RSWU-SP16TR

Single Pole, 16 Throw RF Switching Unit, 100 kHz … 8 GHz

Features

- compact 19”, 1 U design
- LAN remote interface
- Trigger input for synchronous switching

Applications

- RF tests of multimedia components
- EOL test
- RF signal routing
- Broadcast, GNSS, Cellular, 5G, WiFi, Wireless

At a Glance

The RF switch RSWU-SP16TR is a universal, bi-directional RF switching unit for signal routings.

Due to the wide frequency, the switch is compatible with almost all common communication standards:

Broadcast signals such as FM and DAB, mobile signals such as GSM900, GSM1800, UMTS, LTE and 5G, wireless communication such as the standards IEEE 802.11 a/b/g/n/ac/ax/be and WiMAX 802.16 as well as automotive specific standards such as KeylessGo.

Wear-Free Solid-State Switches

The use of semiconductor switches enables very fast switching times. Furthermore, unlike mechanical switches, there is no wear and tear, ensuring the devices have a very long service life.

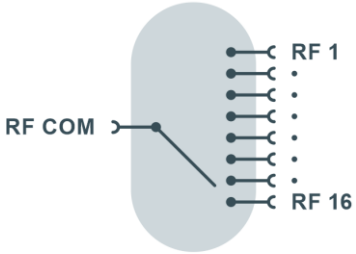
Remote control with Trigger

For remote control the RSWU-SP16TR switch offers a LAN interface and a trigger input. A “queue” function allows preloading switching configurations to the matrix device and a triggered execution by trigger pulses. After a positive TTL trigger slope to the trigger input, the preloaded switch configuration will be executed only by hardware in micro seconds. While the trigger receiver is processing, the trigger signal is forced to LOW for typical 10 ms and all subsequent trigger signals are ignored until the trigger receiver is ready.

Variable Mounting

The RSWU-SP16TR is housed in a 19”, 1 U cover which allows an easy integration into industry-standard system racks.

