

D-SS-12-T series Optical Delay Line & Optical Simulator

Product Features

- ※ Bandwidth to 12GHz
- ※ High dynamic range
- ※ Wide temperature application
- ※ Low amplitude response



Applications

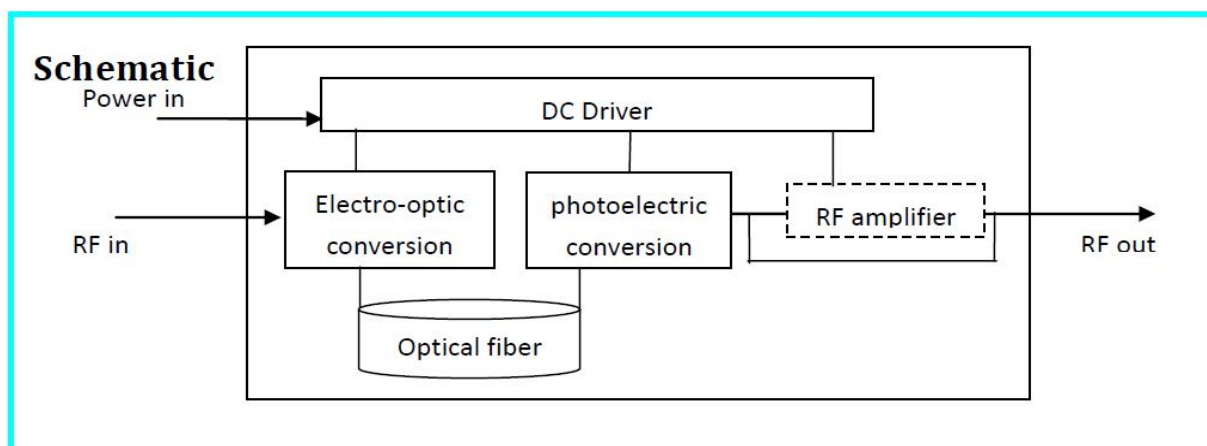
- ※ Radar testing/calibration
- ※ Signal processing
- ※ ECM Electronic countermeasures
- ※ Phased array antenna
- ※ Antenna simulation



Introduce Of D-SS-12-T series

Depended on Microwave-photonic technology, D-SS-12-T series optical delay line & optical simulator delivers unmatched performance for radar testing, signal processing, phased antenna array, antenna simulation and phase noise testing. It can work effectively in the whole L/S/C/X bandwidth, with less insertion loss , high dynamic range, strong electro-magnetic isolation and triple transit signals that are immeasurable.

Principle diagram



Optical and Electrical Specification (T_C = 22±3°C)

Parameter	Min.	Typ.	Max.	Unit	Remark
Frequency Range	1	-	12	GHz	
Amplitude Flatness	-	±2	±2.5	dB	
Time Delay	0.01	-	150	us	Customized
Delay Accuracy	-5‰	-	+5‰	-	
Insertion Loss	0	20	30	dB	Customized
Input VSWR	-	1.8	2	-	
Output VSWR	-	1.8	2	-	
Impedance	-	50	-	Ω	
Input 1 dB Compression	-	+13	+17	dBm	
Spurious Signal Rejection	60	-	-	dBc	
Noise figure	-	45	55	dB	5us, 25°C
Operate Temperature	-20	-	+70	°C	See Ordering Information
Storage Temperature	-40	-	+80	°C	
Relative Delay vs. Temperature	-	-	7	ppm/°C	
Insertion Loss vs. Temperature	-	2	4	%/°C	

Power Supply (T_C = 22±3°C)

Pin	1	2	3	4	5	6	7	8	9
Voltage	NC		GND			+12 V		NC	
Rated current	-		-			0.15 A		-	
Max Current	-		-			1 A		-	

(1) Test condition: Vin=+12V.



