

D-SS-40-T series Optical Delay Line & Optical Simulator



Abstract

Depended on Microwave-photonic technology,D-SS-40-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 bandwidth,with less insertion loss ,high dynamic range,strong electro-magnetic isolation and triple transit signals that are immeasurable.

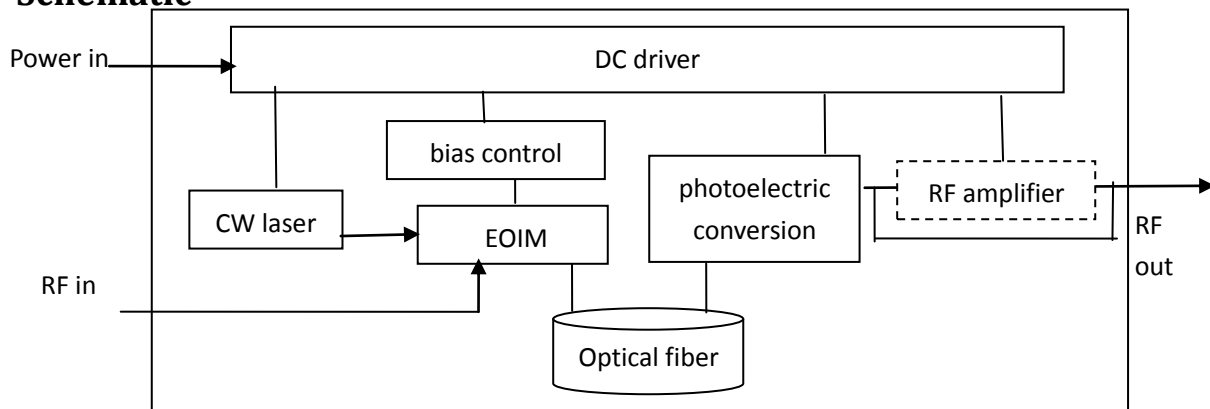
Features

- ✧ **Bandwidth to 40GHz**
- ✧ **High dynamic range**
- ✧ **Wide temperature application**
- ✧ **Low amplitude response**

Applications

- ✧ **Radar testing/calibration**
- ✧ **Signal processing**
- ✧ **Electronic war**
- ✧ **Phased antenna array**
- ✧ **Antenna simulation**

