



## ROF-DML series of analog broadband direct light transmission module



### Product description:

The ROF -DML -XX series of analog broadband direct-tuning transmitters use a highly linear microwave direct-coupled DFB laser (DML), a fully transparent operating mode without RF drive amplifiers and integrated automatic power control (APC) and automatic temperature control (ATC) circuit to ensure that the laser can transmit up to 18 GHz of microwave RF signals with long distances, high bandwidth and flat response, providing excellent linear optical fiber communication for a variety of analog broadband microwave applications. Due to the avoidance of expensive coaxial cable or waveguide, the transmission distance limit is canceled, which greatly improves the signal quality and reliability of microwave communication, being widely used in remote wireless, timing and reference signal distribution, telemetry and delay lines and other communication fields.



### Features

- Excellent RF response flatness
- Wide dynamic range
- Entire transparent work applicable signal coding communication standard network protocols
- Wavelength options: 1550nm DWDM wavelength
- Integrate automatic power control and automatic temperature circuit
- No built-in drive RF amplifier, providing more flexibility

### Applications:

- Remote antenna
- Long-distance analog optical fiber communication
- Military three wave communication
- Tracking telemetry and control
- Delay lines
- Phased array

### Performance parameters

Parameter	Unit	Min	Typ	Max	Remarks
Optical characteristics					
Laser type		DFB			
Operating wavelength	nm	1530	1550	1570	DWDM is optional
Equivalent noise intensity	dB/Hz			-145	



SMSR	dB	35	45		
Light isolation	dB	30			
Output light power	mW	10			
Light return loss	dB	50			
Optical fiber type		SMF-28E			
Optical fiber connector		FC/APC			
RF characteristics					
Operating frequency@-3dB	GHz	0.1		6	
		0.1		10	
		0.1		18	
Input RF range	dBm	-60		20	
Input 1dB compression point	dBm		15		
In-band flatness	dB	-1.5		+1.5	
Standing wave ratio				1.5	
RF reflection loss	dB	-10			
Input impedance	$\Omega$		50		
Output impedance	$\Omega$		50		
RF connector		SMA-F			
Power supply					
Power supply	DC	V		5	
		V		-5	
Consumption	W			10	
Power supply interface		Wear capacitance			



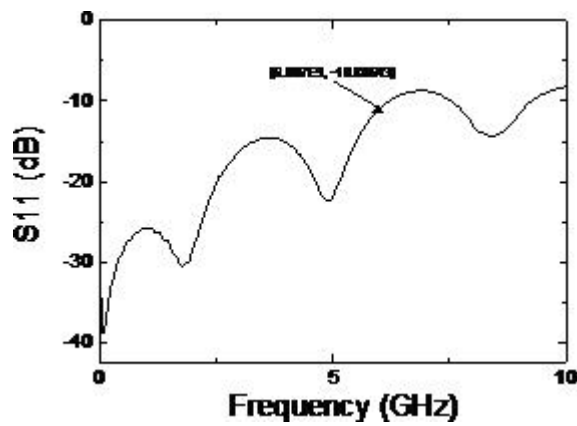
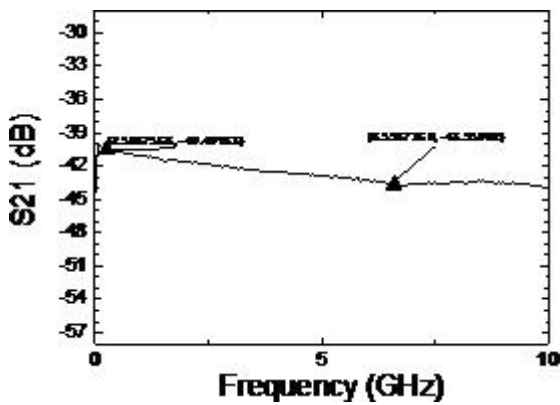
**Limit conditions**

Parameter	Unit	Min	Typical	Max	Remarks
Input RF power	dBm			20	
Operating voltage	V			13	

