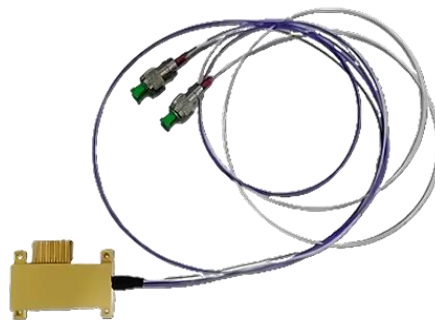


40 GHz IQ Modulator



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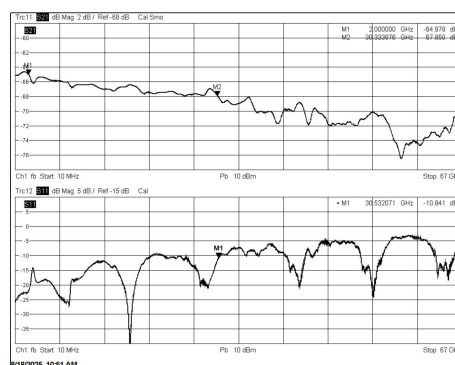
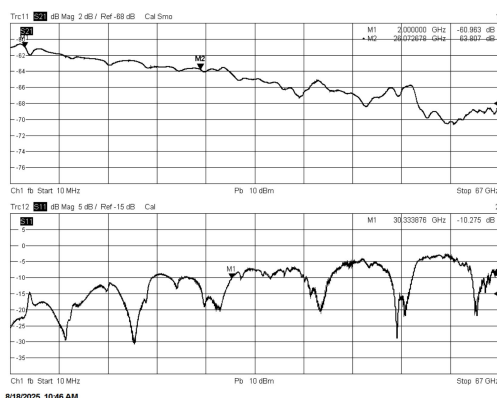
Overview

UFP offers Thin Film Lithium Niobate (TFLN) modulator chips in different formats and data rate, including DR8 and 2 x FR4 @ 100 Gbps/lane for 800 Gbps applications and DR4 @ 400 Gbps/lane for 1.6 Tbps applications. With experience and know-how, AFR engineers are available to customize our products to meet customers' specific requirements.

Specifications (Unless otherwise specified, the test temperature is 25°C)

Category	Parameters	Symbol	Unit	Performance	
Optical Features	Operating Wavelength	λ	nm	~1550	
	Optical Extinction Ratio (@DC)	ER	dB	≥ 25 dB	
	Optical Return Loss	ORL	dB	≤ -15	
	Optical Insertion Loss	IL	dB	~6	
Electrica Features	3db Bandwidth	S21	GHz	I	Q
				~30	~30
	RF Load	Rm	Ohm	50 $\pm$ 5	
	Parent RF V_{π} (@50 KHz)	V_{π} -P	V	3~3.5	
	Child RF V_{π} (@50 KHz)	V_{π} -C	V	3~3.5	
	Heater Resistance	Rh	Ohm	4000 $\pm$ 10%	
	Parent Heater P_{π} (@DC)	P_{π} -P	mW	~50	
	Child Heater P_{π} (@DC)	P_{π} -C	mW	~50	
	RF Return Loss (100 MHz To 30 Ghz)	S11	dB	-10	
Test Condition	Operating Temperature	To	℃	-20~70	
Fiber type	PM1550/SMF-28E				

Bandwidth S21 Curve



Absolute Maximum Ratings

Parameters	Symbol	Min	Max	Typ	Unit
RF Input Power	Sin	-	-	10	dBm
Heater Bias Voltage		0	5		V
Storage Temperature		-40	85	25	°C
Relative Humidity	RH	5	90	50	%