

RF-Matrix MX-20/4-HLS-FFO-6G

MTS-No.: 26956

Application

The MX-20/4-HLS-FFO-6G is an RF-Matrix made of dividers and semiconductor switches. The principle is full fan out. It can be used for several applications, f.e.:

- Switching Unit for RF-generators, amplifiers and antennas at EMC test laboratories
- Filter, diplexer attenuator etc. selection unit
- Any automated routing of measurement equipment at test benches

Description

At the MX-20/4-HLS-FFO-6G all of the outputs can be connected to maximum one input simultaneously. This can be the same input for all outputs.

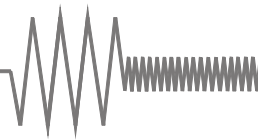
The configuration is 20 inputs and 4 outputs.

In combination with attenuators, splitters and other modules the usability can be extended.



Characteristics

- ▶ RF-Matrix, full fan out, bidirectional, made of dividers and semiconductor switches (20 inputs, 4 outputs)
- ▶ Frequency range from 500 MHz to 6000 MHz
- ▶ Switching time up to 10 ms
- ▶ Integrated power supply 100 V - 240 V AC
- ▶ Remote control by RS-232 and LAN (other interfaces or web control on request)
- ▶ 19" rack mount case with 6 HU
- ▶ Windows control programs can be offered
- ▶ High quality materials and components for extended durability
- ▶ On Request user blocking of separate components (with name / name and keyword available)
- ▶ On request switching cycles of every matrix position can be requested
- ▶ RF-Matrices can be designed according to customer's individual requirements



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Configuration:

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Technical data:

1 RF-specifications:

1.1 Impedance	50 Ω		
1.2 Input power	+33 dBm max. @ the inputs +30 dBm max. @ the outputs		
1.3 Frequency range	500 MHz - 6000 MHz		
1.4 RF-connections	4.3-10 female		
1.5 VSWR in	min.	typ.	max.
	@ 500 - 5850 MHz	1.4	2.2
	@ 5850 - 6000 MHz	1.6	2.2
VSWR out	1.4	2.2	
1.6 Insertion loss (IL)	@ 500 MHz	13 dB	
	@ 5850 MHz	21 dB	23 dB
	@ 6000 MHz	22 dB	24 dB
1.7 IL derating / 100 MHz	0.17 dB		
1.8 Isolation (see plot)	@ IN/IN, IN/OUT		
	@ 500 - 5850 MHz	100 dB	130 dB
	@ 5850 - 6000 MHz	90 dB	120 dB
	@ OUT/OUT, switched to other input	100 dB	130 dB
	@ OUT/OUT, switched to same input	25 dB	40 dB
1.9 Switching time		10 ms	

2 Connections:

2.1 Front side	RF-connections Power switch with integrated control lamp
2.2 Rear side	RF-connections Control card with control interfaces Appliance plug with the integrated fuses F1 and F2 Ground connector

3 General specifications

3.1 Power supply	100 V - 240 V 50 Hz / 60 Hz
3.2 Internal voltage	+5 V DC, +28 V DC
3.3 Control displays	Control lamp in the power switch
3.4 Control interfaces	RS-232 LAN
3.5 Power consumption primarily	150 mA max. @ 230 V
3.6 Voltage supply	Standard rubber connector
3.7 Operating temperature	0 °C - +50 °C
3.8 Reference temperature for specifications	+25 °C
3.9 Dimensions	19"-unit x 6 HU x 430 mm (dimensions without handles and connections)
3.10 Colour	Front side colourless anodized Rear side colourless anodized
3.11 Weight	24.0 kg

4 Delivered parts:

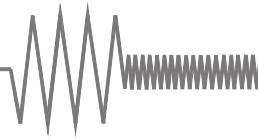
MX-20/4-HLS-FFO-6G
Power cable
CD with operating manual

