

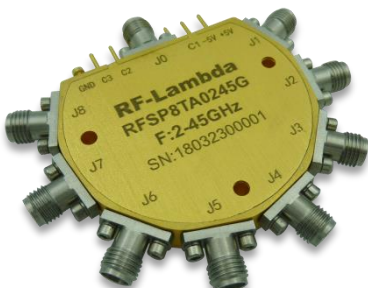


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSP8TA0245G

Absorptive Coaxial SP8T Switch 2 - 45GHz



Features

- Ultra Wide Band Operation 2-45GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation
- Customization available upon request

Typical Applications

- Wireless Infrastructure
- Military and Aerospace
- Test and Measurement

Electrical Specifications, $T_A = +25^{\circ}\text{C}$, $V_{dd} = +5\text{V}/-5\text{V}$, $\text{TTL} = 0 / +5\text{V}$

Description	PN: RFSP8TA0245G						
	SP8T Absorptive Switch						
	Low Power Cold Switching						
Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency Range	2-18			18-45			GHz
Insertion Loss		5.5	6.0		8.0	9.0	dB
Insertion Loss Temperature Coefficient		0.003			0.003		dB/°C
Isolation	50	65		45	55		dB
Input VSWR		2.2	3		2.5	3	: 1
Output VSWR		2.2	3		2.5	3	: 1
RF Input Power (CW)			23			23	dBm
DC Power Dissipation		1.5			1.5		W
0.1dB Compression Point (Po.1dB)		23			23		dBm
IIP3		55			55		dBm
Switching Speed			100			100	ns
Weight	1.76						ounces
Impedance	50						Ω
Bias Current (+5V / -5V)	200/50						mA
Input / Output Connectors	2.92mm - Female						
Finish	Gold Plated						
Material	Aluminum						
Sealing	Hermetically Sealed (Optional)						

Absorptive Coaxial Single Pole Eight Throw Switch 2 - 45GHz



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Absolute Maximum Ratings

Biasing Voltage	+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
RFSP8TA0245G	EAR99	SP8T 2-45GHz PIN Diode Switch

Environmental Specifications and Test Standards

Parameter	Standard	Description
Operational Temperature	MIL-STD-39016	-45°C~+85°C (Case Temperature)
Storage Temperature		-50°C~+125°C
Thermal Shock		1 Hour@ -45°C → 1 Hour @ +85°C (5 Cycles)
Random Vibration		Acceleration Spectral Density 6 (m/s) Total 92.6 RMS
Electrical & Temperature Burn In		Temperature +85°C for 72 Hours
Shock		1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	MIL-STD-883	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)		MIL-STD-883 (For Hermetically Sealed Units)

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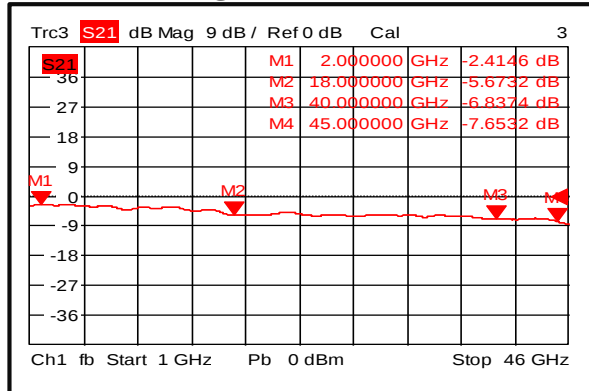
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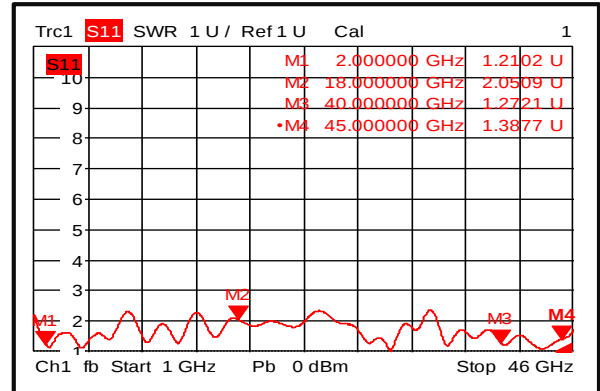
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Typical Performance Plots

