

4 Channel Reflective SPDT Relays DC ... 18.000 MHz

Features

- extremely wideband
- very low insertion loss
- high power handling
- high reliability
- up to 11 switching modules (44 Channels) in one system rack

Applications

- microwave systems
- receiving systems
- RF switching matrices
- quality assurance
- final testing & verification
- R&D



similar appearance

Scope

RSWU-4SPDTR18 is a four channel RF SPDT switch suitable for the frequency range between DC and 18.000 MHz. The four switches are coaxial relay types (reflective) and can easily be combined with other components in 50 Ohm technology.

RSWU-4SPDTR18 is designed as a slide-in module for integration into the SR6-11C system rack. It can be controlled either via SR6-11C low-level 'Binary Interface' or the additional controller unit SR6-CU.

Additional to the SR6-CU module, up to ten RSWU switching modules can be integrated in one SR6-11C system rack. When using the 'Binary Interface', all 11 slots are available for switching modules.

Remote Interfaces

The optional controller SR6-CU provides the interfaces LAN and USB. These interfaces can be used to control the RSWU modules by SCPI oriented ASCII commands.

RF Switching Matrices

In combination with the wideband signal combiner unit WSCU8X1R and the wideband signal distribution units of the WSDU series, RF cross

point matrices can be realized. WSDU units are available as compact slide-in modules, too.

Time-critical Switching

In applications, where shortest response times are required, the switch modules can be controlled via the low-level 'Binary Interface' of the SR6-11C system rack.

This interface allows direct programming of the binary data registers inside the RSWU modules.

Synchronous Switching

SR6-11C enables the synchronous execution of multiple commands across the whole system rack. Additionally SR6-11C provides a 'Trigger IO' interface, which allows the synchronous coupling of multiple SR6-11C system racks and other compatible devices.

RF Specifications

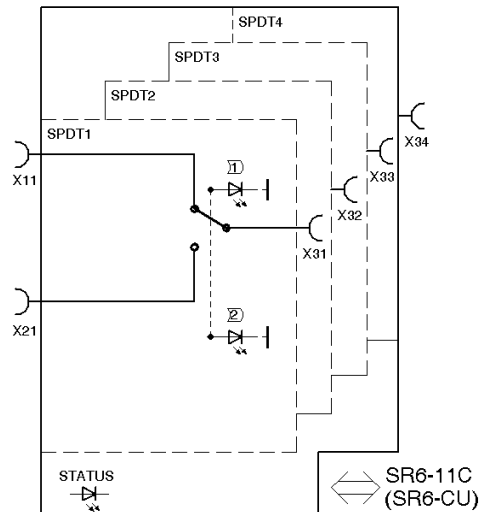
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ω	
low frequency	f_{min}			DC	kHz	
high frequency	f_{max}	18			GHz	
insertion loss	S_{21}, S_{12}		-0.1			$f \leq 3$ GHz
			-0.2			3 GHz < $f \leq 8$ GHz
			-0.3			8 GHz < $f \leq 12.4$ GHz
			-0.4			12.4 GHz < $f \leq 18$ GHz
return loss	S_{11}, S_{22}			-20		$f \leq 3$ GHz
				-17		3 GHz < $f \leq 8$ GHz
				-15		8 GHz < $f \leq 12.4$ GHz
				-13		12.4 GHz < $f \leq 18$ GHz
off isolation	S_{21}, S_{12}			-80		$f \leq 3$ GHz
				-70		3 GHz < $f \leq 8$ GHz
				-60		8 GHz < $f \leq 18$ GHz
channel isolation	S_{31}		-150	-100	dB	$f \leq 8.5$ GHz
transfer power (CW, switch static closed)	$P_{in\ CW}$			+53		$f \leq 3$ GHz
				+50		3 GHz < $f \leq 12.4$ GHz
				+47		12.4 GHz < $f \leq 18$ GHz
switch delay	t_{50-50}			10	ms	50 % trigger to 50 % RF
life cycles			10 E6			
RF connectors			SMA female			

Common Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply		23.5	24.0	24.5	V	via SR6-11C
power consumption				18	W	
dimensions	L x W x H	approx. 197 x 30 x 262			mm	6 U, 6 HP
weight			1400		g	
operating temp. range	T_o	+5		+55	$^{\circ}\text{C}$	
storage temp. range	T_s	-40		+70	$^{\circ}\text{C}$	
ordering information	RSWU-4SPDTR18			1408.4100.1		



Block Diagram



Front View (similar appearance)



Rear View (similar appearance)



Related Products

Product	Description	P/N
SR6-11C	System platform with 11 slots	1409.1202.1
SR6-CU	Controller unit with LAN and USB	1409.3000.1
WSDU1X8	8 way multicoupler 100 kHz ... 4000 MHz	1202.6100.1
WSCU8X1R	High dynamic 8 way combiner 100 kHz ... 4000 MHz, 50 Ω	1208.6102.1
RSWU-8SPSTS	8 channel non-reflective SPST switch 100 kHz ... 8500 MHz	1408.4000.1
RSWU-4SPDTS	4 channel non-reflective SPDT switch 100 kHz ... 8500 MHz	1408.4020.1
RSWU-2SP4TS+	2 channel non-reflective SP4T switch + 1 channel SPDT, 100 kHz ... 8500 MHz	1408.4030.1
RSWU-4SPDTR40	4 channel reflective SPDT switch DC ... 40 GHz	1408.4110.1

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