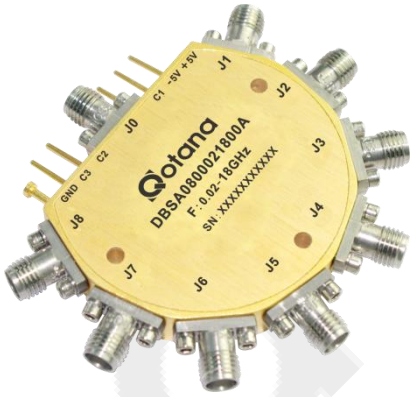
P/N:DBSA0800021800A

QOTANA TECHNOLOGIES

Absorptive 0.02-18GHz Coaxial SP8T Switch

Features

- Ultra Wide Band Operation 0.02-18GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request



RoHS COMPLIANT

ESD

Typical Applications

- Wireless Infrastructure
- Military & Aerospace
- Fiber Optics

RF Microwave & VSAT
Test Instrument

Parameters	Min	Typ.	Max	Min	Typ.	Max	Min	Typ.	Max	Units
Frequency Range		0.02-6			6-12			12-18		GHz
Insertion Loss		2.5	4.5		3.8	5.5		5.5	6.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003			0.003		dB/°C
Isolation	60	85		75	80		60	70		dB
Input VSWR		1.5	1.8		1.5	1.8		1.5	2	: 1
Output VSWR		1.5	1.8		1.5	1.8		1.5	2	: 1
RF Input Power (CW)			30			30			30	dBm
DC Power Dissipation		1.5			1.5			1.5		W
0.1dB Compression Point (P0.1dB)		30			30			30		dBm
IIP3		55			55			55		dBm
Switching Speed			250			250			250	ns
Weight	1.76									ounces
Impedance	50									Ω
Bias Current (+5V / -5V)	350/50									mA
Input / Output Connectors	SMA - Female									
Finish	Gold Plating									
Material	Aluminum									
Sealing	Hermetically Sealed (Optional)									

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Absolute Maximum Ratings

Biasing	+5V±10%/-5V±10%
TTL Control Voltage	0~0.8V/2.8~5V

Note: TTL pins cannot be connected to the negative voltage otherwise the internal driver will be damaged.

Ordering Information

Part No.	ECCN	Description
DBSA0800021800A	EAR99	SP8T 0.02-18GHz PIN Diode Switch

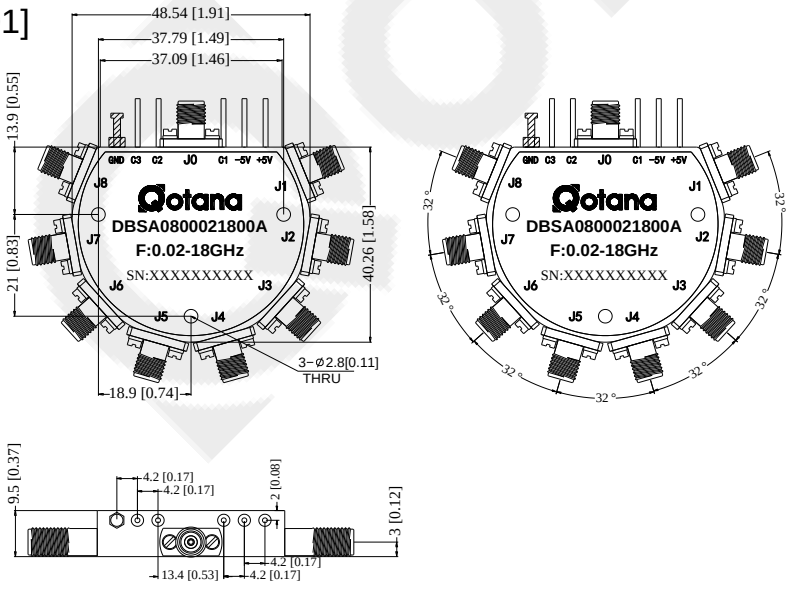
Environmental Specifications

Operational Temperature	-45ºC~+85ºC
Storage Temperature	-55ºC~+125ºC
Altitude	30,000 ft. (Epoxy Sealed Controlled environment)
	60,000 ft. 1.0psi min (Hermetically Sealed Un-controlled environment) (Optional)
Vibration	25g RMS (15 degrees 2KHz) endurance, 1 hour per axis
Humidity	100% RH at 35c, 95%RH at 40ºc
Shock	20G for 11msec half sine wave,3 axis both directions