Schematic



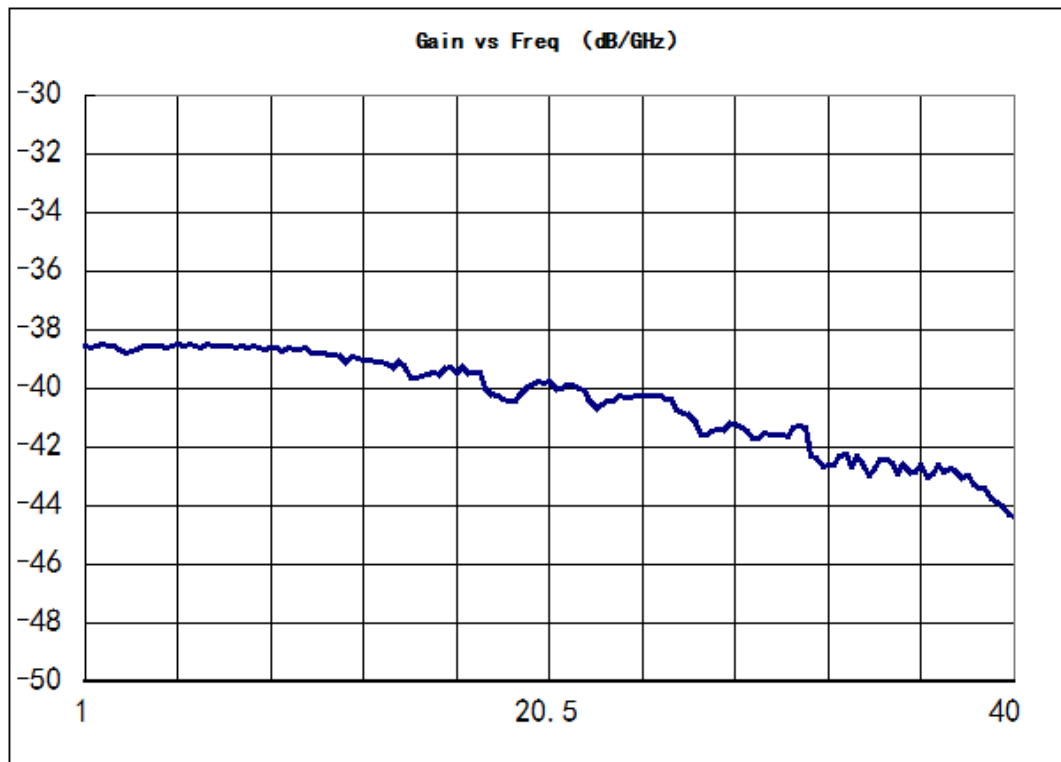
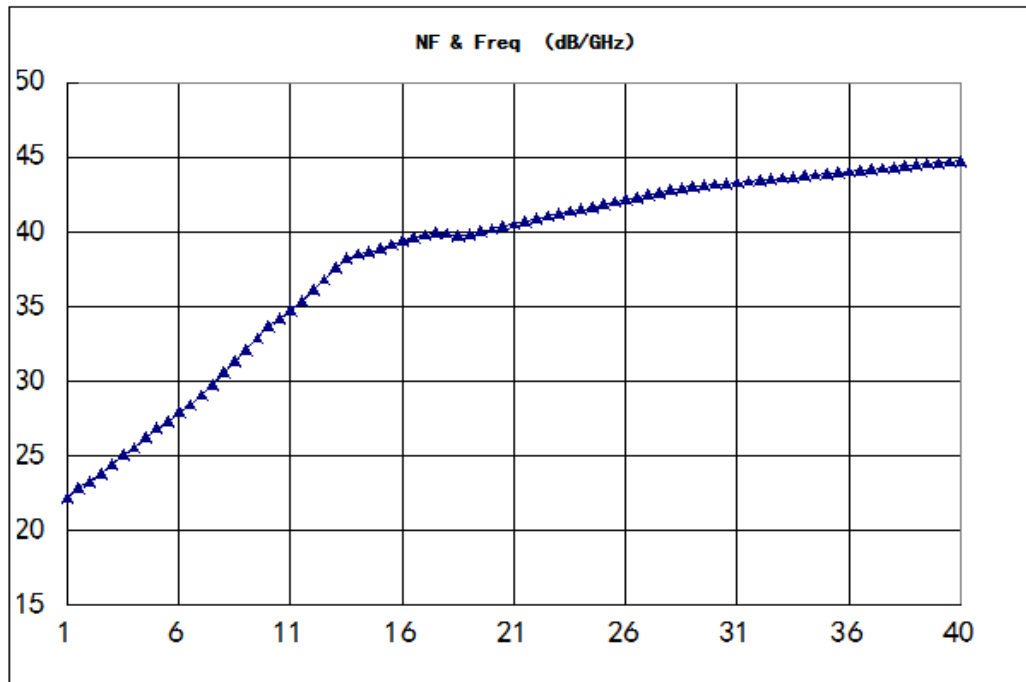
Electrical/Optical Characteristics

Parameter	Parameter values			Unit	Remark
	Min	Typical	Max		
Frequency range	1	-	40	GHz	
Amplitude response	-	±3	±4	dB	
Time Delay	0	-	110	us	Customized
Delay Accuracy	-5‰	-	+5‰	-	
Insertion Loss	-	40	-	dB	Customized
Input VSWR	-	2	2.3	-	
Output VSWR	-	1.5	2	-	
Impedance	-	50	-	Ω	
Input 1 dB Compression	-	+15	+18	dBm	
Spurious signal rejection ratio	60	-	-	dBc	
Noise figure	-	45	50	dB	(8us)
Operating Temperature Range	-40	-	+70	°C	
Storage Temperature Rang	-40	-	+70	°C	
Relative Delay vs. Temperature	-	-	7	ppm/°C	
Insertion Loss vs. Temperature	-	3	6	%/°C	

