



Reflective Coaxial SP12T Switch 1 – 43.5GHz

Features

- Ultra Wide Band Operation 1-43.5GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



Typical Applications

- Wireless Infrastructure
- 5G communication
- Test and measurement Instrument

RF Microwave & VSAT
Fiber Optics

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	1		8	8		26.5	26.5		43.5	GHz
Insertion Loss		4.0	5.5		8.0	10.0		9.0	12.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/ ° C
Isolation	55	60		45	55		45	50		dB
Input VSWR		2.5	3		2.5	3		2.5	3	: 1
Output VSWR		2.5	3		2.5	3		2.5	3	: 1
RF Input Power (CW)			23			23			23	dBm
DC Power Dissipation		2.5			2.5			2.5		W
0.1dB Compression Point(P0.1dB)		23			23			23		dBm
IIP3		55			55			50		dBm
Switching Speed		100			100			100		ns
Weight	5.29									ounces
Impedance	50									Ω
Bias Current (+5V/-5V)	420/70									mA
Input / Output Connectors	2.92mm - Female									
Finish	Nickel plated									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									



Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
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Ordering Information

Part No.	Description
DBSR1201004000A	SP12T 1-40GHz PIN Diode Switch

Outline Drawing:

All Dimensions in mm (inches)

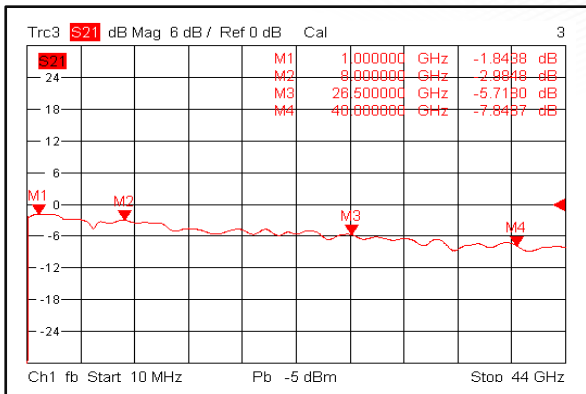
Truth Table

TTL Control Voltage THRESHOLD				Low(0)=0~0.8V	High(1)=2.8~5V
Control Input TTL				Signal Path State	
C4	C3	C2	C1		
0	0	1	0	J0-J1	
0	0	1	1	J0-J2	
0	1	0	0	J0-J3	
0	1	0	1	J0-J4	
0	1	1	0	J0-J5	
0	1	1	1	J0-J6	
1	0	0	0	J0-J7	
1	0	0	1	J0-J8	
1	0	1	0	J0-J9	
1	0	1	1	J0-J10	
1	1	0	0	J0-J11	
1	1	0	1	J0-J12	

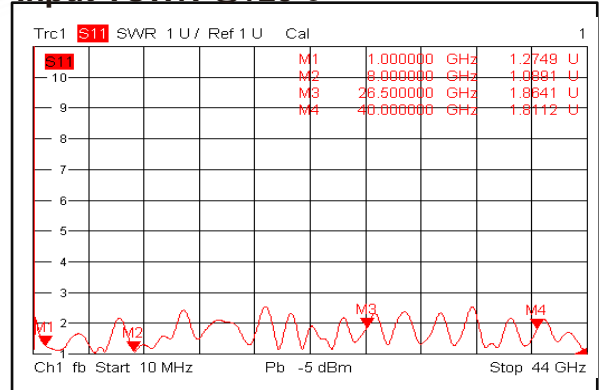
Control Pin Customization available upon request