Outline Drawing:

All Dimensions in mm (inches)

[X801]



Truth Table

Control Input TTL			Signal Path State
C3	C2	C1	
0	0	0	J0-J1
0	0	1	J0-J2
0	1	0	J0-J3
0	1	1	J0-J4
1	0	0	J0-J5
1	0	1	J0-J6
1	1	0	J0-J7
1	1	1	J0-J8
Control Pin Customization available upon request			

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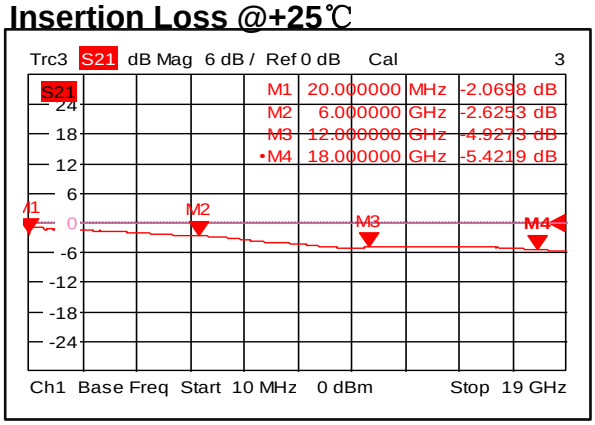
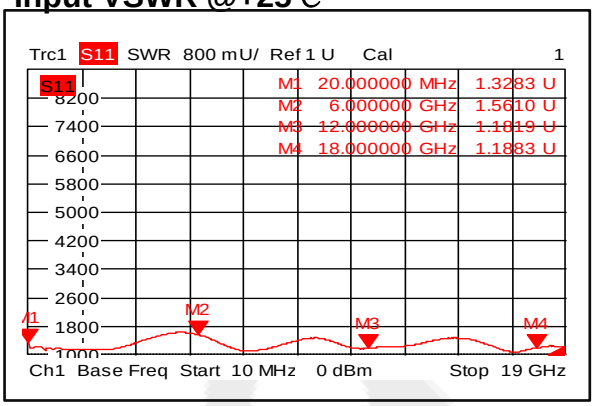
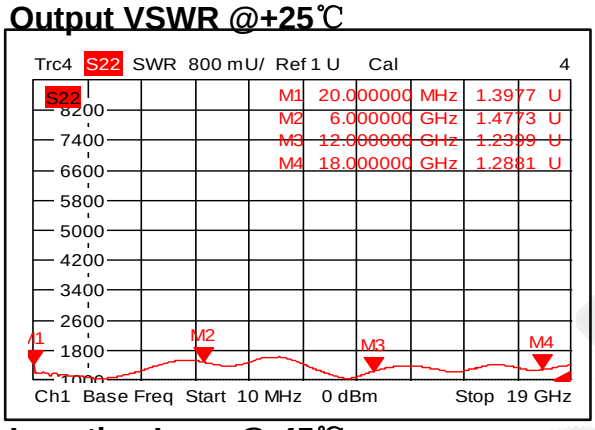
Insertion Loss @+25℃