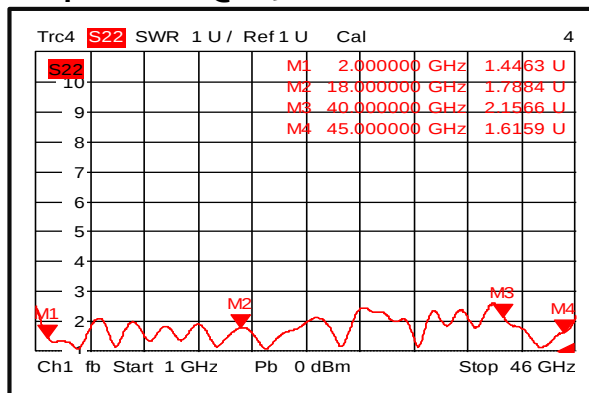
Insertion Loss @+25°C



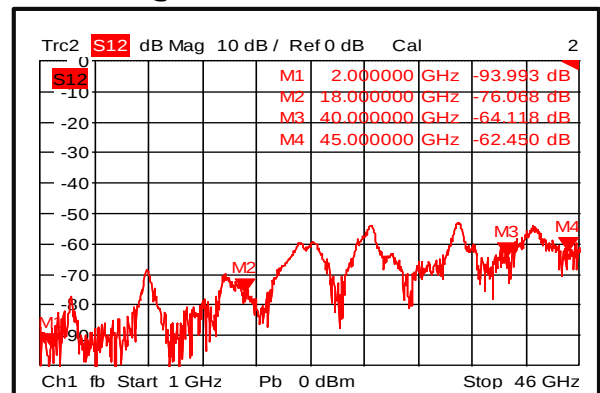
Input VSWR @+25°C



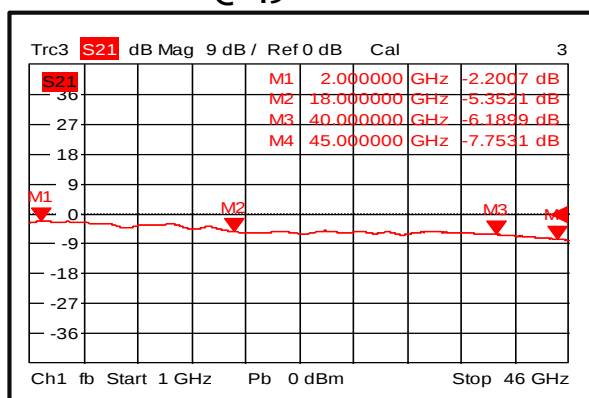
Output VSWR @+25°C



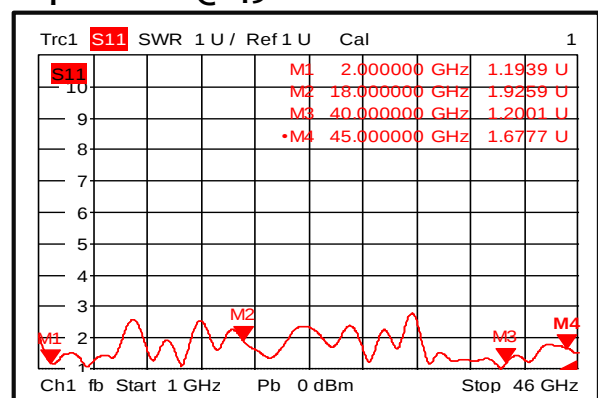
Isolation @+25°C



Insertion Loss @-45°C



Input VSWR @-45°C



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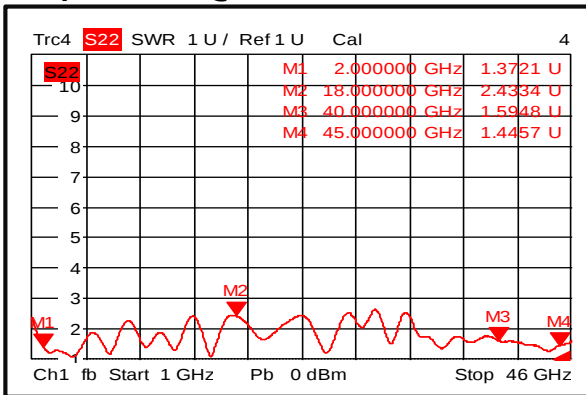
