

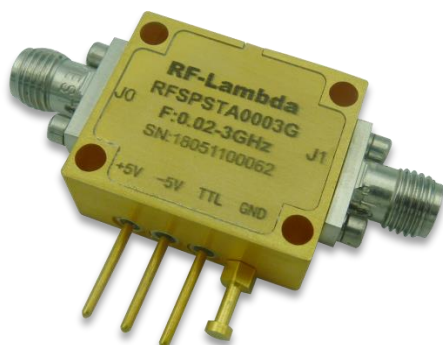


RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSPSTA0003G

Absorptive Coaxial SPST Switch 0.02 - 3GHz



Features

- Wide Band Operation 0.02-3GHz
- TTL compatible driver included
- Fast Switching Speed
- Low Insertion Loss and High Isolation

Typical Applications

- Wireless Infrastructure
- Test and Measurement
- Military and Aerospace

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

Description	PN: RFSPSTA0003G			
	SPST Absorptive Switch Jo: Absorptive Port Ji: Reflective port			
	Low Power Cold Switching			
Parameters	Min	Typ.	Max	Units
Frequency Range	0.02~3			GHz
Insertion Loss		1.3	1.5	dB
Insertion Loss Temperature Coefficient		0.003		dB/ °C
Isolation (Jo→Ji)	80	85		dB
Input VSWR		1.3	1.5	: 1
Output VSWR		1.3	1.5	: 1
RF Input Power (CW)			30	dBm
DC Power Dissipation (CW)		0.3		W
0.1dB Compression Point (Po.1dB)		30		dBm
IIP3		55		dBm
Switching Speed		150	200	ns
Weight	0.35			ounces
Impedance	50			Ω
Bias Current (+5V / -5V)	70/50			mA
Input / Output Connectors	SMA-Female			
Finish	Gold Plated			
Material	Aluminum			
Sealing	Hermetically Sealed (Optional)			

Absorptive Coaxial Single Pole Single Throw Switch 0.02 - 3GHz



RF-LAMBDA

LEADER OF RF BROADBAND SOLUTIONS

RFSPSTA0003G

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
RFSPSTA0003G	EAR99	SPST 0.02-3GHz 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)

Absorptive Coaxial Single Pole Single Throw Switch 0.02 - 3GHz

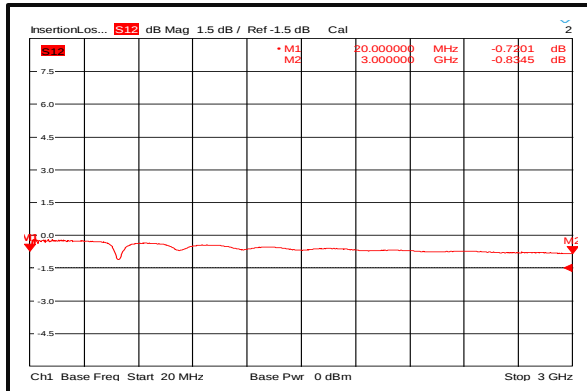


RF-LAMBDA

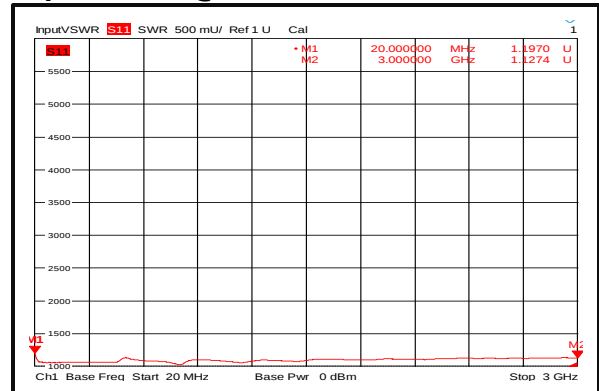
LEADER OF RF BROADBAND SOLUTIONS

RFSPSTA0003G

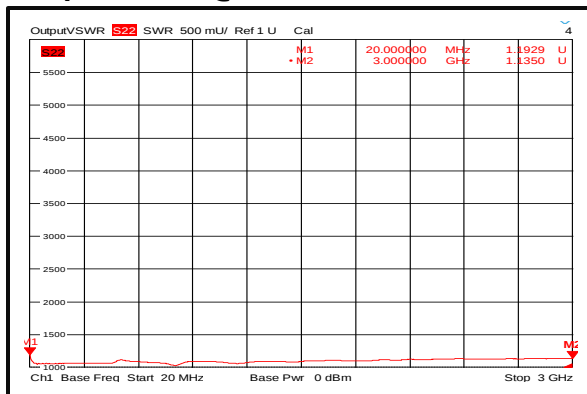
Typical Performance Plots Insertion Loss @+25°C



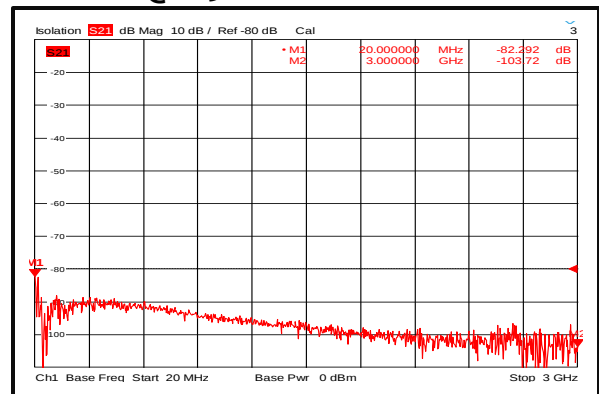
Input VSWR @+25°C



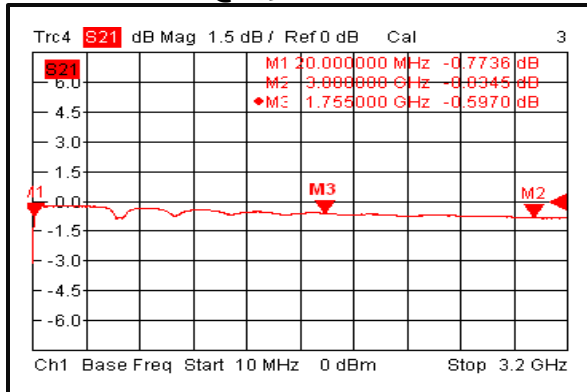
Output VSWR @+25°C



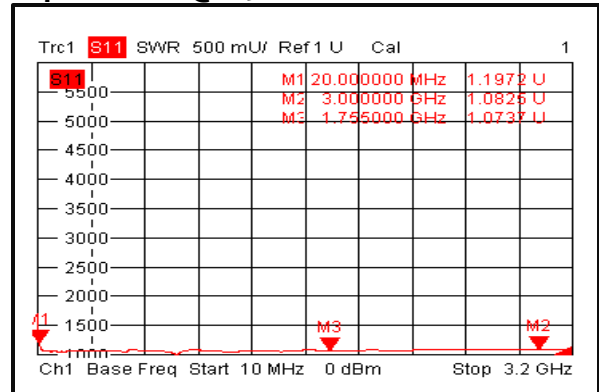
Isolation @+25°C



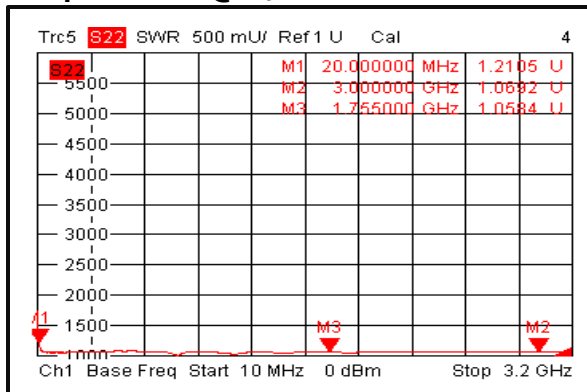
Insertion Loss @-45°C



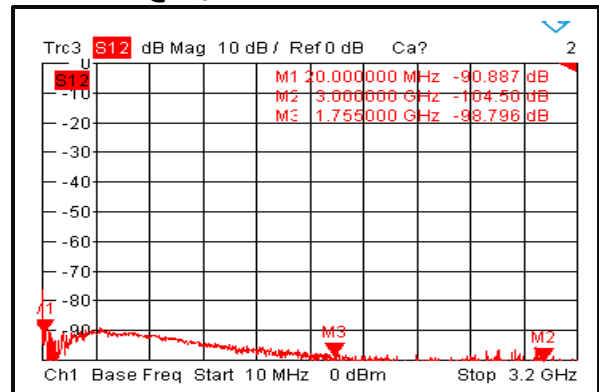
Input VSWR @-45°C



Output VSWR @-45°C



Isolation @-45°C



Absorptive Coaxial Single Pole Single Throw Switch 0.02 - 3GHz

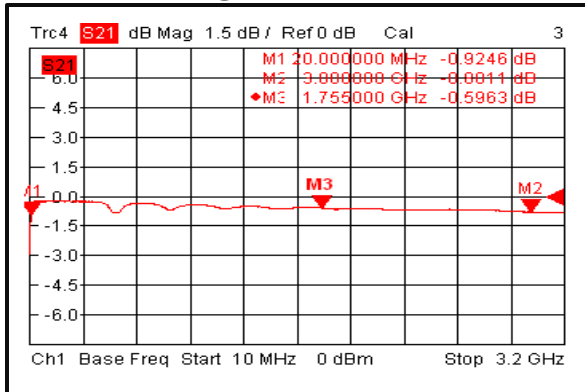


RF-LAMBDA

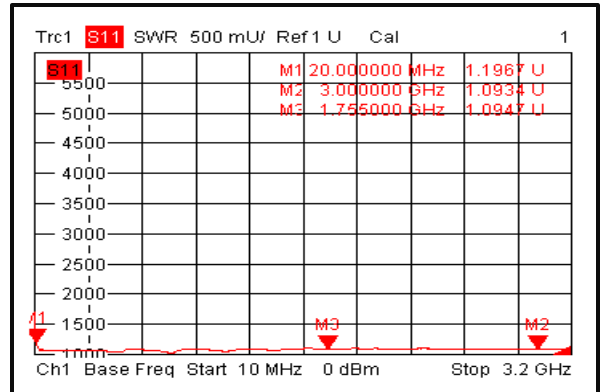
LEADER OF RF BROADBAND SOLUTIONS

RFSPSTA0003G

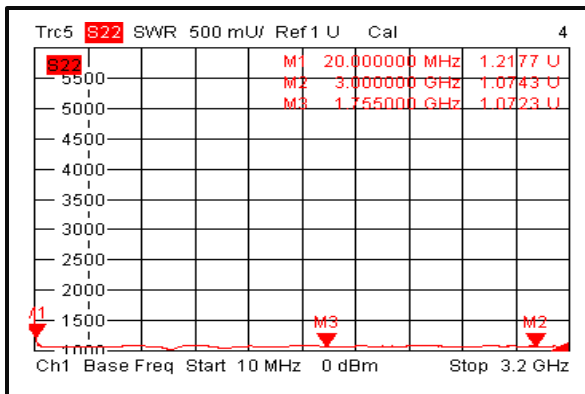
Insertion Loss @+85°C



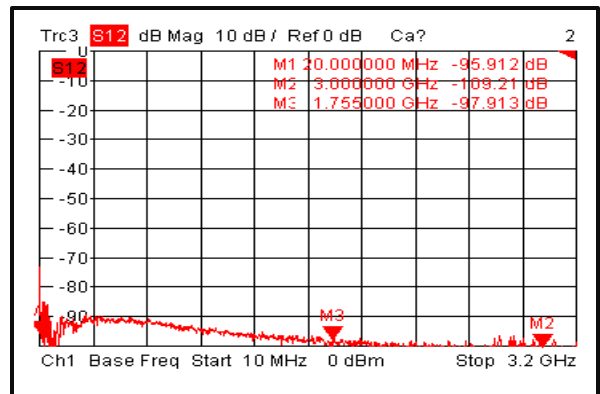
Input VSWR @+85°C



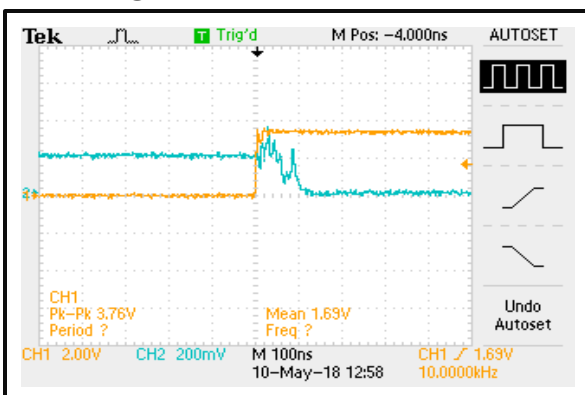
Output VSWR @+85°C



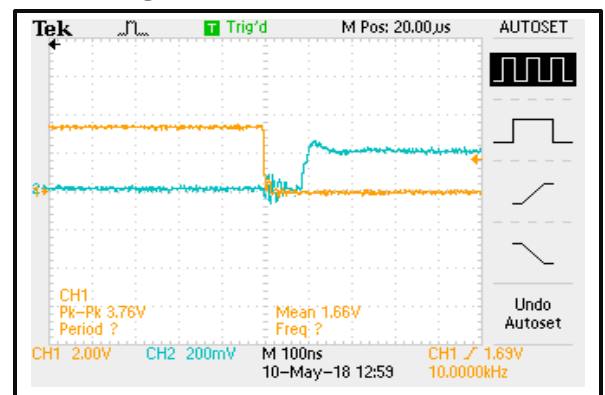
Isolation @+85°C



Switching Speed



Switching Speed



Absorptive Coaxial Single Pole Single Throw Switch 0.02 - 36GHz

