

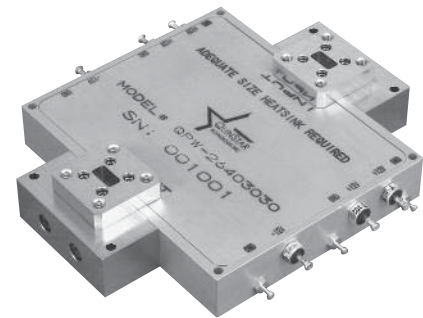


Millimeter-Wave Broadband Power Amplifiers

QPW

Characteristics

- ◆ Broad Bandwidth of Operation
- ◆ High Power Performance
- ◆ Available from 15 to 95 GHz



Product Description

QuinStar Technology's series QPW power amplifiers utilize advanced MMICs and discrete devices for state-of-the-art power performance in the 15-95 GHz frequency range. The standard amplifier housing offers a wide range and combinations of input and output coaxial connectors or waveguide ports. For 15 to 40 GHz amplifiers, we offer 2.9 mm coaxial connectors, and 2.4 mm for 40-50 GHz and 1.9 mm connectors for frequencies beyond. Appropriate

waveguide input and/or output ports are offered for the entire range from 15 to 95 GHz. Any valid combination of coaxial and waveguide input and output ports can be supplied, if desired. In addition to the standard products, QuinStar can produce customized amplifiers to specific requirements. A wide range of optional features is available for these amplifiers. Please see page 39 for details of these options.

Specifications

Model Number	Frequency Range (GHz)	Power P1dB (dBm)	Gain (dB)	Gain Flatness (±dB)	Voltage (V)	Current (A) typ.	-Voltage (V)	-Current (mA), max.	Outline Pages 40-45
QPW-15272313	15-27	23	13	2	12	1	-	-	J
QPW-15272328	15-27	23	28	2	12	1.1	-	-	J
QPW-15272344	15-27	23	44	2	12	1.2	-	-	J
QPW-15272713	15-27	27	13	2	12	1.6	-	-	J
QPW-15272728	15-27	27	28	2	12	1.7	-	-	J
QPW-15272744	15-27	27	44	2	12	1.8	-	-	J
QPW-15273012	15-27	30	12	2	12	3.3	-	-	A
QPW-15273022	15-27	30	22	2	12	3.4	-	-	A
QPW-15273032	15-27	30	32	2	12	3.6	-	-	A
QPW-15273042	15-27	30	42	2	12	3.7	-	-	A
QPW-15273211	15-27	32	11	2	12	6	-	-	A
QPW-15273221	15-27	32	21	2	12	6.3	-	-	A
QPW-15273231	15-27	32	31	2	12	6.4	-	-	A
QPW-15273241	15-27	32	41	2	12	6.5	-	-	A
QPW-18282311	18-28	23	11	2	12	0.7	-	-	J,G,L,S
QPW-18282327	18-28	23	27	2	12	0.8	-	-	J,G,L,S
QPW-18282343	18-28	23	43	2	12	0.9	-	-	J,G,L,S
QPW-18282710	18-28	27	10	2	12	0.8	-	-	J,G,L,S
QPW-18282716	18-28	27	16	2	12	1.1	-	-	J,G,L,S
QPW-18282742	18-28	27	42	2	12	1.2	-	-	J,G,L,S
QPW-18283025	18-28	30	25	2.2	12	1.8	-	-	A
QPW-18283036	18-28	30	36	2.3	12	1.9	-	-	A
QPW-18283046	18-28	30	46	2.3	12	2	-	-	A
QPW-18283320	18-28	33	20	2.0	12	3.3	-	-	A
QPW-18283330	18-28	33	30	2.2	12	3.4	-	-	A



