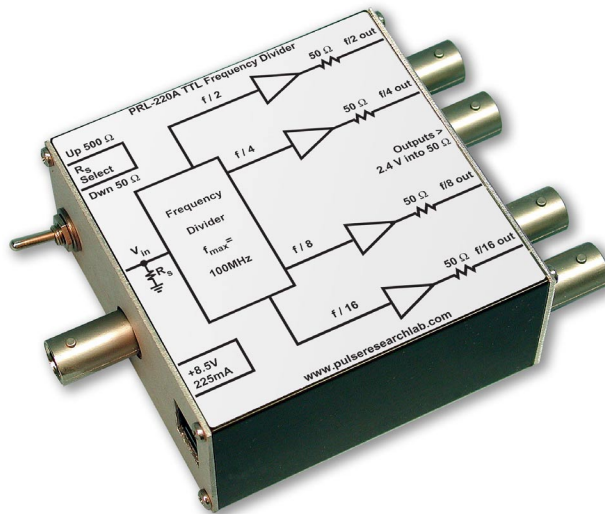
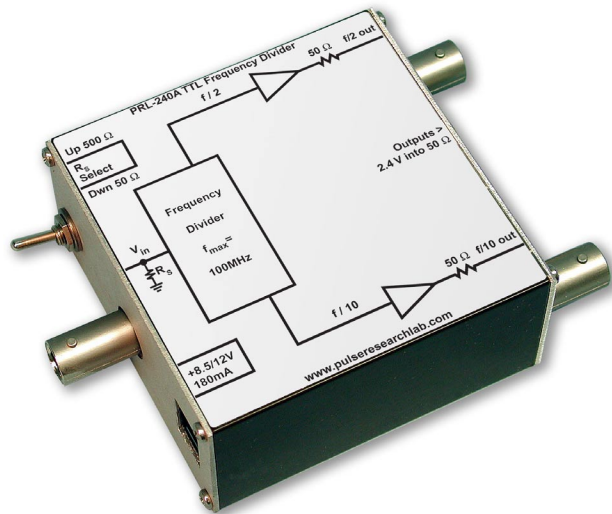


PRL-220A $\div 2$, $\div 4$, $\div 8$ and $\div 16$ TTL FREQUENCY DIVIDER PRL-240A $\div 2$ and $\div 10$ TTL FREQUENCY DIVIDER



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 Ω Outputs deliver > 2.2V 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 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 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 2.2V 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 $\div 10$ 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.

***SPECIFICATIONS ($0^{\circ}\text{C} \leq T_A \leq 35^{\circ}\text{C}$)**

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

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Comments
$R_{in} (Lo)$	Input Resistance	49.5	50	50.5	Ω	
$R_{in} (Hi)$	Input Resistance	495	500	505	Ω	
I_{DC}	DC Input Current		200 135	225 180	mA	PRL-220A PRL-240A
V_{DC}	DC Input Voltage	7.5	8.5	12	V	
V_{AC}	AC/DC Adaptor Input Voltage	103	115	127	V	
V_{IH}	Input HI Level	2	2.5	5	V	
V_{IL}	Input LO Level	-0.5	0	0.5	V	
V_{OH}	Output Hi Level	2.2 4.8	2.5 5		V V	50Ω $1M\Omega$
V_{OL}	Output Lo Level		0.15 0.3	0.25 0.5	V V	50Ω $1M\Omega$
T_{PLH}	Propagation Delay to f/n output $\uparrow$		10	13	ns	
T_{PHL}	Propagation Delay to f/n output $\downarrow$		10	13	ns	
t_r/t_f	Rise/Fall Times (10%-90%)		2/1.8	3	ns	
T_{SKEW}	Skew between outputs		1	2	ns	
F_{MAX}	Max clock frequency	100			MHz	$R_{in} = 50\Omega$
	Size		1.3 x 2.9 x 2.9		in.	
	Shipping weight, incl. AC adapter		3		lb.	

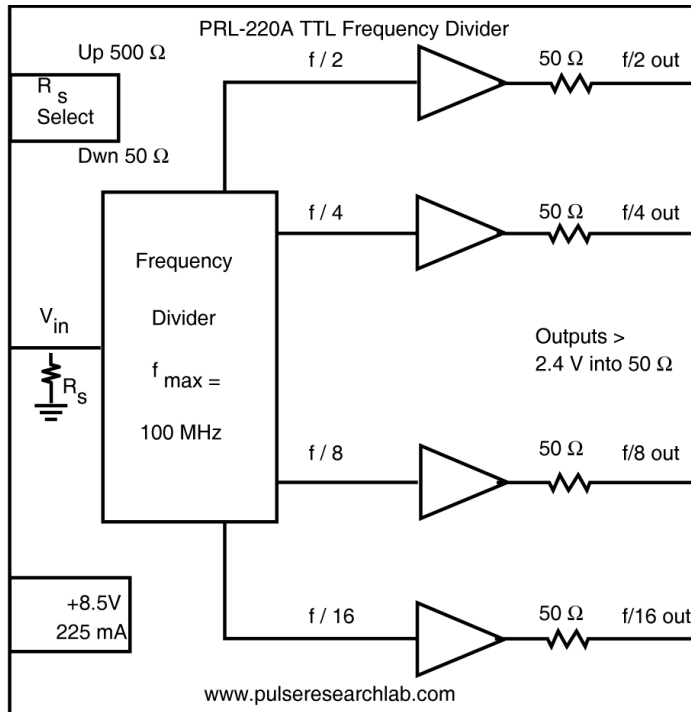


Figure 1A PRL-220A Block Diagram

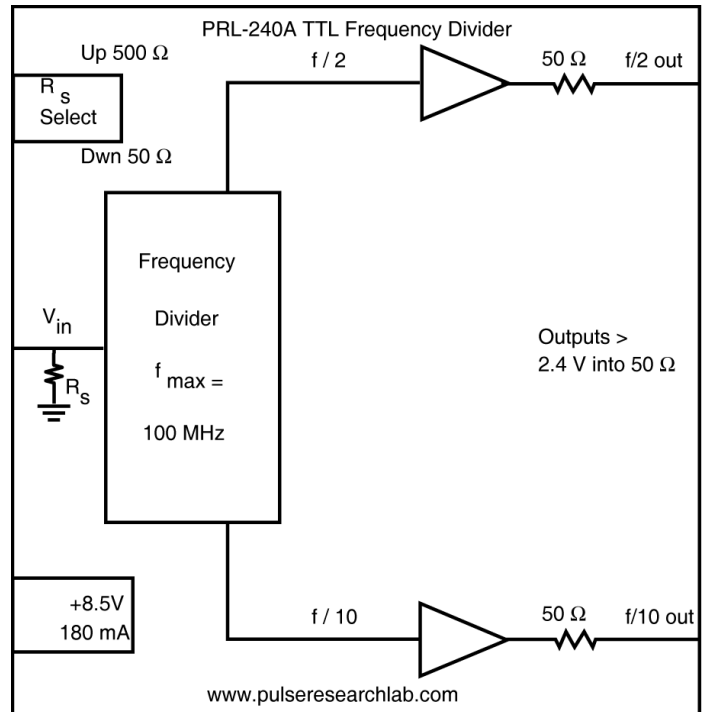


Figure 2A PRL-240A Block Diagram