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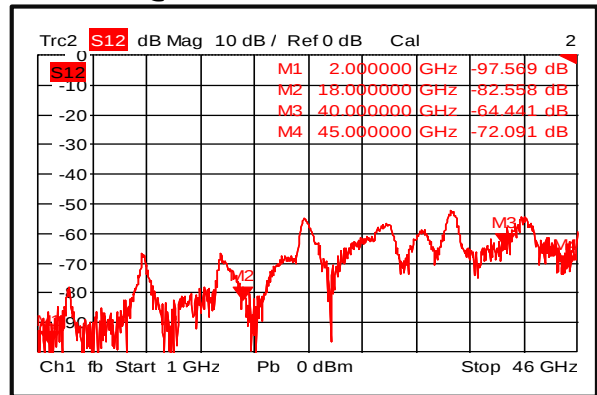
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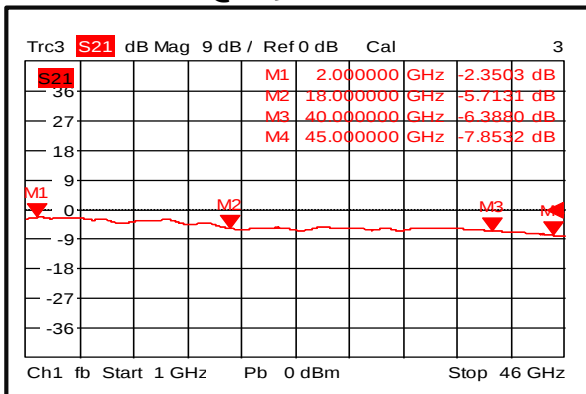
Output VSWR @-45°C



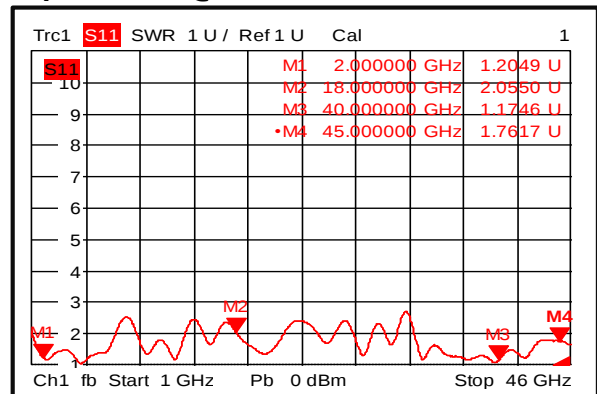
Isolation @-45°C



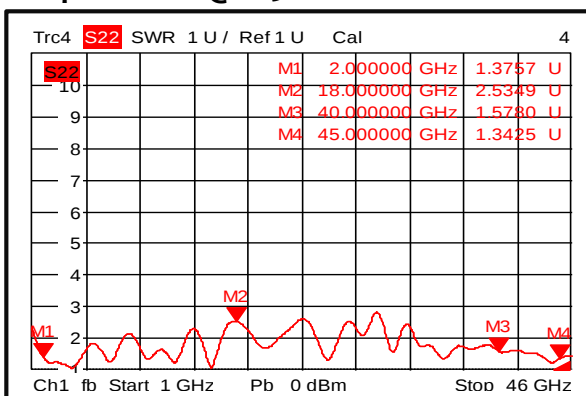
Insertion Loss @+85°C



Input VSWR @+85°C



Output VSWR @+85°C



Isolation @+85°C