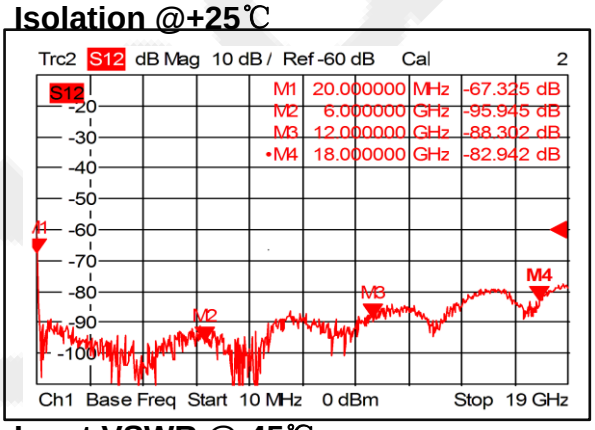
Input VSWR @+25℃



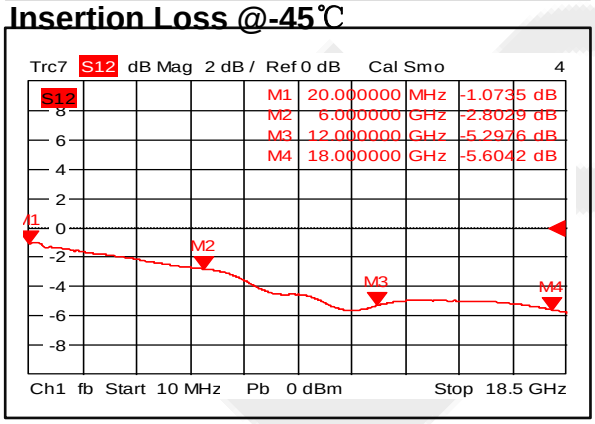
Output VSWR @+25℃



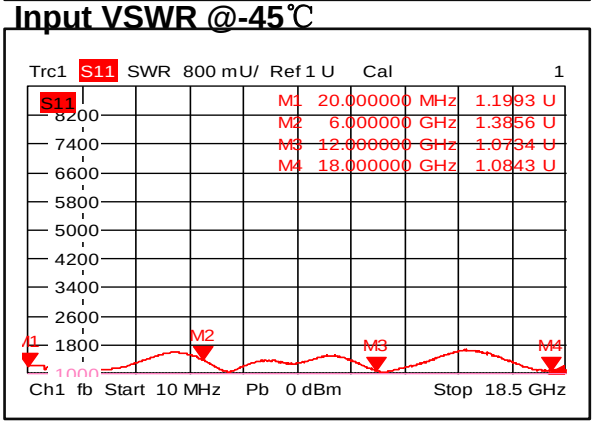
Isolation @+25℃



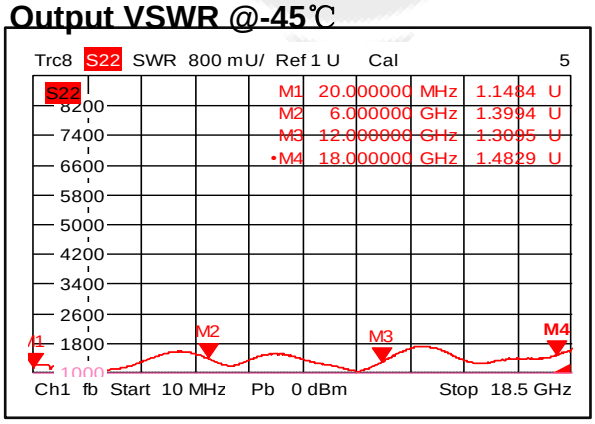
Insertion Loss @-45℃



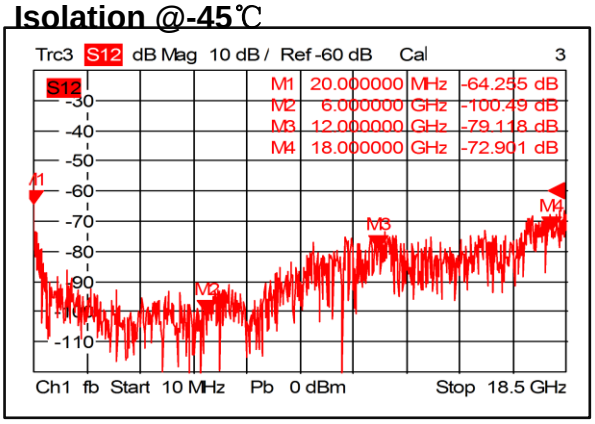
Input VSWR @-45℃



Output VSWR @-45℃



Isolation @-45℃



