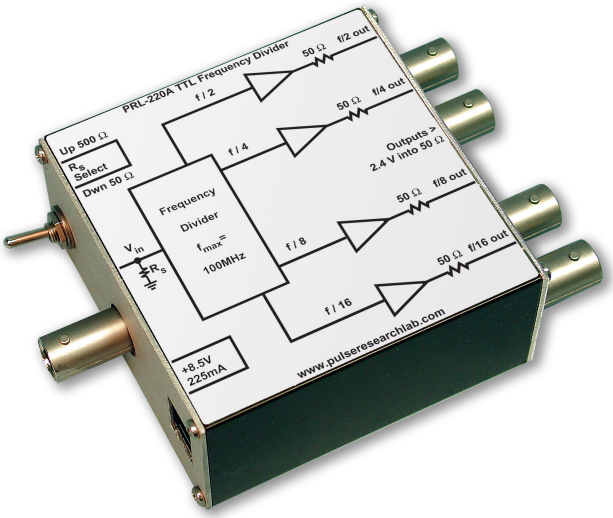
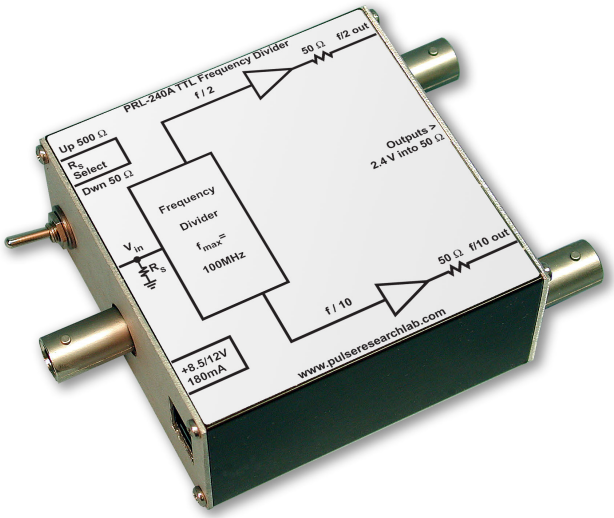
PRL-220A, ÷2, ÷4 , ÷8 and ÷16 TTL FREQUENCY DIVIDER
PRL-240A, ÷2 and ÷10 TTL FREQUENCY DIVIDER



PRL-220A



PRL-240A

APPLICATIONS

- Count down signal for 'scope trigger
- Control Signal for split cycle timing
- Counter Output simulation
- Square Wave Generator (Except ÷10 Output)
- An Essential Lab Tool for Working with TTL/CMOS Circuits

FEATURES

- 100 MHz Input Toggle Frequency
- 50 Ω Outputs deliver > 2.2 V into 50 Ω loads
- TTL/CMOS Compatible Input Levels
- 50 Ω or 500 Ω Input Resistance
- BNC I/O Connectors
- Ready-to-Use 1.3 x 2.9 x 2.9-in. Module includes AC/DC Adapter

DESCRIPTION

The PRL-220A and PRL-240A are self-contained high-speed TTL frequency dividers capable of operating at input clock frequencies in excess of 100 MHz. The PRL-220A has ÷2, ÷4, ÷8 and ÷16 outputs. The PRL-240A has ÷2 and ÷10 outputs. The input resistance of each unit can be selected to be 500 Ω or 50 Ω by a toggle switch. Functional block diagrams of the PRL-220A and PRL-240A are shown in Fig. 1 and Fig. 2, respectively.

The back-matched 50 Ω outputs of these frequency dividers can drive long lines and deliver greater than 2.2 V into 50 Ω loads. Except for the division ratios, the performance characteristics of both units are identical.

The outputs of these frequency dividers are square waves, except for the ÷10 output in the PRL-240A, where the output pulse positive duty cycle is 40%. These dividers are useful for testing High-pass and Low-pass filters. The divider outputs are useful as 'scope triggers for viewing multi-frequency signals. The ÷2 signal is often needed as a control signal for split-cycle timing applications.

Each unit is housed in a1.3 x 2.9 x 2.9-in. extruded aluminum enclosure with BNC I/O connectors. A ±8.5V AC/DC, ±1.8 A Adapter is supplied with each unit.

If mounting is desired, a pair of 35001420 mounting brackets can accommodate two PRL modules of the same length. A number of PRL modules can also share a single ±8.5V AC/DC adaptor using the PRL-730 or PRL-736 voltage distribution module. Please see the Accessories Section for more detail.

