500–6000 MHz Four-Channel Reflective PIN SP3T Switch Module

The module integrates four independent PIN-diode SP3T switches over 500–6000 MHz. Isolation is 80 dB typical and switching time is 100 ns typical.

Supply is +12 VDC typical with 150 mA typical current. Dimensions are 180 × 72 × 13.5 mm and weight is at most 500 g; RF ports use SMA-K with a documented SPI interface.



Electrical specifications

Parameter	Value	Unit
Frequency range	500–6000	MHz
Number of independent switches	4	-
Switch type	SP3T	-
Switch topology	Reflective	-
Switching technology	PIN	-
Maximum input power [1]	30	dBm
Insertion loss	≤2	dB
Isolation	80 (Typical)	dB
Switching speed	100 (Typical)	ns
Input/output VSWR	1.5 (Typical)	-
Supply voltage [2]	+12	VDC
Supply current	150 (Typical)	mA
Operating temperature [3]	−40–+80	°C
Storage temperature [4]	−55–+125	°C

[1] Maximum: 30 dBm.
[2] Typical: 12 VDC.
[3] Maximum: 80 °C.
[4] Maximum: 125 °C.

Control interfaces

Parameter	Value	Unit
SPI data rate [1]	2 /10	Mbps
SPI unused data bits	8–15 — Source marks these bits as having no meaning.	-
SPI bit assignment — C41	7	-
SPI bit assignment — C40	6	-

Control interfaces

Parameter	Value	Unit
SPI port selection — rx4-00 [2]	Rx4A	-
SPI port selection — rx4-01 [3]	Rx4B	-
SPI port selection — rx4-10 [4]	Rx4C	-
SPI port selection — rx4-11 [5]	No meaning defined by the source	-
SPI bit assignment — C31	5	-
SPI bit assignment — C30	4	-
SPI port selection — rx3-00 [6]	Rx3A	-
SPI port selection — rx3-01 [7]	Rx3B	-
SPI port selection — rx3-10 [8]	Rx3C	-
SPI port selection — rx3-11 [9]	No meaning defined by the source	-
SPI bit assignment — C21	3	-
SPI bit assignment — C20	2	-
SPI port selection — rx2-00 [10]	Rx2A	-
SPI port selection — rx2-01 [11]	Rx2B	-
SPI port selection — rx2-10 [12]	Rx2C	-
SPI port selection — rx2-11 [13]	No meaning defined by the source	-
SPI bit assignment — C11	1	-
SPI port selection — rx1-00 [14]	Rx1A	-
SPI port selection — rx1-01 [15]	Rx1B	-
SPI port selection — rx1-10 [16]	Rx1C	-
SPI port selection — rx1-11 [17]	No meaning defined by the source	-

[1] Typical: 2 Mbps. Maximum: 10 Mbps.
[2] C41:C40=00
[3] C41:C40=01
[4] C41:C40=10
[5] C41:C40=11
[6] C31:C30=00
[7] C31:C30=01
[8] C31:C30=10
[9] C31:C30=11
[10] C21:C20=00
[11] C21:C20=01
[12] C21:C20=10
[13] C21:C20=11

[14] C11:C10=00
[15] C11:C10=01
[16] C11:C10=10
[17] C11:C10=11

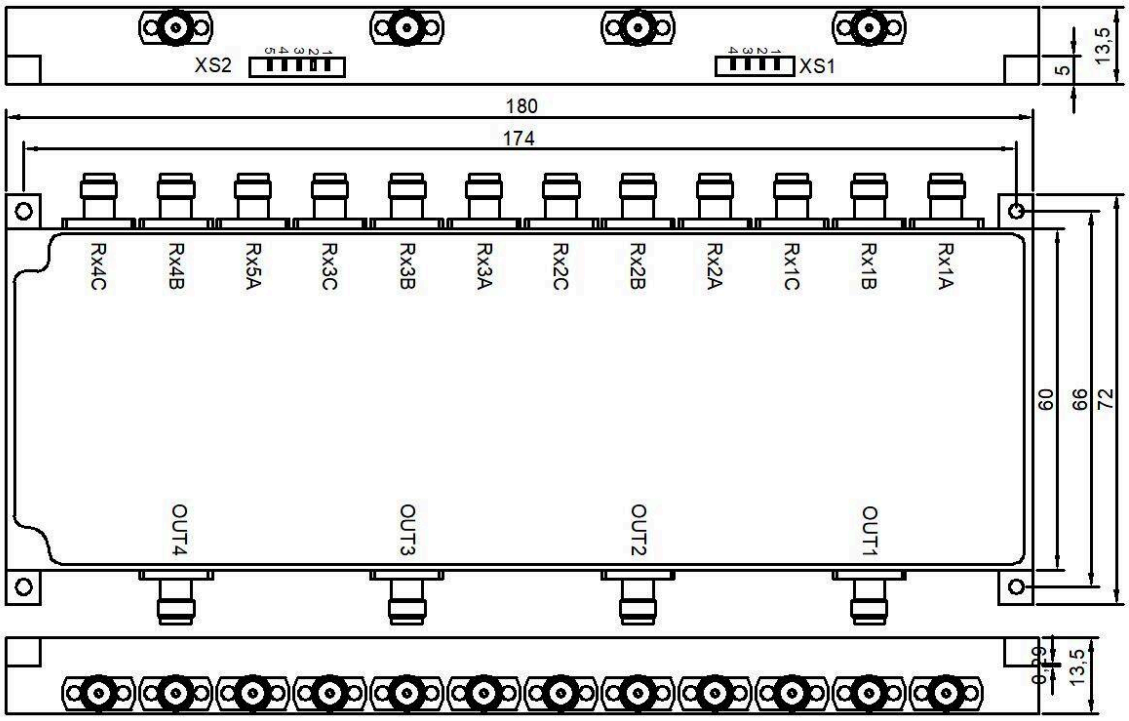
Interfaces and contacts

Interface	Specification	Unit
RF inputs — rx1 [1]	SMA-K	-
RF output — RX1 [2]	SMA-K	-
RF inputs — rx2 [3]	SMA-K	-
RF output — RX2 [4]	SMA-K	-
RF inputs — rx3 [5]	SMA-K	-
RF output — RX3 [6]	SMA-K	-
RF inputs — rx4 [7]	SMA-K	-
RF output — RX4 [8]	SMA-K	-
Power contacts — 1-2 [9]	+12	VDC
Power contacts — 3-4 [10]	GND	-
SPI contact — 1 [11]	SPI_MOSI	-
SPI contact — 2 [12]	SPI_SCK	-
SPI contact — 3 [13]	SPI_NSS / LE	-
SPI contact — 4 [14]	GND	-
SPI contact — 5 [15]	NC	-
External connection line	External connection line provided with the module	-

[1] Rx1A / Rx1B / Rx1C
[2] OUT1
[3] Rx2A / Rx2B / Rx2C
[4] OUT2
[5] Rx3A / Rx3B / Rx3C
[6] OUT3
[7] Rx4A / Rx4B / Rx4C
[8] OUT4
[9] XS1 / 1–2
[10] XS1 / 3–4
[11] XS2 / 1
[12] XS2 / 2
[13] XS2 / 3
[14] XS2 / 4
[15] XS2 / 5

Mechanical specifications

Parameter	Value	Unit
Dimensions	180 × 72 × 13.5	mm
Weight	≤500	g



Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.