PULSE AMPLIFIERS

Coaxial

INVERTING & NON-INVERTING up to 200 mW, 2.5 KHz to 700 MHz

ZPUL

Up to 200 mW

MODEL NO.	FREQ. (MHz) f_L-f_U	GAIN (dB) Min.	GAIN (dB) Flatness Max.	RISE/FALL TIME ns Max.	PULSE WIDTH* µs Max.	POLARITY	MAXIMUM POWER (dBm) Output (1 dB Comp.)	MAXIMUM POWER (dBm) Input (no damage)	DYNAMIC RANGE NF** dB Typ.	DYNAMIC RANGE Intercept 3rd order Typ.	VSWR Typ. In	VSWR Typ. Out	DC POWER Volt V.	DC POWER Current (mA)	CASE STYLE * Note B	CONNECTION	PRICE $ Qty. (1-9)
ZPUL-21	0.0025-700	21	±1	1.5	6	Inverting	22	+10	7.3	34	2:1	2:1	24	350	S32	—	249.00
ZPUL-30P	0.0025-700	29	±1	1.5	6	Non-inverting	22	+10	7.2	34	2:1	2:1	24	400	S32	—	295.00

L_w = low range [f_L to $f_U/2$] m = mid range [$2f_L$ to $f_U/2$] U = upper range [$f_U/2$ to f_U]

* pulse width for less than 10% droop
** NF tested above 10 MHz

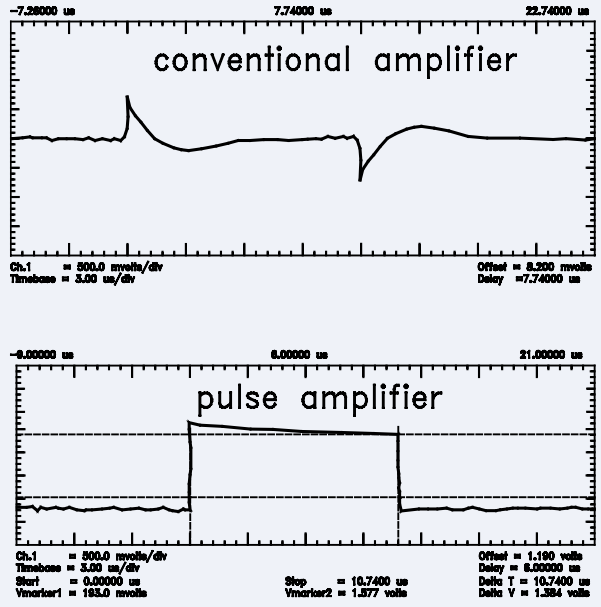
features

- wide bandwidth 2.5 KHz to 700 MHz, useable to 1 GHz
- excellent flatness ±0.6 dB typical
- can handle wide pulse width & (15 µs typ.) with excellent rise/fall time (1.1 ns typ.)
- inverting (ZPUL-21) & non-inverting (ZPUL-30P) configurations
- delay time, 1.5 ns typical

applications

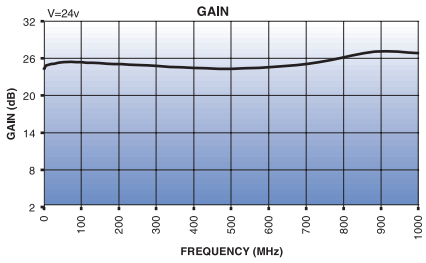
- computers
- digital communication
- medical test set-ups

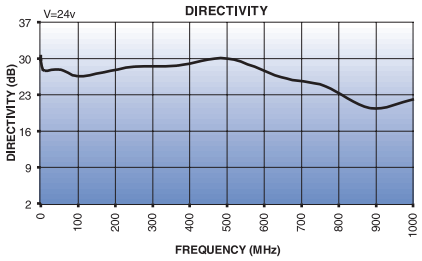
typical amplifier response to a pulse input

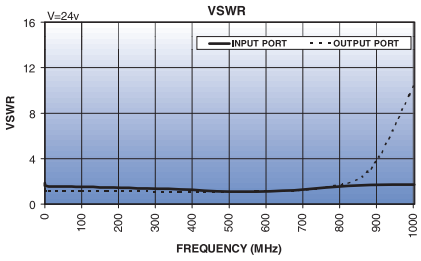


NOTES:
* Available only with BNC connectors
B. Connector types and case mounted options, case finishes are given in section 0, see "Case styles & Outline Drawings".
C. Prices and specifications subject to change without notice.
D. For Quality Control Procedures see Table of Contents, Section 0, see "Mini-Circuits Guarantees Quality" article.
1. Operating temperature: -20°C to 65°C
Storage temperature: -55°C to 100°C

