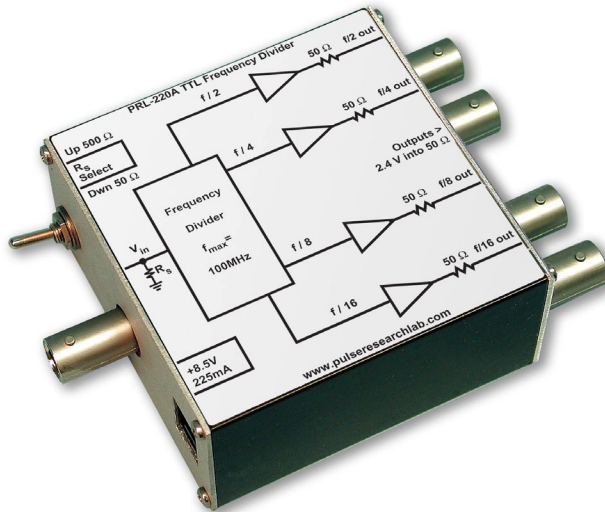
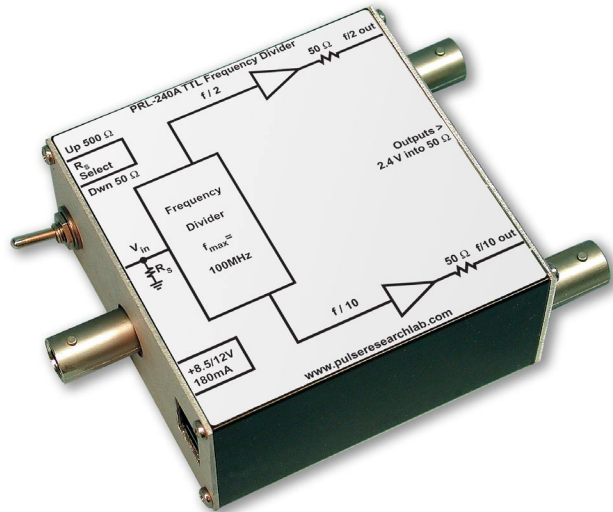


# PRL-220A $\div 2$ , $\div 4$ , $\div 8$ and $\div 16$ TTL FREQUENCY DIVIDER PRL-240A $\div 2$ and $\div 10$ TTL FREQUENCY DIVIDER



**PRL-240A**



**PRL-220A**

## APPLICATIONS

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

## FEATURES

- 100 MHz Toggle Frequency
- 50  $\Omega$  Outputs deliver > 2.2V into 50  $\Omega$  loads
- TTL/CMOS Compatible Input Levels
- 50  $\Omega$  or 500  $\Omega$  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 clock frequencies in excess of 100 MHz. The PRL-220A has  $\div 2$ ,  $\div 4$ ,  $\div 8$  and  $\div 16$  outputs. The PRL-240A has  $\div 2$  and  $\div 10$  outputs. The input resistance of each unit can be selected to be 500 $\Omega$  or 50 $\Omega$  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 $\Omega$  outputs of these frequency dividers can drive long lines and deliver greater than 2.2V into 50 $\Omega$  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  $\div 10$  output in the PRL-240A, and they are useful for testing High and Low pass filters. The divider outputs are useful as 'scope triggers for viewing multi-frequency signals. The  $\div 2$  signal is often needed as a control signal for split-cycle timing applications.

Each unit is housed in an attractive 1.3 x 2.9 x 2.9-in. extruded aluminum enclosure and has BNC I/O connectors. A  $\pm 8.5V$  AC/DC 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  $\pm 8.5V$  AC/DC adaptor using the PRL-730 or PRL-736 voltage distribution module. Please see the Accessories Section for more detail.

