

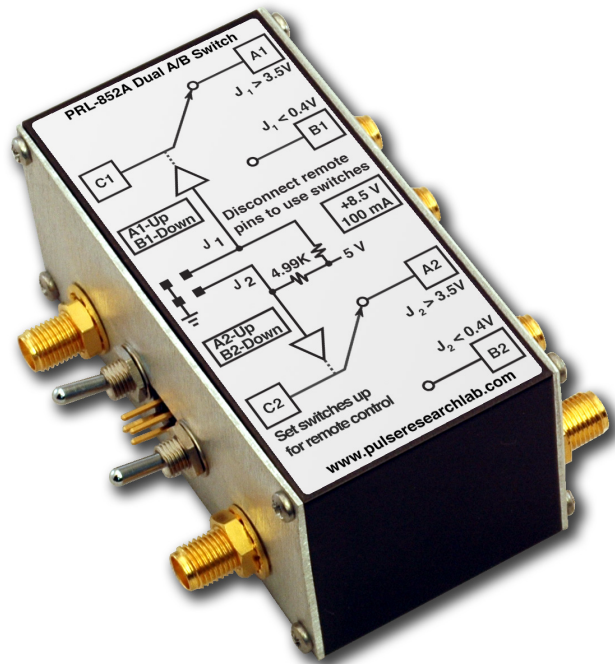
PRL-852A-RM, DUAL CHANNEL, 3.5 GHz SPDT REFLECTIVE A/B SWITCH

APPLICATIONS

- Switching GHz/Sub-Nanosecond Rise Time Signals
- 2 x 1 Microwave Scanner

FEATURES

- 3.5 GHz Bandwidth, typical
- 50 Ω Impedance
- 1.6:1 VSWR
- 6 ms Switching Time
- SMA I/O Connectors
- Manual Switches and Remote Control Pins
- +8.5 VDC adapter included



DESCRIPTION

The PRL-852A-RM is a dual channel, DC coupled “A/B” switch designed for switching microwave and sub-nanosecond rise time signals in the 50 Ω environment. It is a reflective switch in that the unselected port, A or B, is not terminated into 50 Ω . Therefore, a signal connected to the unselected port will be reflected. The reflective switch is intended mainly for routing a signal from port C to either port A or B, where not terminating the unselected port into 50 Ω is desirable. It can also be used as a scanner when not terminating the unselected port is acceptable.

The PRL-852A-RM-SMA has SMA I/O connectors. Each channel has a toggle switch and TTL/CMOS-compatible control pins for output selection.

When a switch is in the Up position, the upper pin is pulled up to 5 V via a 4.99 K Ω resistor, and the Port A is selected. A logic Hi of +3.5V minimum applied to the upper pin is sufficient to maintain the selection of Port A. The lower pin is GND. Shorting the upper pin to GND or pulling it below 0.5 V selects Port B.

The two channels 1 and 2 are independent, and may be switched separately. The toggle switch for a given channel should be in the Up position for remote control. Remote pins should be disconnected in manual mode, otherwise the switch in the Down position will short the external control circuit to GND.

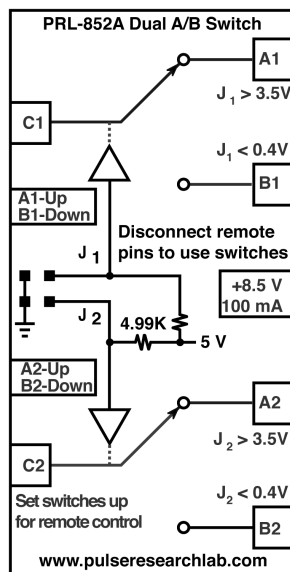
The unit is housed in an extruded aluminum enclosure and supplied with a ± 8.5 V AC/DC adapter. It can also be powered by a third-party +7.5 V to +12 V DC power supply.

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

SPECIFICATIONS (0° C ≤ T_A ≤ 35°C)

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

SYMBOL	PARAMETER	Min	Typ	Max	UNIT
T _R /T _F	Rise/Fall Times (10%-90%)		100	108	ps
BW	Equivalent 3 dB bandwidth	3.25	3.50		GHz
R _{IN}	Input Resistance, selected Ch.		>10 ⁶		Ω
R _{IN(RM)}	Input Resistance, Logic inputs.		4.99k		Ω
V _{IH}	Logic Input Hi Level	2	2	5	V
V _{IL}	Logic Input Lo Level	-0.5	0	0.5	V
VSWR1	f ≤ 1.25GHz		1.15:1	1.25:1	
VSWR2	f ≤ 2.4GHz		2.7:1	3.5:1	
V _O /V _{IN1}	Insertion Loss, selected Channel • 0 ≤ f ≤ 1.25 GHz • 1.25 GHz < f ≤ 2.4 GHz		1.65 6	2.5 10	dB dB
V _O /V _{IN2}	Isolation, non-selected Channels. • 0 ≤ f ≤ 1.25 GHz • 1.25 GHz < f ≤ 2.4 GHz	30 22	33 25		dB dB
t _{PLH}	Propagation Delay to output ↑		900	1100	ps
t _{SKEW}	Skew between any 2 outputs		10	25	ps
V _{IN MAX}	Maximum input Voltage			30	V
I _{MAX}	Maximum Switching Current			0.5	A
	Switch Time		6		ms
	Expected Lifecycles		>10 ⁶		
V _{DC}	DC Input Voltage	7.5	8.5	12	V
I _{DC}	DC Input Current		135	150	mA
V _{AC}	AC/DC Adapter Input Voltage	100	115	127	V
	Logic Input for Remote operation		2 x 2 pins J1, J2, G1, G2		
	Size		1.3 x 2.9 x 2.9		in.
	Weight		7		Oz
	Shipping Weight w/AC Adapter		3.5		lb.



PRL-852A-RM Block Diagram