

4X8 Shortwave Switching Matrix 1.7 ... 30 MHz

Features

- wideband
- ultra high dynamic
- VLF / VHF suppression
- input lightning protection

Applications

- short wave receiving systems
- signal distributions
- research & development (R&D)
- test equipment
- laboratory applications



Overview

RSWM-4X8SR is a wideband switching matrix with four inputs and eight outputs, designed in 50 Ohms technology. The device can be controlled via the remote interfaces LAN and USB (SCPI-oriented ASCII-Commands) An Product variant with touchscreen based MMI on the front panel is also available.

Excellent RF Characteristics

The device's extremely high dynamic and excellent properties in terms of linearity make this device the right choice for demanding applications where reproducible results must be obtained.

Synchronous Operation

Like many other products of Becker Nachrichtentechnik GmbH, the devices of the RSWM family offer a TRIGGER IO port. This interface provides a precise trigger pulse which complies with the physical execution of the applied switching command. On the other hand, external pulses can be applied to this port in order to trigger the execution of queued switching commands. Therefore it is possible to link multiple devices to a synchronous switching compound.

Compact & Robust Design

The compact dimensions in 19" 3 U construction of the RSWM device make it ideally suited for installations in system racks or for use as a table top device.

RF Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ω	
low frequency	f_{min}		1.7		MHz	
high frequency	f_{max}		30		MHz	
gain	S_{21}		2		dB	
gain flatness	ΔS_{21}		± 1.0		dB	
input return loss	S_{11}		-25		dB	
output return loss	S_{22}		-18		dB	
filter suppression	S_{21}		-16		dBr	@ 500 kHz, rel.S21 @ 16 MHz
	S_{21}		-19		dBr	@ 100 MHz, rel.S21 @ 16 MHz
1 dB compression	P_{1dB}		+21		dBm	
3 rd order intercept	OIP3 ¹		+42		dBm	
2 nd order intercept	OIP2 ¹		+90		dBm	
noise figure	NF		6.0		dB	
channel isolation	S_{21}		-70		dB	
output isolation	S_{31}		-27		dB	
maximum input power	P_{in}		+25		dBm	CW, no damage
RF connectors						N female

Note 1: P_{in} = test frequency pairs: 2.5 / 3.5 MHz, 12 / 15 MHz, 22 / 27 MHz. Input level 2 x 0 dBm.

Common Specifications

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	V_{supply}	90		260	V	50 / 60 Hz AC
power consumption	P_{supply}		80	400	VA	
dimensions	L x W x H	appr. 450 x 515 x 150			mm	19" 3 U, without connectors and handles
weight			20		kg	
operating temp. range	T_o	+5		+ 40	°C	
storage temp. range	T_s	- 40		+ 70	°C	
remote ports	LAN	10/100 BaseT		TCP/IP		RJ45 on rear side
	USB	2.0 (high speed)				USB type B

Ordering Information

Variant	P/N	MMI with touch screen
RSWM-4X8SR VAR1	1205.4312.1	NO
RSWM-4X8SR VAR2	1205.4312.2	YES



Front View (VAR1)



Related Products

Product	Description	P/N
RSWM-4X4ER	Wideband 4X4 Switching Matrix 20 ... 8000 MHz	1205.4202.X
RSWM-4X4R	Non-blocking 4X4 Switching Matrix 20 ... 4000 MHz	1205.4102.X