Typical Response Curve

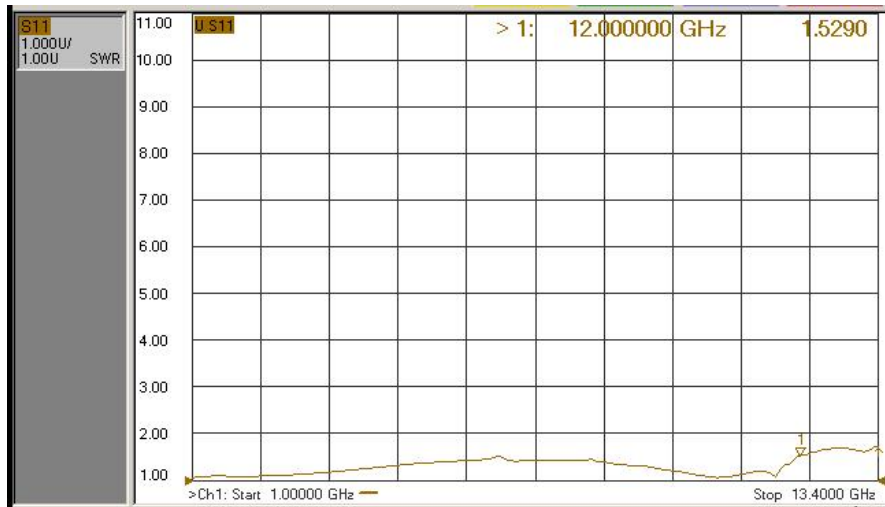


Fig1. Typical Response Curve-S11

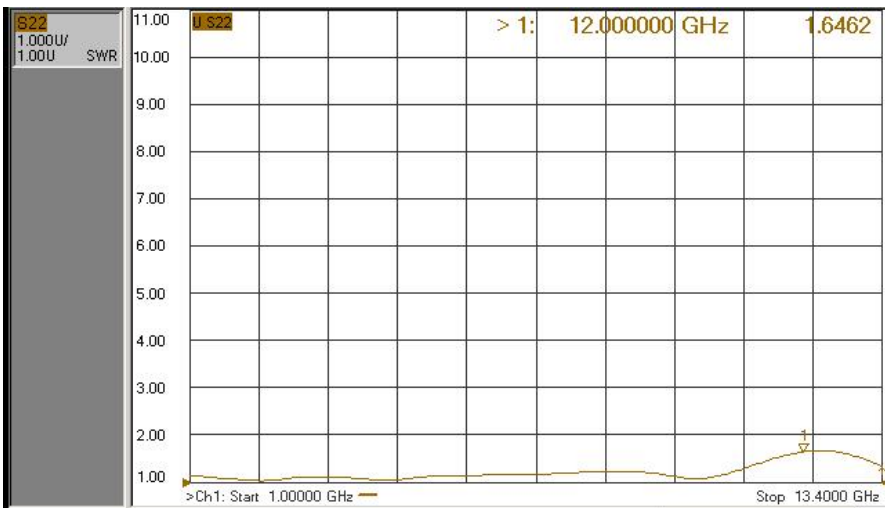


Fig2. Typical Response Curve-S22

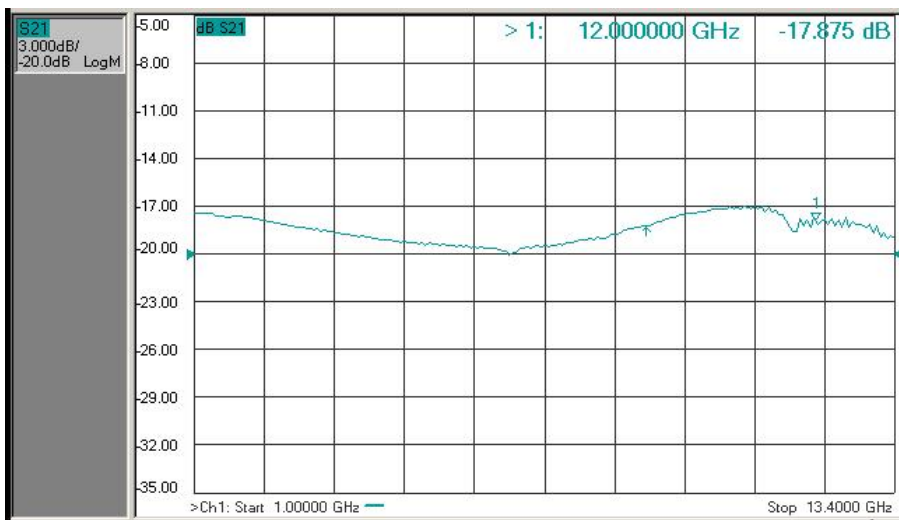
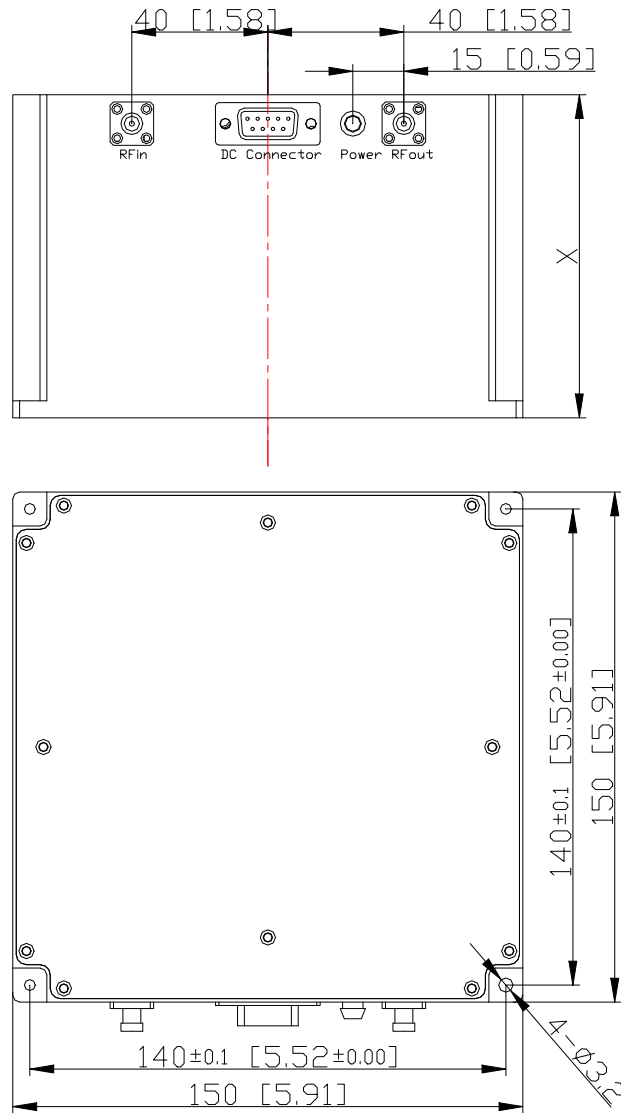


Fig3. Typical Response Curve-S21



Dimension Unit: mm[inch]



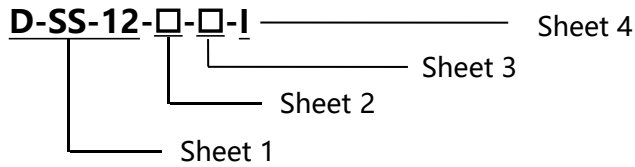
RF connector: SMA-K (Customized)

DC connector: DE-9PS (Customized)

Height value: X (mm)							
Product Type	D-SS-12-T-G						Remark
Time delay (us)	8	20	35	50	60	80	Standard
X (mm)	37	50	65	80	90	110	
Product Type	D-SS-12-T-P						Remark
Time Delay (us)	8	35	60	80	110	150	Compact
X (mm)	20	45	55	65	78	95	



Order Information



Sheet 1:

Symbol	Description
D-SS-12	Fixed fiber optic delay line, Frequency: 1~12GHz

Sheet 2:

Symbol	Description
T	Time delay , Customized, 0.01 to 150 us

Sheet 3:

Symbol	Dimension(refer to Height value: X (mm))
G	Standard structure
P	Compact structure
CM	Customized structure

Sheet 4:

Symbol	Description
I	Industrial grade: Operate Temperature: -20°C to +70°C Storage Temperature: -40°C to +80°C

For example: **D-SS-12-08-G-I** which means fixed fiber optic delay line, frequency: 1~12GHz, time delay: 8us, standard structure, operate temperature: -20°C to +70°C, storage temperature: -40°C to +80°C.