ZPUL-21

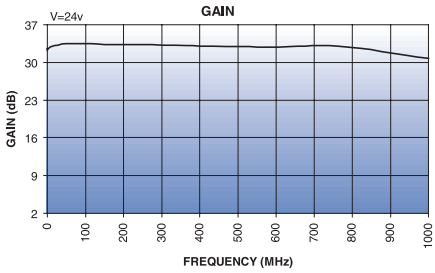


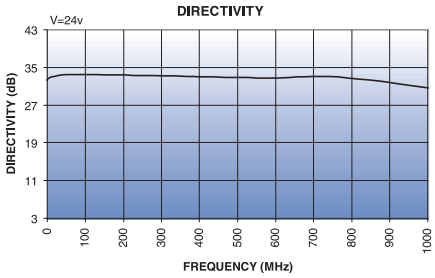


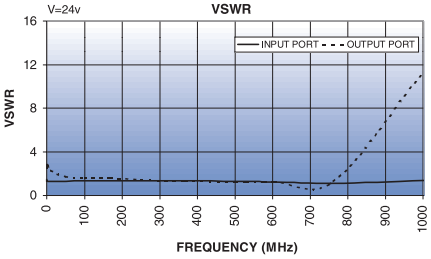


FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1) IN	VSWR (:1) OUT	N.F. (dB)		Pout (@1dB COMPR) (MHz)	Pout (@1dB COMPR) (dBm)
0.002	24.14	30.72	1.85	1.40	10.00	7.37	0.002	24.63
0.012	24.47	29.52	1.61	1.20	106.00	7.15	0.012	24.76
0.050	24.42	29.95	1.58	1.18	202.00	7.20	0.050	24.70
1.008	24.43	28.89	1.58	1.17	298.00	7.27	1.008	24.82
10.078	24.92	27.56	1.57	1.17	418.00	7.29	8.930	25.50
50.000	25.41	27.85	1.54	1.18	466.00	7.26	50.000	25.58
98.875	25.40	26.60	1.52	1.18	514.00	7.23	98.875	25.44
167.875	25.17	27.34	1.48	1.17	562.00	7.22	176.500	25.30
251.250	24.92	28.45	1.39	1.15	610.00	7.18	300.125	24.91
366.250	24.56	28.65	1.26	1.10	658.00	7.17	349.000	24.64
501.375	24.29	30.00	1.09	1.11	706.00	7.12	501.375	24.34
645.125	24.76	26.40	1.18	1.17	754.00	7.05	661.750	24.14
763.000	25.71	24.64	1.45	1.50	802.00	6.97	817.625	23.06
883.750	27.09	20.40	1.70	3.10	898.00	6.77	944.125	20.65
1001.625	26.82	22.14	1.73	10.56	970.00	6.67	1073.500	14.21

ZPUL-30P







FREQUENCY (MHz)	GAIN (dB)	DIRECTIVITY (dB)	VSWR (:1) IN	VSWR (:1) OUT	N.F. (dB)		Pout (@1dB COMPR) (MHz)	Pout (@1dB COMPR) (dBm)
0.002	32.16	32.16	1.53	2.50	10.00	7.41	0.003	24.26
0.010	32.60	32.60	1.32	2.57	97.00	7.16	0.050	24.67
0.050	32.49	32.49	1.30	2.72	126.00	7.16	1.026	24.83
0.118	32.47	32.47	1.31	2.77	155.00	7.15	9.866	25.30
1.106	32.51	32.51	1.30	2.80	213.00	7.17	50.000	25.61
10.172	32.98	32.98	1.29	2.27	271.00	7.20	98.875	25.51
50.000	33.45	33.45	1.30	1.74	329.00	7.23	133.375	25.36
98.875	33.48	33.48	1.31	1.66	416.00	7.24	297.250	24.96
167.875	33.35	33.35	1.31	1.58	503.00	7.23	377.750	24.42
248.375	33.28	33.28	1.32	1.48	561.00	7.21	501.375	24.38
366.250	33.13	33.13	1.32	1.34	619.00	7.20	541.625	24.06
501.375	32.91	32.91	1.29	1.30	706.00	7.16	625.000	23.98
604.785	32.81	32.81	1.25	1.26	793.00	7.20	708.375	23.89
763.000	33.01	33.01	1.11	1.30	909.00	7.29	872.250	23.46
1001.625	30.68	30.68	1.35	11.38	996.00	7.24	952.750	20.75

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