Principal Block Diagram



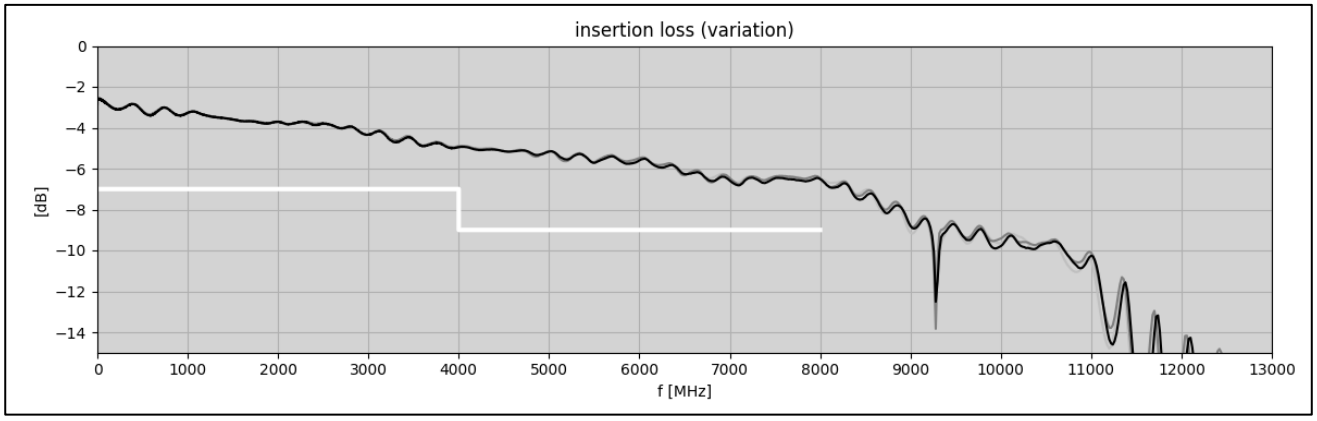
RF Specifications

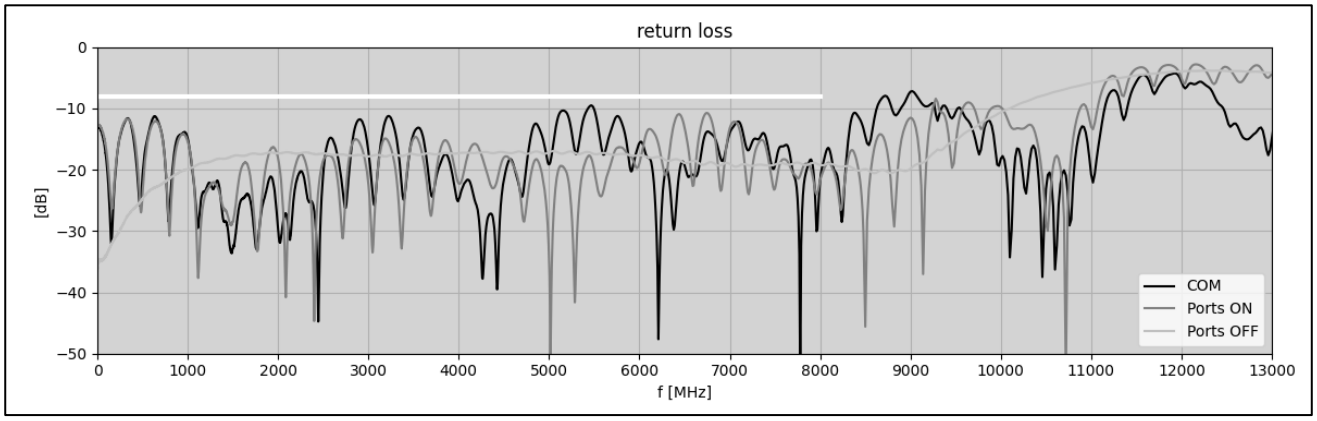
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
impedance	Z_{in} / Z_{out}		50		Ohm	
number of RF COM ports	n_{INST}		1			
number of RF ports	n_{RF}		16			
low frequency	f_{min}			100	kHz	
high frequency	f_{max}	8	11		GHz	
insertion loss	S_{21}	-7	-4		dB	f ≤ 4 GHz
	S_{21}	-9	-6		dB	f > 4 GHz
off isolation	S_{21_OFF}		-50*	-40	dB	*Distance (d=1)
output isolation	S_{23}		-50*	-40	dB	f ≤ 4 GHz, *Distance (d=1)
	S_{23}		-40*	-25	dB	f > 4 GHz, *Distance (d=1)
RF power	P_{RF}			+15	dBm	f < 10 MHz, CW
	P_{RF}			+35	dB,	f ≥ 10 MHz, CW
RF connectors	X_{RF}	SMA female				
maximum DC Voltage	U_{max}	-		20	V	
ESD discharge resistor	R_{ESD}		4.7		kΩ	

