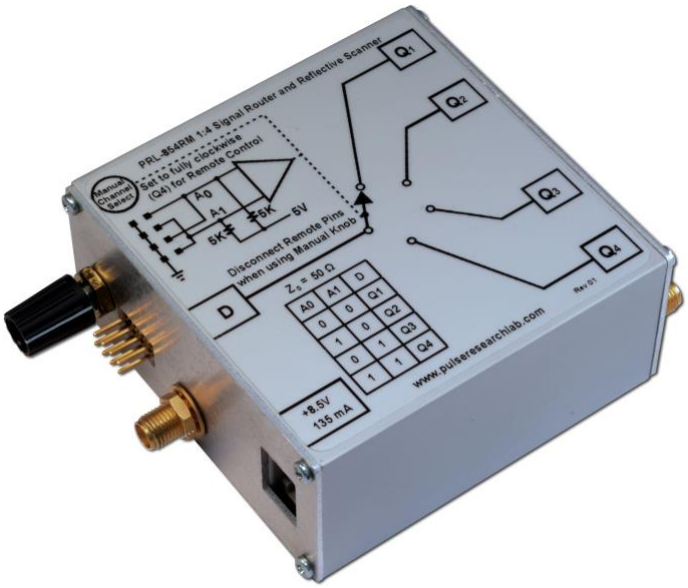
PRL-854-RM, 1 x 4 SIGNAL ROUTER & 4 x 1 SCANNER

APPLICATIONS

- Switching GHz/Sub-ns Rise Time Signals
- GHz Signal Routing or Scanning

FEATURES

- DC to 2.5 GHz Usable Frequency Range
- Up to 1.75 GHz 3 dB bandwidth
- Z_0 =50 Ω
- Typical 1.65 dB Insertion loss and 46 dB Isolation @ 1.25 GHz
- 6 ms Switching Time
- SMA I/O Connectors
- Manual or Remote Control
- Modules include AC/DC Adapters



PRL-854-RM-SMA

DESCRIPTION

The PRL-854-RM is a 1 x 4, DC coupled signal router designed for 50 Ω I/O applications. The usable frequency band extends from DC to over 2.5 GHz. A signal connected to input D can be routed to output Q1, Q2, Q3 or Q4. It can also be used as a Reflective Scanner in the reverse direction, in that signals connected to the Q inputs can be scanned one at a time at the D output. Because signals connected to the non-selected ports are not terminated, these signals will be reflected, hence the term reflective scanner.

The PRL-854-RM-SMA has SMA I/O connectors. Each model is provided with a 4-position rotary switch for manual channel selection and four LEDs for channel identification. All models also have 2 x 2 stick pins (pulled up to +5V via 4.99 kΩ resistors) for remote TTL/CMOS logic control inputs. An additional 2 x 2 set of stick pins allows control signals to be cascaded through to additional units. The pin designations and truth tables for the logic inputs are shown in the following table. When the rotary switch is set to the fully clockwise position the logic inputs are left open. A0 and A1 are both high, and channel Q4 is selected. Jumpers or remote inputs may be used to pull the pins low. When the unit is not powered, Q4 is also selected.

A0	A1	D
L	L	Q1
H	L	Q2
L	H	Q3
H	H	Q4

Table I: Logic Input Truth table for PRL-854-RM
0 V ≤ L ≤ 0.4 V; 2 V ≤ H ≤ 5 V

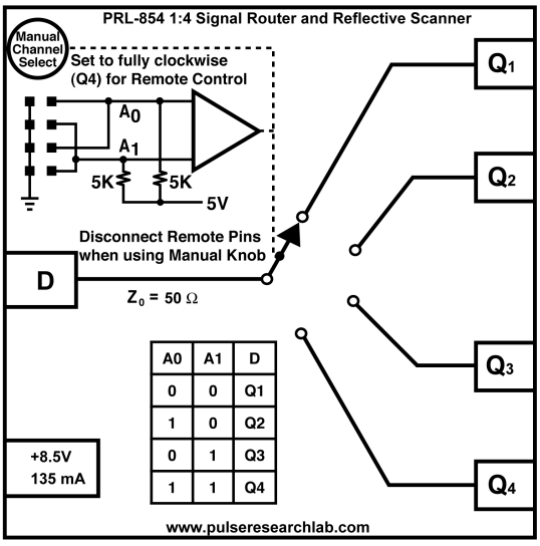
The PRL-854-RM is housed in a 1.3 x 2.9 x 2.9-in. aluminum extrusion and includes a ±8.5 V AC/DC adapter. The PRL-854-RM replaces the PRL-854 in all applications, as the newer model provides both manual and remote control in one unit.

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SPECIFICATIONS (0^0 C ≤ T_A ≤ 35^0C)

Unless otherwise specified, dynamic measurements are made with all outputs terminated into 50 Ω.

SYMBOL	PARAMETER	Min	Typ	Max	UNIT	Comments
$t_{r/tf}$	Rise/Fall Times (10%-90%)		200	230	ps	
BW	Equivalent 3 dB bandwidth	1.50	1.75		GHz	
$R_{in(RM)}$	Input Resistance, Logic inputs.		4.99k to +5V		kΩ	
V_{IH}	Logic Input Hi Level	2	2	5	V	
V_{IL}	Logic Input Lo Level	-0.5	0	0.5	V	
VSWR	25MHz ≤ f ≤ 1.25 GHz		1.35:1	1.60:1		
VSWR	1.25 GHz < f ≤ 2.4 GHz		2.00:1	2.50:1		
Vo/Vin	Insertion Loss, selected Channel • 625 MHz≤ f ≤1.25 GHz • 1.25GHz<f≤2.4GHz		 1.65 6.00	 2.50 10.00	 dB dB	
Vo/Vin	Isolation. non-selected Channels. • 625 MHz≤ f ≤ 1.25 GHz • 1.25 GHz < f ≤ 2.4 GHz	 40 32	 46 38		 dB dB	
t_{PLH}	Propagation Delay to Output ↑		900	1200	ps	
t_{SKEW}	Skew between any 2 Outputs		10	40	ps	
Vin max	Maximum Input Voltage			30	V	
Imax	Maximum Switching Current			0.5	A	
	Switch Time		6		ms	
	Expected Life Cycles		$>10^6$			
V_{DC}	DC Input Voltage	7.5	8.5	12	V	
I_{DC}	DC Input Current		120	135	mA	
V_{AC}	AC/DC Adapter Input Voltage	100	115	127	V	
	Logic input for Remote operation	2 x 2 pins (A0, A1, G1, G2)				See Table I
	Size	1.3 x 2.9 x 2.9			in.	
	Weight	7			Oz	



PRL-854-RM Block Diagram

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