Millimeter-Wave Broadband Power Amplifiers

QPW

Specifications

Model Number	Frequency Range (GHz)	Power P1dB (dBm)	Gain (dB)	Gain Flatness (±dB)	Voltage (V)	Current (A) typ.	-Voltage (V)	-Current (mA), max.	Outline Pages 40-45
QPW-18283340	18-28	33	40	2.3	12	3.5	-	-	A
QPW-18283620	18-28	36	20	2.2	12	7	-	-	B
QPW-18283630	18-28	36	30	2.3	12	7.5	-	-	B
QPW-18283640	18-28	36	40	2.4	12	7.7	-	-	B
QPW-18283820	18-28	38	20	2.5	12	14	-	-	*
QPW-18283830	18-28	38	30	2.6	12	15	-	-	*
QPW-18283840	18-28	38	40	2.7	12	15.5	-	-	*
QPW-26352315	26.5-34.5	23	15	1.8	12	0.4	-	-	J,G,L,S
QPW-26352326	26.5-34.5	23	26	2	12	0.45	-	-	J,G,L,S
QPW-26352337	26.5-34.5	23	37	2.3	12	0.5	-	-	J,G,L,S
QPW-26352348	26.5-34.5	23	48	2.5	12	0.55	-	-	J,G,L,S
QPW-26352815	26.5-34.5	28	15	2	12	1.5	-	-	A,R,M,T
QPW-26352826	26.5-34.5	28	26	2.3	12	1.6	-	-	A,R,M,T
QPW-26352837	26.5-34.5	28	37	2.5	12	1.7	-	-	A,R,M,T
QPW-26352848	26.5-34.5	28	48	2.8	12	1.8	-	-	A,R,M,T
QPW-26353013	26.5-34.5	30	13	3	12	3	-	-	B,K,N,Q
QPW-26353024	26.5-34.5	30	24	3	12	3.2	-	-	B,K,N,Q
QPW-26353035	26.5-34.5	30	35	3	12	3.4	-	-	B,K,N,Q
QPW-26353046	26.5-34.5	30	46	3	12	3.6	-	-	B,K,N,Q
QPW-20452320	20-45	23	20	2.5	12	0.8	-	-	J
QPW-20452330	20-45	23	30	2.5	12	0.95	-	-	J
QPW-20452340	20-45	23	40	2.5	12	1.1	-	-	J
QPW-20452350	20-45	23	50	2.5	12	1.2	-	-	J
QPW-20452720	20-45	27	20	2.5	12	1.6	-	-	J
QPW-20452730	20-45	27	30	2.5	12	1.9	-	-	J
QPW-20452740	20-45	27	40	2.5	12	2	-	-	J
QPW-20452750	20-45	27	50	2.5	12	2.1	-	-	J
QPW-20452918	20-45	29	18	3	12	3.2	-12	50	A
QPW-20452928	20-45	29	28	3	12	3.6	-12	50	A
QPW-20452940	20-45	29	40	3	12	3.8	-12	50	A
QPW-20452950	20-45	29	50	3	12	4	-12	50	A
QPW-24313020	24-31	30	20	2	10	2.5	-12	50	A,R,M,T
QPW-24313030	24-31	30	30	2	10	2.6	-12	50	A,R,M,T
QPW-24313040	24-31	30	40	2	10	2.7	-12	50	A,R,M,T
QPW-24313050	24-31	30	50	2	10	2.8	-12	50	A,R,M,T
QPW-24313320	24-31	33	20	2	10	3.5	-12	50	A,R,M,T
QPW-24313330	24-31	33	30	2	10	3.6	-12	50	A,R,M,T
QPW-24313340	24-31	33	40	2	10	3.7	-12	50	A,R,M,T
QPW-24313350	24-31	33	50	2	10	3.8	-12	50	A,R,M,T
QPW-24313618	24-31	36	18	2	10	7	-12	50	A,R,M,T
QPW-24313628	24-31	36	28	2	10	7.1	-12	50	A,R,M,T
QPW-24313638	24-31	36	38	2	10	7.2	-12	50	A,R,M,T
QPW-24313648	24-31	36	48	2	10	7.5	-12	50	A,R,M,T
QPW-24313817	24-31	38	17	2	10	14	-12	100	B,K,N,Q
QPW-24313827	24-31	38	27	2	10	14.2	-12	100	B,K,N,Q