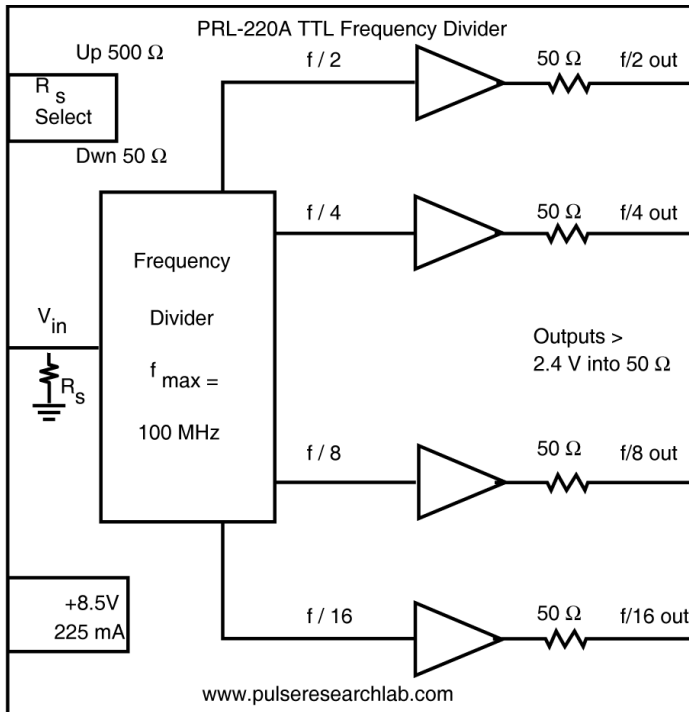


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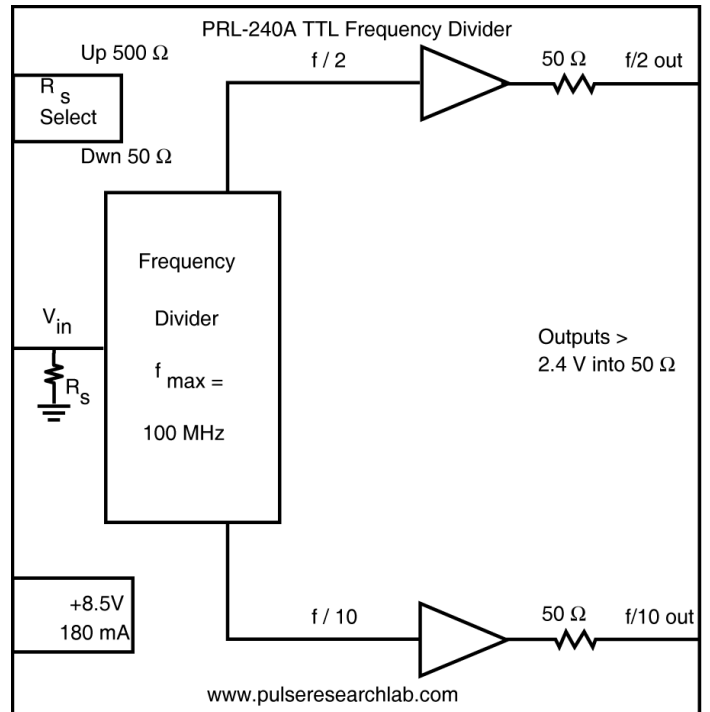
**\*SPECIFICATIONS (0° C ≤ T<sub>A</sub> ≤ 35°C)**

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

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Comments
R <sub>in</sub> (Lo)	Input Resistance	49.5	50	50.5	Ω	
R <sub>in</sub> (Hi)	Input Resistance	495	500	505	Ω	
I <sub>DC</sub>	DC Input Current		200 135	225 180	mA	PRL-220A PRL-240A
V <sub>DC</sub>	DC Input Voltage	7.5	8.5	12	V	
V <sub>AC</sub>	AC/DC Adaptor Input Voltage	103	115	127	V	
V <sub>IH</sub>	Input HI Level	2	2.5	5	V	
V <sub>IL</sub>	Input LO Level	-0.5	0	0.5	V	
V <sub>OH</sub>	Output Hi Level	2.2 4.8	2.5 5		V V	50Ω 1MΩ
V <sub>OL</sub>	Output Lo Level		0.15 0.3	0.25 0.5	V V	50Ω 1MΩ
T <sub>PLH</sub>	Propagation Delay to f/n output ↑		10	13	ns	
T <sub>PHL</sub>	Propagation Delay to f/n output ↓		10	13	ns	
t <sub>r</sub> /t <sub>f</sub>	Rise/Fall Times (10%-90%)		2/1.8	3	ns	
T <sub>SKEW</sub>	Skew between outputs		1	2	ns	
F <sub>MAX</sub>	Max clock frequency	100			MHz	R <sub>in</sub> = 50 Ω
	Size		1.3 x 2.9 x 2.9		in.	
	Shipping weight, incl. AC adapter		3		lb.	



**Figure 1A PRL-220A Block Diagram**



**Figure 2A PRL-240A Block Diagram**