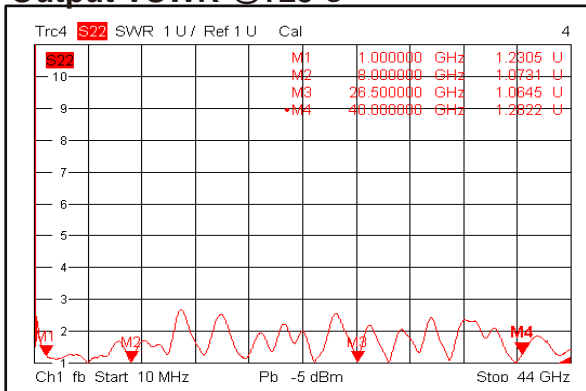
Insertion Loss @+25°C



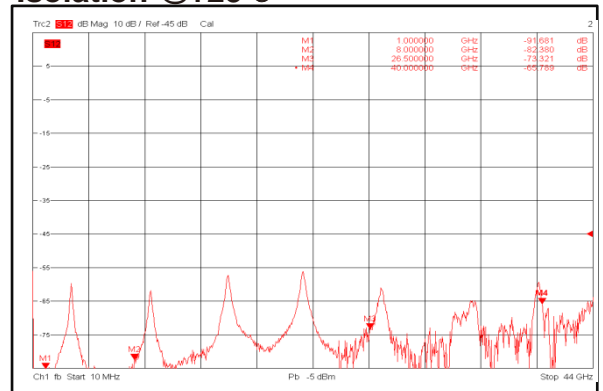
Input VSWR @+25°C



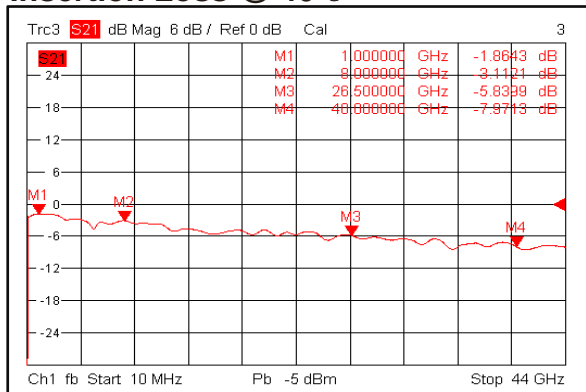
Output VSWR @+25°C



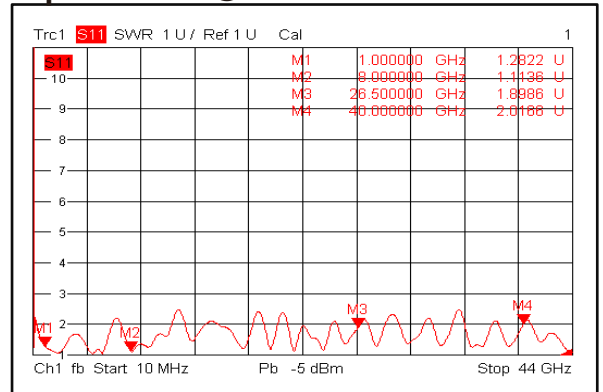
Isolation @+25°C



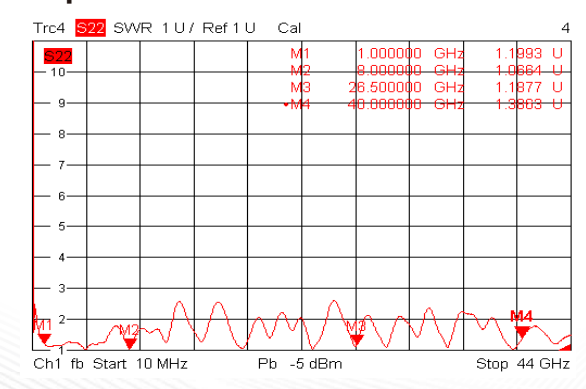
Insertion Loss @-40°C



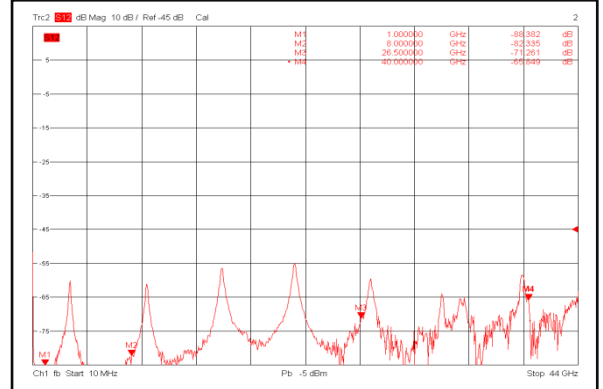
Input VSWR @-40°C