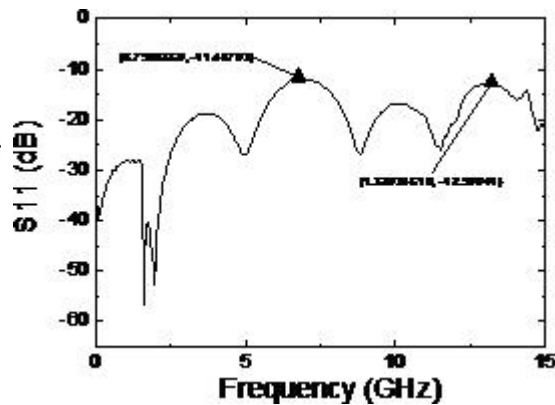
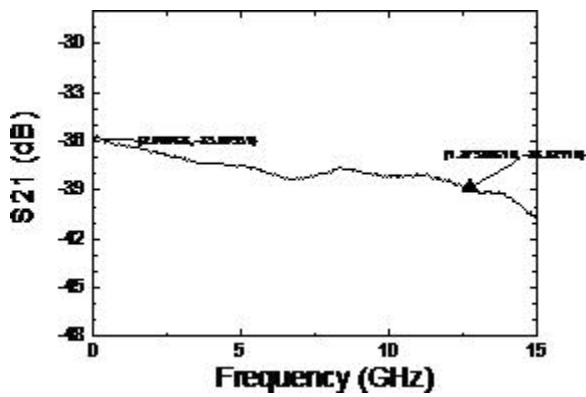
Operating temperature	°C	-40		+70	
Storage temperature	°C	-40		+85	
Operating relative humidity	%	5		95	

**Dimensions:**

unit : mm



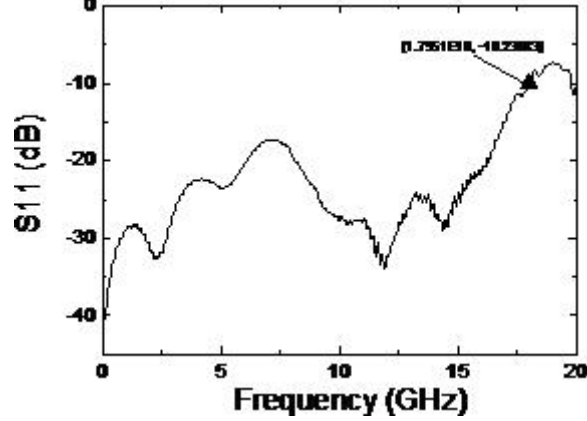
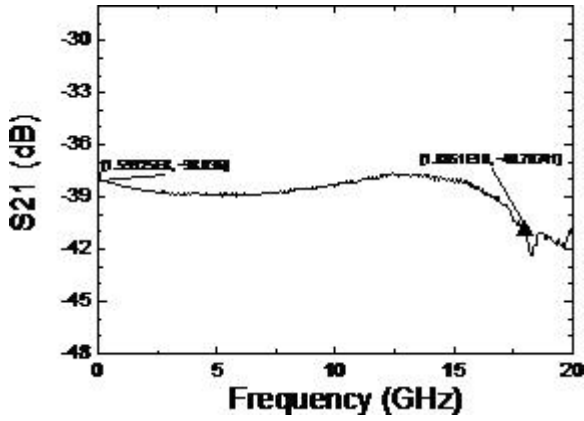
**Characteristic curve:**





6G S21&S11curve

10G S21&S11curve



18G S21&S11curve

**Ordering information:**

ROF -DML	XX	XX	X	X	X	X
Direct-tuning modulation transmitter module	Operating wavelength : 15-1550nm XX—DWDM channel	Modulation bandwidth : 06G-06GHz 10G-10GHz 18G-18GHz	Package type: M—standard module	Output power: 06---6dBm 10---10dBm	Optical fiber connector : FP ---FC/PC FA ---FC/APC SP---user specified	Operating temperature: empty-- -20~60°C G---- 40~70°C J---- 55~70°C

\*please contact our seller if you have special requirements