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*SPECIFICATIONS (0^{o} C ≤ T_A ≤ 35° C)

All AC measurements are made with all outputs terminated into 50 Ω

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Comments
R_{INLo}	Input Resistance. 50 Ω	49.5	50.0	50.5	Ω	
R_{INHi}	Input Resistance. 500 Ω	495	500	505	Ω	
I_{DC1}	DC Input Current, PRL-220A		200	225	mA	
I_{DC2}	DC Input Current, PRL-240A		135	180	mA	
V_{DC}	DC Input Voltage	7.5	8.5	12.0	V	
V_{AC1}	AC/DC Adapter Input Voltage, 120 VAC	103	115	127	V	
V_{AC2}	AC/DC Adapter Input Voltage, 220 VAC	206	230	254	V	
V_{IH}	Input Hi Level	2.0	2.5	5.0	V	
V_{IL}	Input Lo Level	-0.5	0.0	0.5	V	
V_{OH1}	Output Hi Level, R_{LOAD} = 50 Ω	2.2	2.5		V	
V_{OH2}	Output Hi Level, R_{LOAD} = 1 MΩ	4.8	5.0		V	
V_{OL1}	Output Lo Level, R_{LOAD} = 50 Ω		0.15	0.25	V	
V_{OL2}	Output Lo Level, R_{LOAD} = 1M Ω		0.3	0.5	V	
T_{PLH}	Propagation Delay to f/n output ↑		10	13	ns	
T_{PHL}	Propagation Delay to f/n output ↓		10	13	ns	
t_r	Rise Time (10%-90%)		2.0	3.0	Ns	
t_f	Fall Time (10%-90%)		1.8	3.0	Ns	
T_{SKEW}	Skew between outputs		1	2	ns	
F_{MAX}	Max clock frequency	100			MHz	R_{IN} = 50 Ω
	Size	1.3 x 2.9 x 2.9			in.	
	Weight	1			lb.	
	Shipping weight, incl. AC adapter	4			lb.	

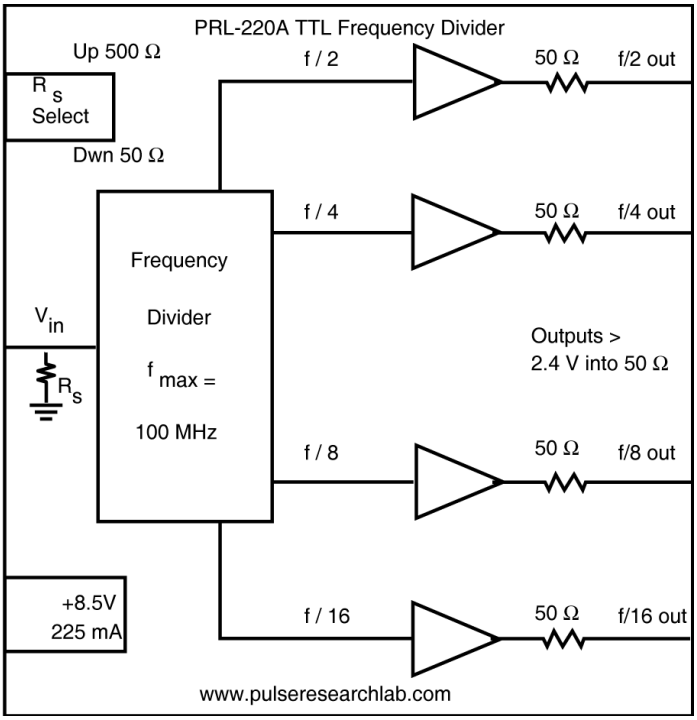


Figure 1: PRL-220A Block Diagram

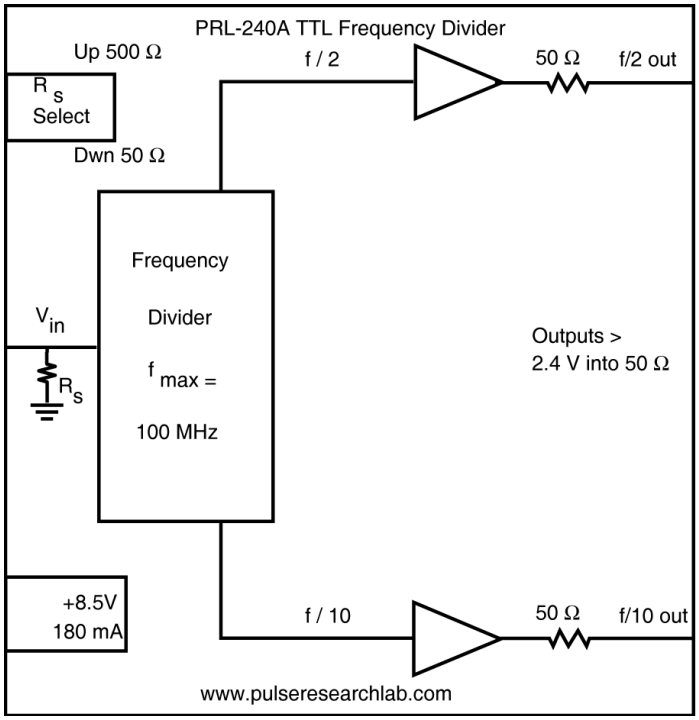


Figure 2: PRL-240A Block Diagram

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