Millimeter-Wave Broadband Power Amplifiers

QPW

Amplifier Products 1

Specifications

Model Number	Frequency Range (GHz)	Power P1dB (dBm)	Gain (dB)	Gain Flatness (±dB)	Voltage (V)	Current (A) typ.	-Voltage (V)	-Current (mA), max.	Outline Pages 40-45
QPW-24313837	24-31	38	37	2	10	14.4	-12	100	B,K,N,Q
QPW-24313847	24-31	38	47	2	10	15	-12	100	B,K,N,Q
QPW-24314017	24-31	40s	17	2	10	28	-12	100	*
QPW-24314027	24-31	40s	27	2	10	28.4	-12	100	*
QPW-24314037	24-31	40s	37	2	10	28.8	-12	100	*
QPW-24314047	24-31	40s	47	2	10	30	-12	100	*
QPW-30403010	30-40	30	10	3	10	3	-12	50	A,R,M,T
QPW-30403020	30-40	30	20	3	10	3.5	-12	50	A,R,M,T
QPW-30403030	30-40	30	30	3	10	3.5	-12	50	A,R,M,T
QPW-30403040	30-40	30	40	3	10	3.6	-12	50	A,R,M,T
QPW-30403310	30-40	33	10	3	10	6	-12	50	A,R,M,T
QPW-30403320	30-40	33	20	3	10	6.5	-12	50	A,R,M,T
QPW-30403330	30-40	33	30	3	10	6.5	-12	50	A,R,M,T
QPW-30403340	30-40	33	40	3	10	6.6	-12	50	A,R,M,T
QPW-30403510	30-40	35	10	3	10	12	-12	50	B,K,N,Q
QPW-30403520	30-40	35	20	3	10	13	-12	50	B,K,N,Q
QPW-30403530	30-40	35	30	3	10	13	-12	50	B,K,N,Q
QPW-30403540	30-40	35	40	3	10	13.5	-12	50	B,K,N,Q
QPW-30403720	30-40	37s	20	3	10	17	-12	50	B,K,N,Q
QPW-30403730	30-40	37s	30	3	10	17	-12	50	B,K,N,Q
QPW-30403740	30-40	37s	40	3	10	17.3	-12	50	B,K,N,Q
QPW-30403750	30-40	37s	50	3	10	17.6	-12	50	B,K,N,Q
QPW-32482310	32-48	23	10	2	12	0.7	-12	30	J,G,L,S
QPW-32482322	32-48	23	22	2	12	0.8	-12	30	J,G,L,S
QPW-32482334	32-48	23	34	2	12	0.9	-12	30	J,G,L,S
QPW-32482346	32-48	23	46	2	12	1	-12	30	J,G,L,S
QPW-32472718	32-47	27	18	2	12	1.5	-12	50	J,G,L,S
QPW-32472730	32-47	27	30	2	12	1.6	-12	50	J,G,L,S
QPW-32472742	32-47	27	42	2	12	1.7	-12	50	J,G,L,S
QPW-32472923	32-47	29	23	2	12	1.5	-12	50	J,G,L,S
QPW-32472935	32-47	29	35	2	12	1.6	-12	50	J,G,L,S
QPW-32472947	32-47	29	47	2	12	1.7	-12	50	J,G,L,S
QPW-40473215	40-47	32	15	2.5	10	14	-12	100	A,R,M,T
QPW-40473235	40-47	32	35	2.5	10	14.5	-12	100	A,R,M,T
QPW-40473247	40-47	32	47	2.5	10	15	-12	100	A,R,M,T
QPW-45572215	45-57	22s	15	2.5	12	2	-12	50	A,R,M,T
QPW-45572225	45-57	22s	25	2.6	12	2.1	-12	50	A,R,M,T
QPW-45572235	45-57	22s	35	2.7	12	2.2	-12	50	A,R,M,T
QPW-45572245	45-57	22s	45	2.8	12	2.3	-12	50	A,R,M,T
QPW-50662315	50-66	23	15	3.5	8	2.2	-	-	C2
QPW-50662330	50-66	23	30	3.5	8	2.3	-	-	C2
QPW-71762128	71-76	21	28	2	6	0.7	-	-	P2
QPW-80912215	80-91	22s	15	3	8	2.2	-	-	C1
QPW-80912230	80-91	22s	30	3	8	2.3	-	-	C1



Millimeter-Wave Broadband Power Amplifiers

QPW

Specifications

Model Number	Frequency Range (GHz)	Power P1dB (dBm)	Gain (dB)	Gain Flatness (±dB)	Voltage (V)	Current (A) typ.	-Voltage (V)	-Current (mA), max.	Outline Pages 40-45
QPW-90952318	90-95	23	18	3	5	0.8	-	-	P2
QPW-90952328	90-95	23	28	3	5	1	-	-	P2
QPW-90952715	90-95	27	15	3	5	1.8	-	-	C1
QPW-90952728	90-95	27	28	3	5	2	-	-	C1
QPW-90953020	90-95	30	20	3.5	5	5	-	-	C2
QPW-90953030	90-95	30	30	3.5	5	5.2	-	-	C2

s = Saturated Power

*Please contact QuinStar for outline information.

Ordering Information

Model Number **QPW - ABCD EF GH IJ - K**

frequency range, minimum-maximum frequencies, in GHz

P1dB (power at 1dB gain compression point) in dBm (or saturated power where applicable)

options (see page 39)

outline designation (see pages 40-45)

gain, in dB