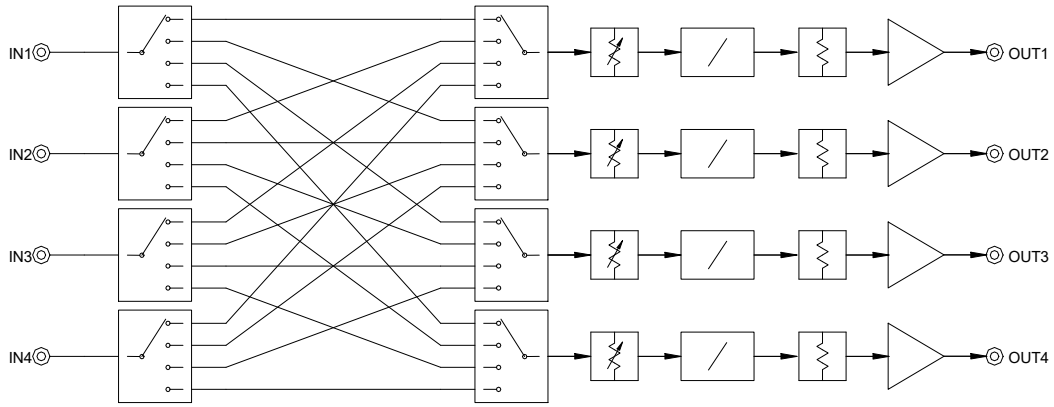
HX4P4T9081G Switch Matrix Module

1.Functional Block Diagram

ID	Items	Specifications
		

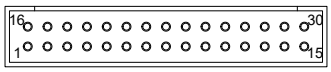
2.Description

ID	Items	Specifications
2-1	Type	Reflective 4*4 Switch Matrix Module
2-2	Input	4 Ports
2-3	Output	4 Ports
2-4	Frequency Range	1GHz~18GHz
2-5	Isolation	≥60dB
2-6	Gain	≥0dB
2-7	Amplitude Imbalance	≤±0.4dB
2-8	Gain Flatness	≤±2.0dB@Full Band ≤±0.5dB@Any 1GHz Bandwidth
2-9	Phase Stability	≤±5°(Same Temp & Freq)
2-10	Amplitude Stability	≤±0.3dB(Same Temp & Freq)
2-11	VSWR	≤2.5
2-12	Impedance	50Ω
2-13	RF Input Power	24dBm
2-14	Switching Speed	≤1us
2-15	Attenuation Range	0~30dB
2-16	Control Step Size	1dB
2-17	Attenuation Accuracy	±1.0dB Typical@1GHz ~10GHz ±1.5dB Typical @10GHz ~18GHz
2-18	Input/Output Connectors	SMA-F
2-19	Control Connector	JL24-30ZJW
2-20	Control	TTL=0V/3.3V ~ 5V
2-21	DC Power Supply	+12V/≤5A

3.Environmental Specifications

ID	Items	Specifications
3-1	Operational Temperature	-40℃ ~ +70℃
3-2	Storage Temperature	-55℃ ~ +85℃

4.Interface

ID	Items	Specifications
4-1	Control Connector	JL24-30ZJW
		
4-2	NO	Specifications
	1	C1
	2	C2
	3	C3
	4	C4
	5	C5
	6	C6
	7	C7
	8	C8
	9	A9
	10	A10
	11	A11
	12	A12
	13	A13
	14	A14
	15	A15
	16	A16
	17	A17
	18	A18
	19	A19
	20	A20
	21	A21
	22	A22
	23	A23
	24	A24
	25	A25
	26	A26
	27	A27
	28	A28
	29	+12V
	30	GND

5.Attenuation Control Truth Table

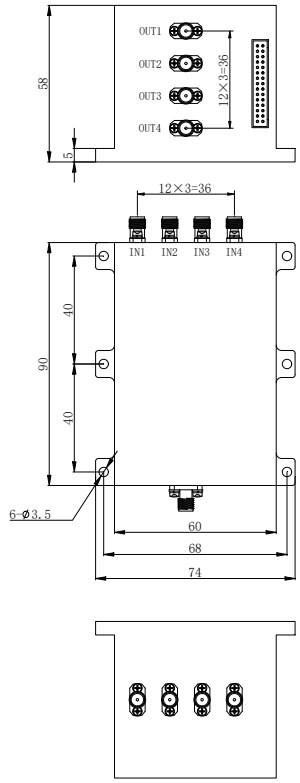
ID	Path	A13	A12	A11	A10	A9	Attenuation Value
5-1	OUT1	0	0	0	0	1	1dB
		0	0	0	1	0	2dB
		0	0	1	0	0	4dB
		0	1	0	0	0	8dB
		1	0	0	0	0	16dB
ID	**Path**	**A18**	**A17**	**A16**	**A15**	**A14**	**Attenuation Value**
5-2	OUT2	0	0	0	0	1	1dB
		0	0	0	1	0	2dB
		0	0	1	0	0	4dB
		0	1	0	0	0	8dB
		1	0	0	0	0	16dB
ID	**Path**	**A23**	**A22**	**A21**	**A20**	**A19**	**Attenuation Value**
5-3	OUT3	0	0	0	0	1	1dB
		0	0	0	1	0	2dB
		0	0	1	0	0	4dB
		0	1	0	0	0	8dB
		1	0	0	0	0	16dB
ID	**Path**	**A28**	**A27**	**A26**	**A25**	**A24**	**Attenuation Value**
5-4	OUT4	0	0	0	0	1	1dB
		0	0	0	1	0	2dB
		0	0	1	0	0	4dB
		0	1	0	0	0	8dB
		1	0	0	0	0	16dB

6.Truth Table

ID	C2	C1	Signal Path State
6-1	0	0	IN1-OUT1
	0	1	IN1-OUT2
	1	0	IN1-OUT3
	1	1	IN1-OUT4
ID	**C4**	**C3**	**Signal Path State**
6-2	0	0	IN2-OUT1
	0	1	IN2-OUT2
	1	0	IN2-OUT3
	1	1	IN2-OUT4
ID	**C6**	**C5**	**Signal Path State**
6-3	0	0	IN3-OUT1
	0	1	IN3-OUT2
	1	0	IN3-OUT3

	1	1	IN3-OUT4
ID	**C8**	**C7**	**Signal Path State**
6-4	0	0	IN4-OUT1
	0	1	IN4-OUT2
	1	0	IN4-OUT3
	1	1	IN4-OUT4

7.Outline Drawing

ID	Items	Specifications
7-1	Outline Drawing	Unit: mm
Tolerances:±0.2mm 		
7-2	Material	Aluminum
7-3	Finish	Aluminum conductive coating
7-4	Weight	/

8.Note

8-1	Should be take the ESD protection during use.
8-2	Exceeding the rated input power limit may cause the product to burn out.
8-3	Avoid using in extreme temperature,humidity, or corrosive environments.
8-4	Good grounding can reduce EMI and RFI.
8-5	All specifications are subject to change without notice at any time.