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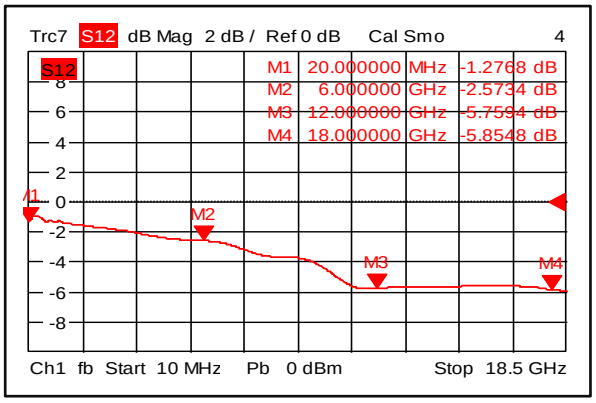
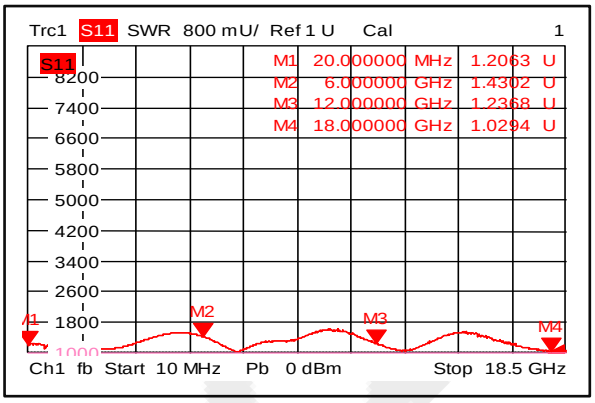
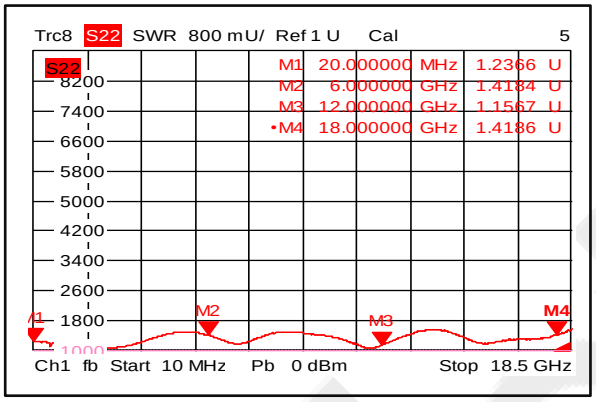
Insertion Loss @+85℃



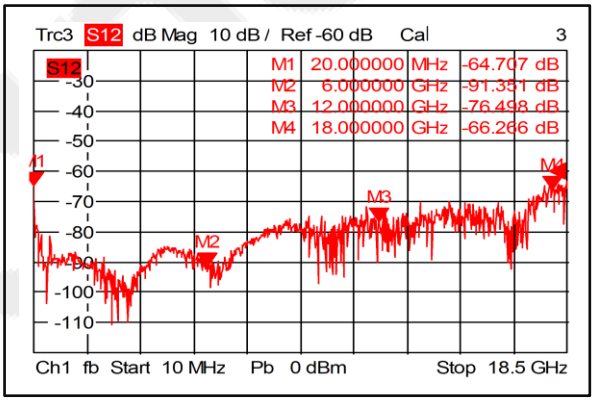
Input VSWR @+85℃



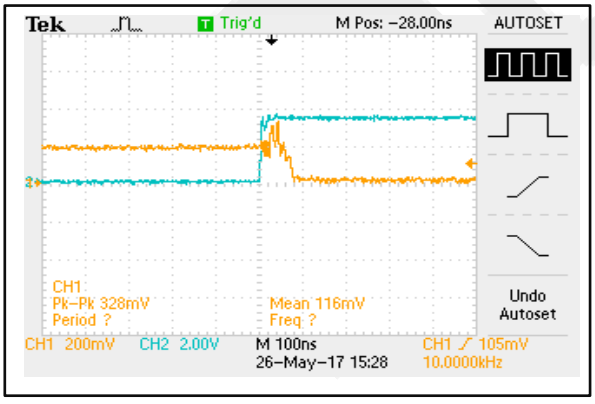
Output VSWR @+85℃



Isolation @+85℃



Switching Speed



Switching Speed