Output VSWR @-40°C

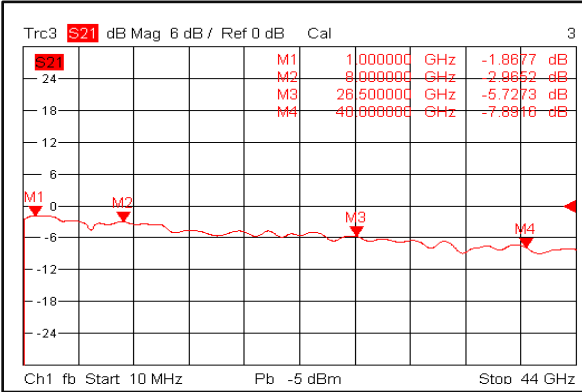


Isolation @-40°C

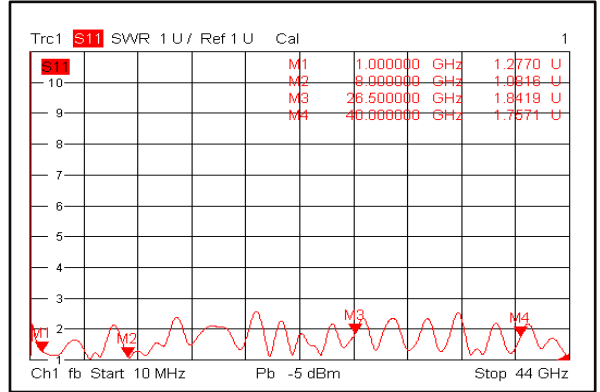




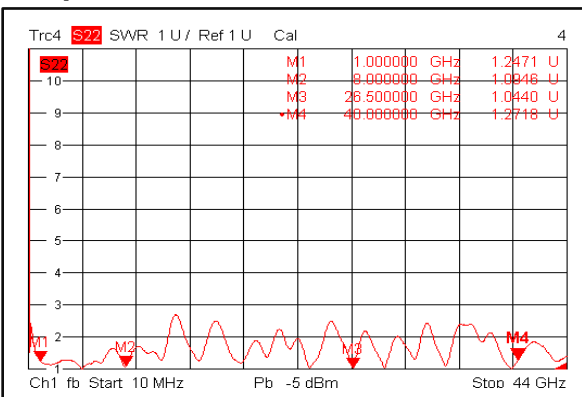
Insertion Loss @+85°C



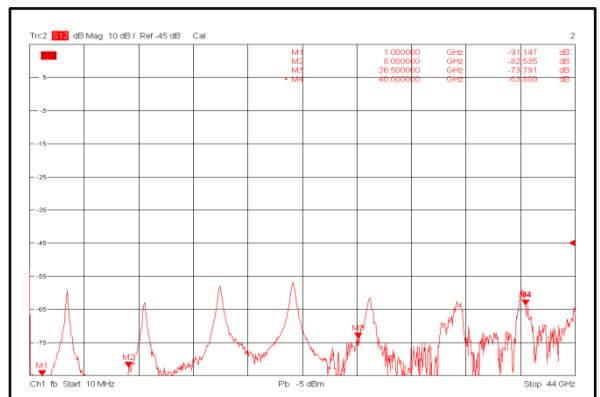
Input VSWR @+85°C



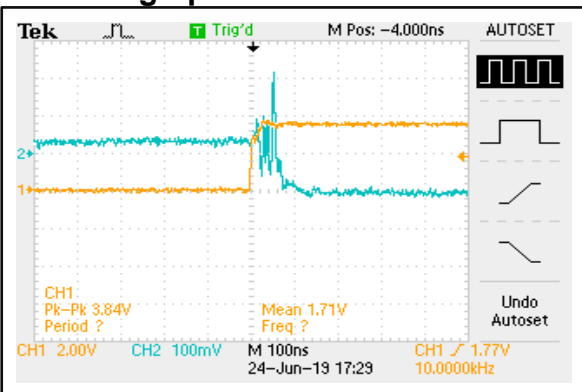
Output VSWR @+85°C



Isolation @+85°C



Switching Speed



Switching Speed

