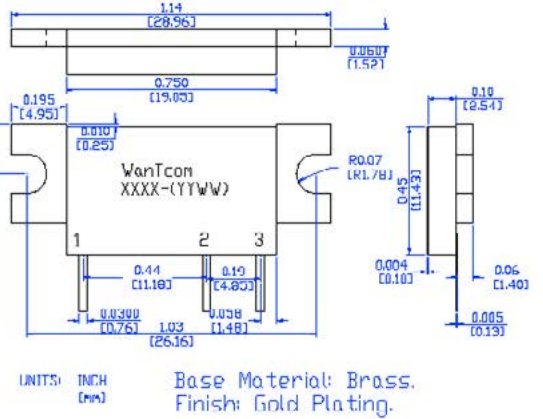


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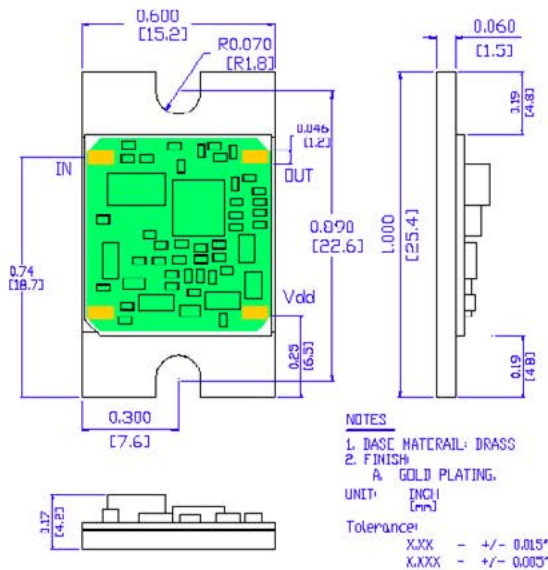
18. WP-11



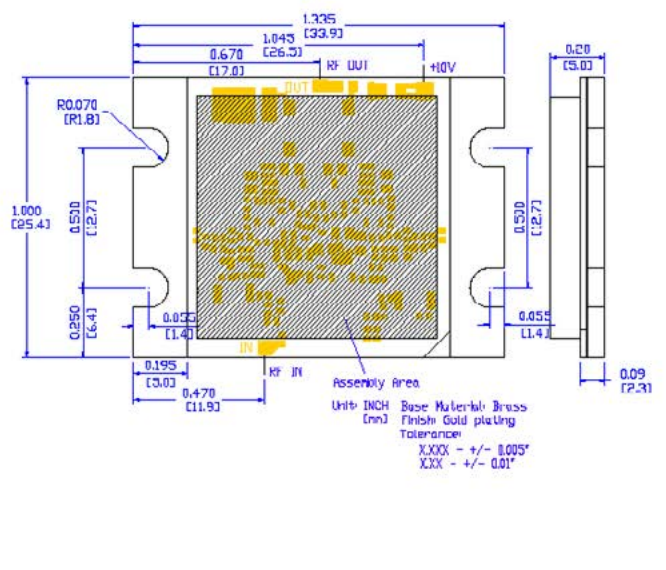
19. WPM-2



20. WPM-3



21. WPM-4







Selection Guide

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