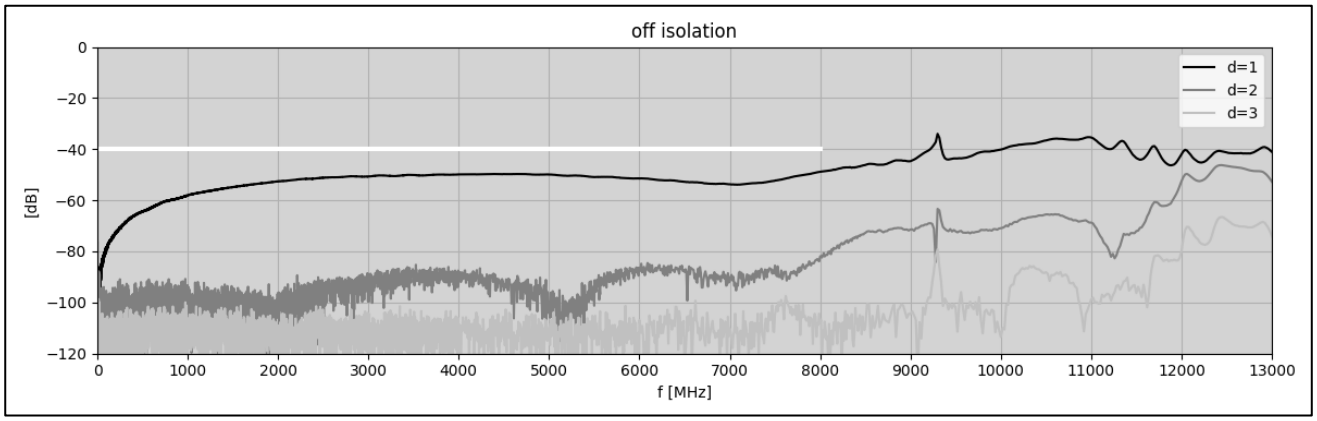
Common Specifications

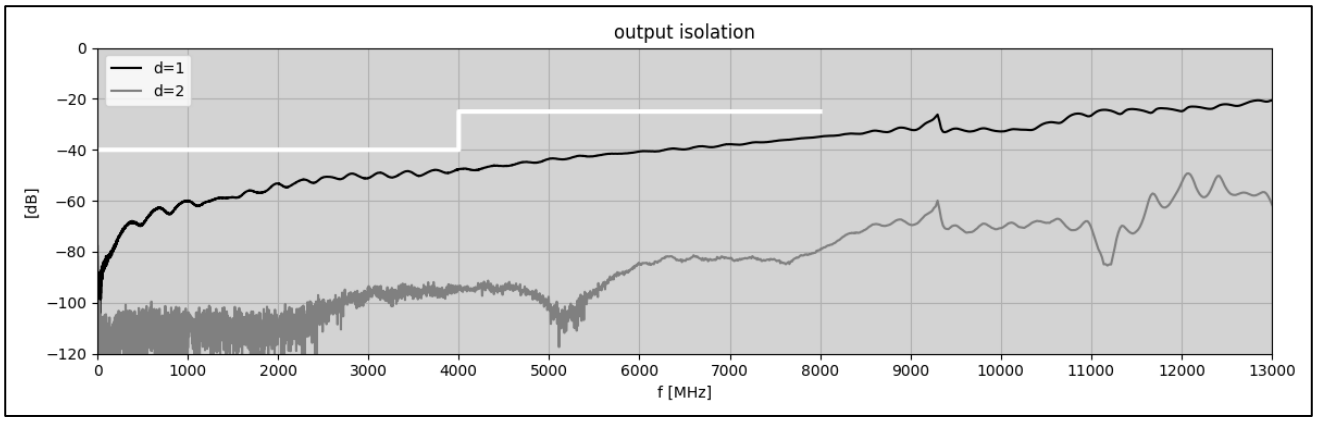
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
power supply	u_{AC}	90	230	260	V	50 / 60 Hz
power consumption	P_{AC}		4		W	
dimensions	WxHxD	approx. 483 x 45 x 265			mm	19”, 1 U
weight			3.3		kg	
remote interface	X_{REM}	RJ45 10/100BaseT				ASCII commands
operating temp. range	T_o	+ 5		+ 45	°C	
storage temp. range	T_s	- 40		+ 70	°C	
ordering information	RSWU-SP16TR		P/N: 2506.4002.1			

S-Parameter (typical response)







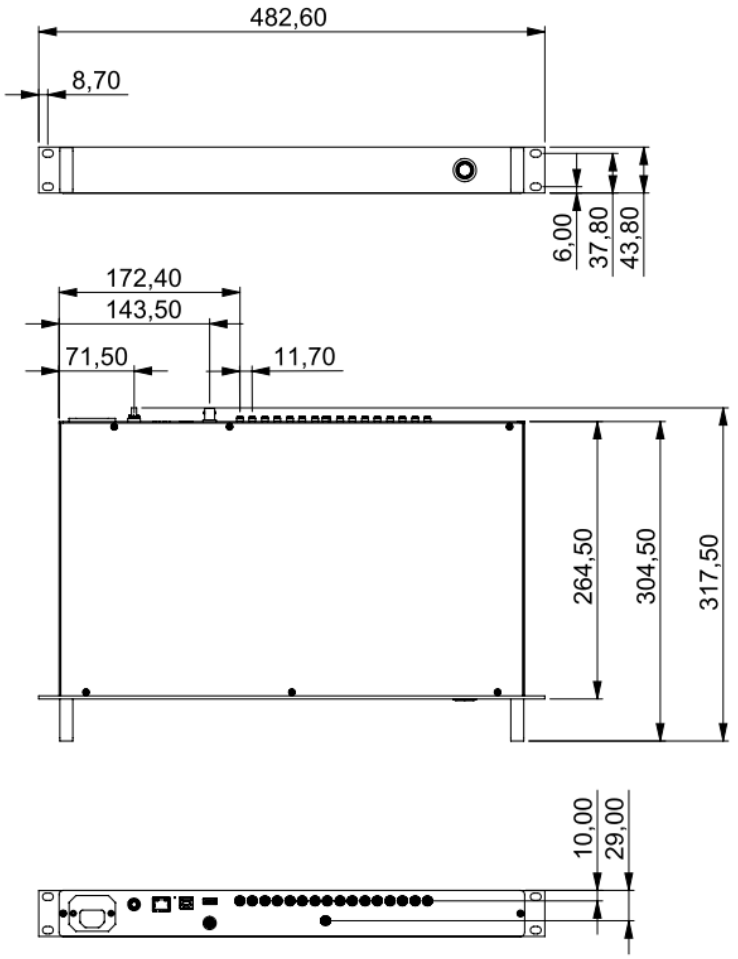


Appearance

Front View

Rear View

Dimensions



all dimensions in mm
± 2mm

Related Products

RF Switches

RF Switch Matrices

RF Attenuators

RF Attenuation Networks

RF Terminals