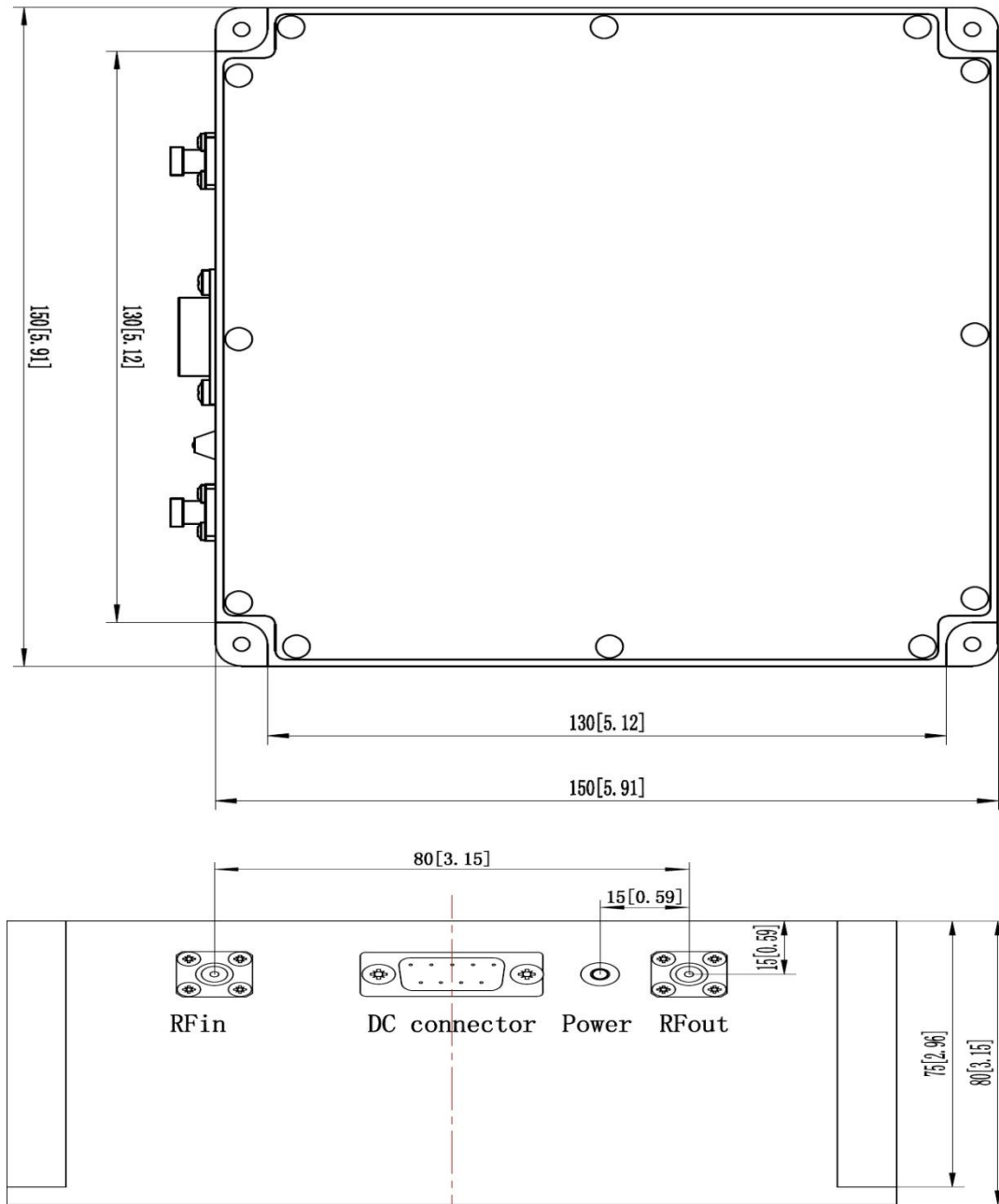
Connector description & Power supply

Pin	1	2	3	4	5	6	7	8	9
Voltage	+5V		GND			-12V		NC	
Current rating	0.8		-			0.5		-	
Max Current	3					1			

Typical Response Curves



The packages and pins(Unit:inch)



RF connector: SMA-K (Can be ordered)

DC connector: DE-9PS (Can be ordered)

X:							
Product type	D-SS-40-T-G						Remark
Time delay (us)	8	35	60	80	110	150	Standard
X (mm)	30	50	75	95	125	165	
Product type	D-SS-40-T-P						Remark
Time delay (us)	8	35	60	80	110	150	Compact
X (mm)	20	38	50	60	75	95	

Ordering Information

Product type	Packages	Quality levels	Operating Temperature	Storage Temperature
D-SS-40-T-G-I	Standard	Industry-grade	-20°C ~ 70°C	-40°C ~ 70°C
D-SS-40-T-G-M		military-grade	-40°C ~ 70°C	-50°C ~ 80°C
D-SS-40-T-G-S		Special military-grade	-55°C ~ 85°C	-55°C ~ 85°C
D-SS-40-T-P-I	Compact	Industry-grade	-20°C ~ 70°C	-40°C ~ 70°C
D-SS-40-T-P-M		military-grade	-40°C ~ 70°C	-50°C ~ 80°C
D-SS-40-T-P-S		Special military-grade	-55°C ~ 85°C	-55°C ~ 85°C
D-SS-40-T-C-I	customization	Industry-grade	-20°C ~ 70°C	-40°C ~ 70°C
D-SS-40-T-C-M		military-grade	-40°C ~ 70°C	-50°C ~ 80°C
D-SS-40-T-C-S		Special military-grade	-55°C ~ 85°C	-55°C ~ 85°C