5 Comments:

Warranty 12 months
RoHS-compliant Yes

6 Recommended accessories:

Shielding box of the series
MSB-02xx or MSB-01xx
RF-cables
Control software



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Typical measurements:

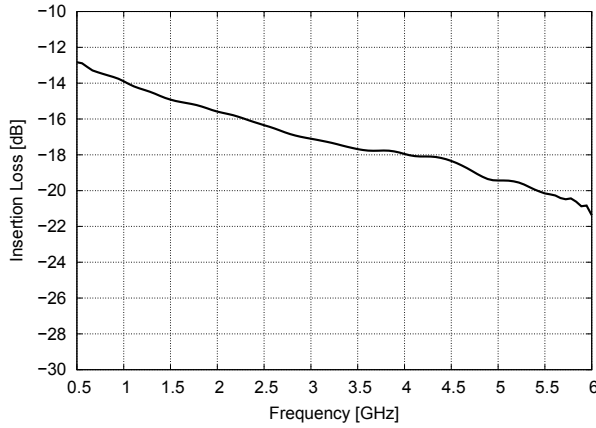


Fig. 1: Input port to output port insertion loss

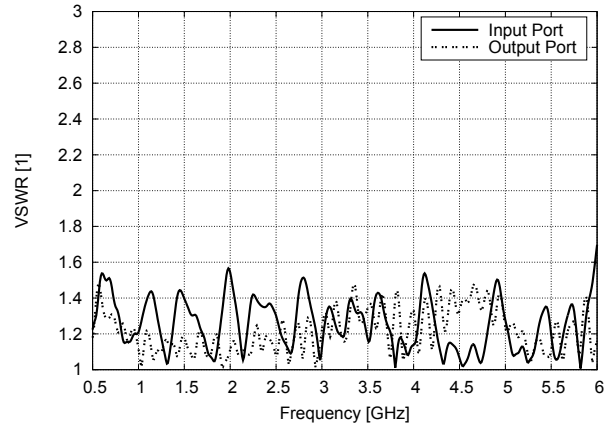


Fig. 2: VSWR for input and output ports

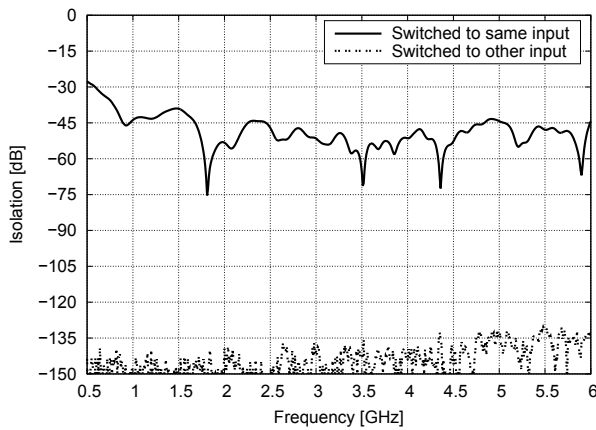


Fig. 3: Isolation between output ports

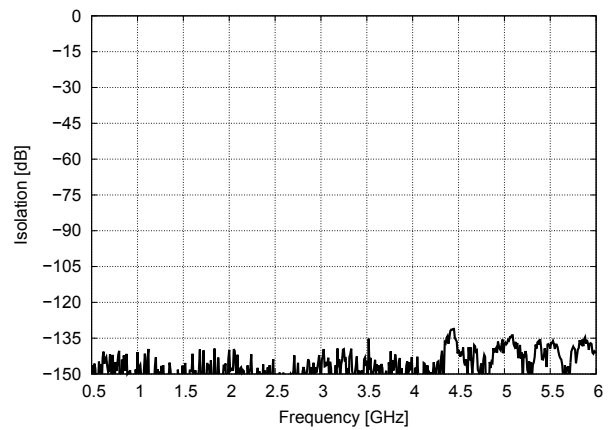


Fig. 4: Isolation between in- and output ports

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Views:

