18 to 40 GHz SP12T Absorptive RF Switch Datasheet

Product ID: SW00344 Model: S12TA-180400E13B

- SP12T Absorptive RF Switch
- Wideband Operation
- Low Insertion Loss: 14 dB Max.
- Fast Switching
- TTL Control

Electrical Specifications

Description	Units	Minimum	Typical	Maximum
Frequency Range	GHz	18		40
Maximum Input Power	W			0.2
Insertion Loss	dB		12	14
VSWR	: 1			3
Isolation	dB	40		
Switching Time	ns			100
Supply Current @ +5 V	mA		300	
Supply Current @ -5 V	mA		100	
Control Interface			PIN	
Control Type			TTL	
Impedance	Ω		50	
Operating Temperature	°C	-45		+85

Note

- Measured at +25 °C, 50 Ω system, sea level, unless otherwise noted.
- Switching time is measured from 50% of the TTL control transition to 90% RF for turn-on and 10% RF for turn-off.
- Rise / fall time is measured from 10% to 90% RF and from 90% to 10% RF, respectively.

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Mechanical Specifications

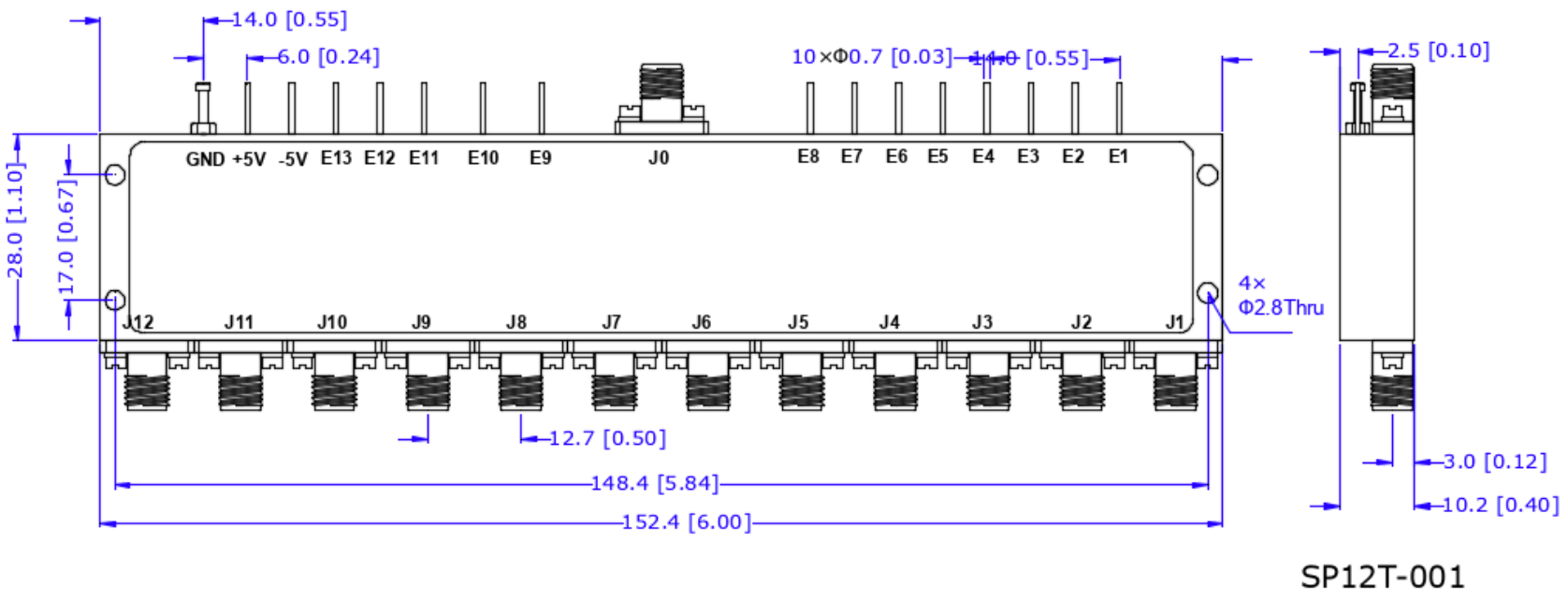
Dimensions (L×W×H)	152.4*28*10.2 mm
RF Input Connector	2.92mm-Female Stainless Steel
RF Output Connectors	2.92mm-Female Stainless Steel
Weight	122 g
Finish	Nickel Plated
Environment	Nominal
RoHS / REACH Compliant	√

Truth Table

Control Input TTL													Signal Path State
E13	E12	E11	E10	E9	E8	E7	E6	E5	E4	E3	E2	E1	
0	1	1	1	1	1	1	1	1	1	1	1	0	J0-J1
0	1	1	1	1	1	1	1	1	1	1	0	1	J0-J2
0	1	1	1	1	1	1	1	1	1	0	1	1	J0-J3
0	1	1	1	1	1	1	1	1	0	1	1	1	J0-J4
0	1	1	1	1	1	1	1	0	1	1	1	1	J0-J5
0	1	1	1	1	1	1	0	1	1	1	1	1	J0-J6
1	1	1	1	1	1	0	1	1	1	1	1	1	J0-J7
1	1	1	1	1	0	1	1	1	1	1	1	1	J0-J8
1	1	1	1	0	1	1	1	1	1	1	1	1	J0-J9
1	1	1	0	1	1	1	1	1	1	1	1	1	J0-10
1	1	0	1	1	1	1	1	1	1	1	1	1	J0-11
1	0	1	1	1	1	1	1	1	1	1	1	1	J0-12

- TTL High (1): 2.8 to 5 V
- TTL Low (0): 0 to 0.8 V
- Low-Power Cold Switching

CAD Drawing



Dimensions are in mm [Inches]
Tolerances: Outline drawing: ±0.2 [0.008]
Hole: ±0.2 [0.008]

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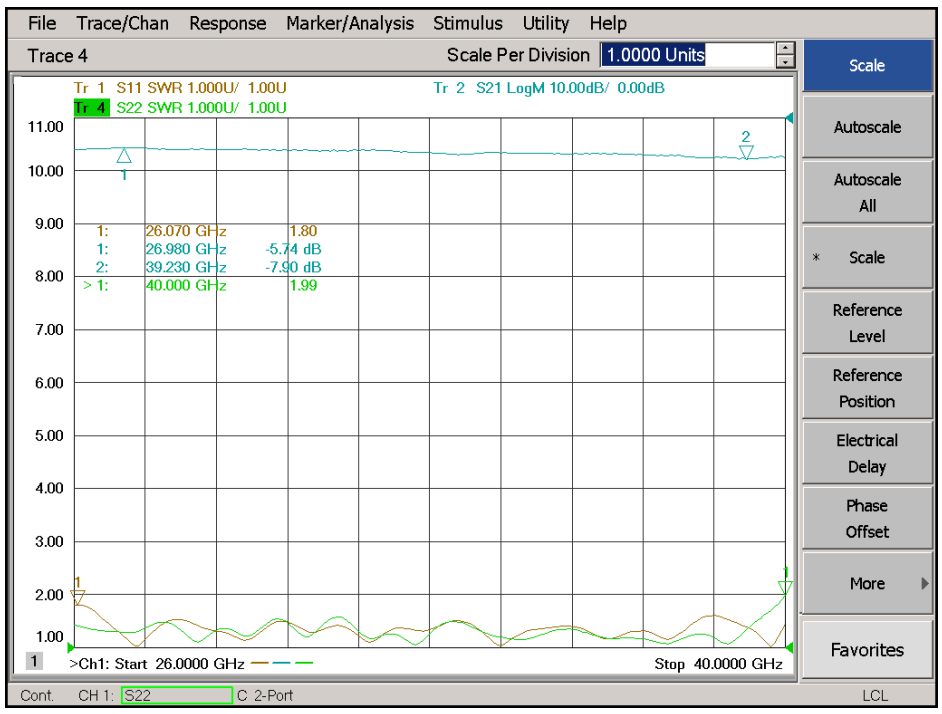
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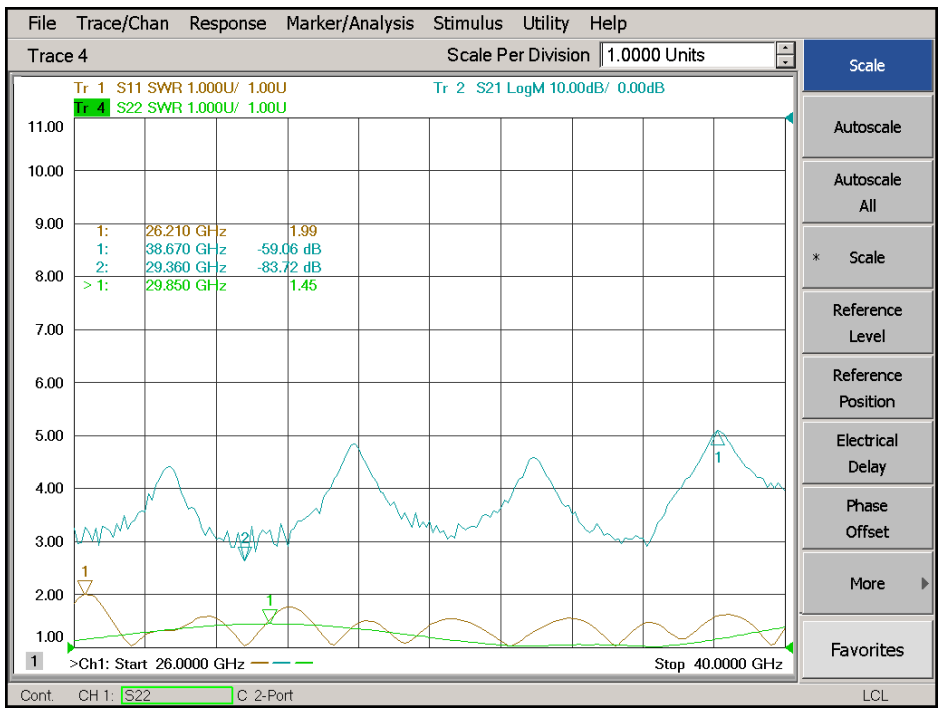
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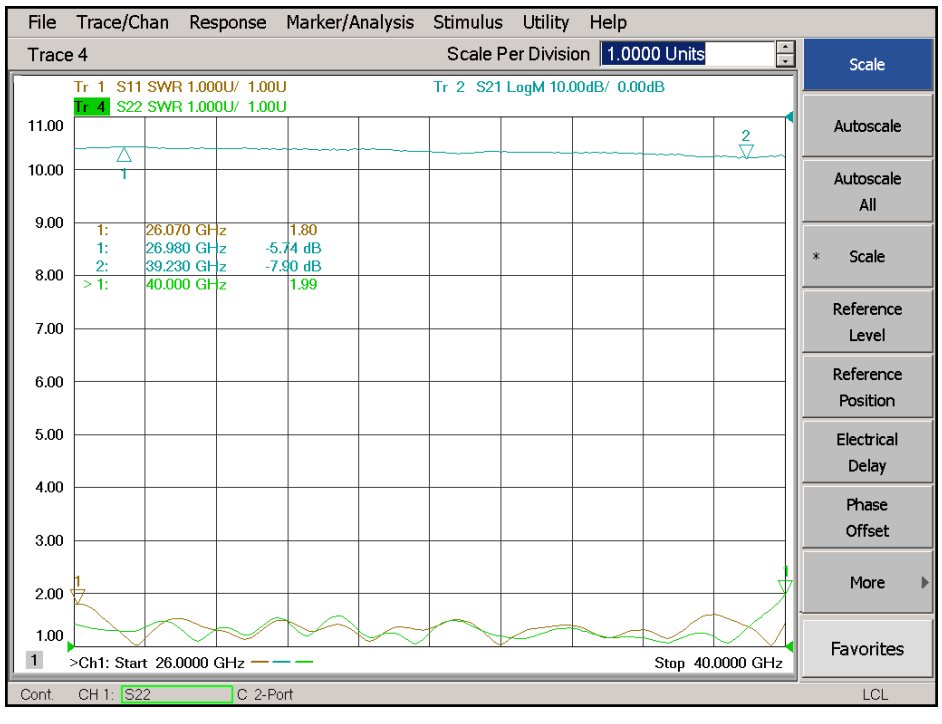
J0 to J1 Insertion Loss



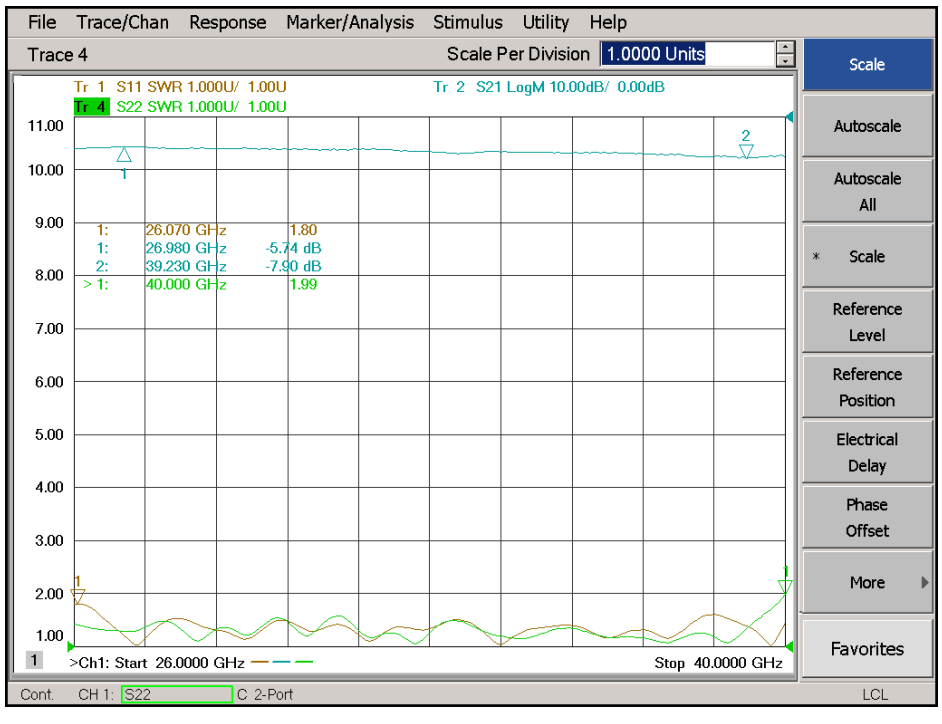
J0 to J1 Isolation



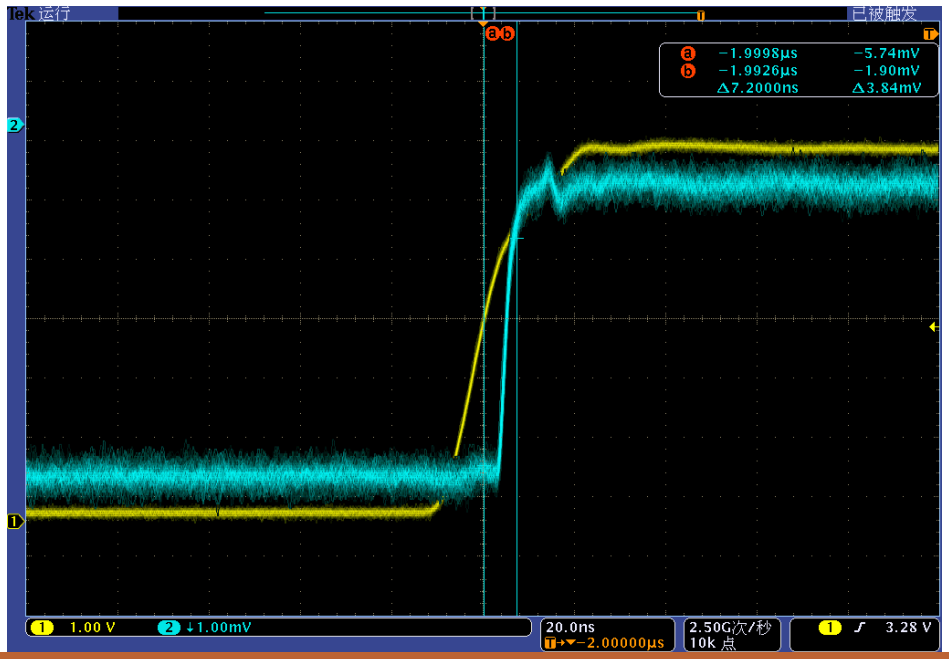
J0 to J2 Insertion Loss



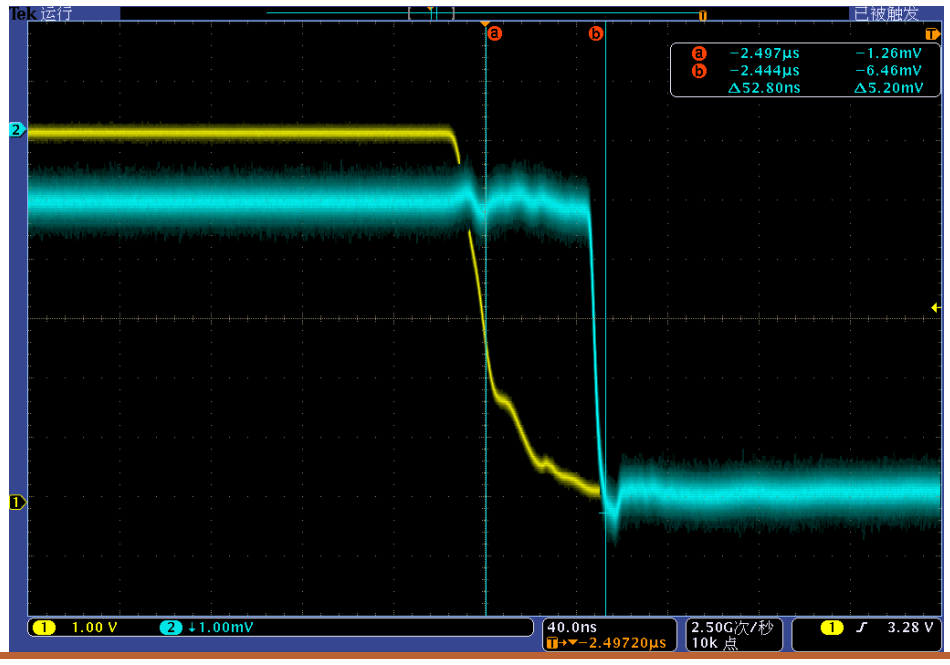
J0 to J2 Isolation



Turn-On Switching Time



Turn-Off Switching Time



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