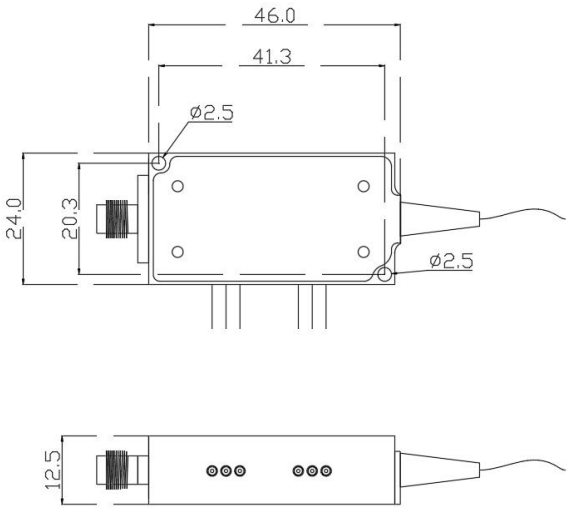
RF over Fiber Module

GOM25



- Frequency Range: 9~2500MHZ
- 1550/1310(nm)
- FC/APC or SC/APC
- The Total Gain(TX+RX): 15dB
- Low Power Consumption

RoHS

Description

GOM25 is a RFoF module operate between 45MHz to 2.5GHz, provide long distance RF signal transport over Single Mode Fiber. It is a RF over fiber system. This module is a photoelectric conversion device designed specifically for long-distance, high fidelity transmission of satellite system RF signals. Solved the core problems of short transmission distance, high loss, and susceptibility to electromagnetic interference in the transmission of high-frequency satellite signals, including Beidou, GPS, Glonass, Galeo and other satellite navigation frequency bands, using traditional coaxial cables. The system consists of a pair of modules, TX unit and RX unit, which transmit remote RF signals to receivers or time-frequency devices tens of kilometers away with low distortion and loss through single-mode optical fibers. It is a key component for achieving high-precision positioning, timing, and synchronization systems to operate stably and reliably in a distributed architecture.

Applications

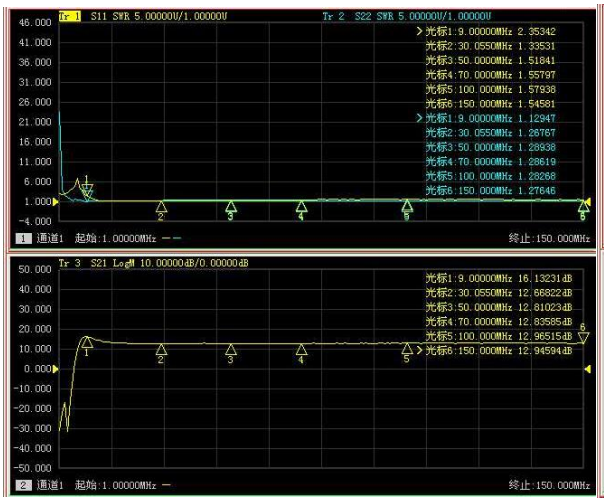
- GPS and GNSS Repeater Systems
- Multi-Radio Interconnect
- 5G testing

Specifications

Parameters	Conditions	Min.	Typ.	Max.	Units
Freq. Range	Input & Output	9		2500	MHz
In & Out Impedance	Input / Output		50		Ω
Input VSWR			2.0		
Output VSWR			2.0		
Gain	TX+RX	0		15	dB
Gain Flatness	TX+RX		3		dB
Wavelength	TX		1550/1310		nm
	RX	1260		1650	nm
TX&RX Operating Voltage		4.8	5	5.2	V
TX Operating Current	Without Bias-T	120	150		mA
	With Bias-T			250	mA
RX Operating Current		180	200		mA
Max. RF Input Power	TX			10	dBm
Max. Output Power	RX			7	dBm
RX Optical Power	RX	-15		5	dBm
AGC Power	RX	-	-	-	-
RF Connector			SMA K		
Fiber Optic Connector			FC/APC SC/APC		
Operating Temperature Range	TX,RX	-25		65	℃
Storage Temperature Range	TX,RX	-40		85	℃

Test Data

Frequency(Mhz)	9	30	50	70	100	150	200	350	400	450
VSWR	2.0	1.3	1.6	1.6	1.6	1.6	1.5	1.5	1.5	1.5
Gain(dB)	16	12	12	12	12	12	13	13	13	13

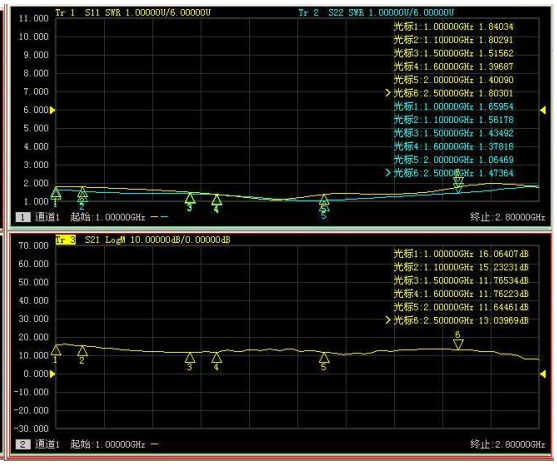


(9Mhz~150Mhz)

(150Mhz~500Mhz)

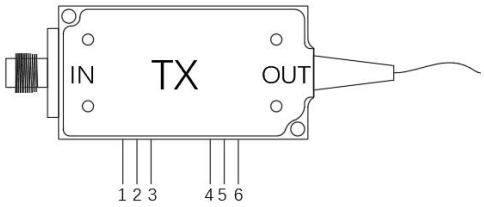
Frequency(Mhz)	500	600	700	800	900	1000	1100	1500	1600	2000	2500
VSWR	1.5	1.5	1.6	2.0	2.0	2.0	2.0	1.5	1.5	1.5	2.0
Gain(dB)	13	13	13	15	15	15	11	11	11	11	13

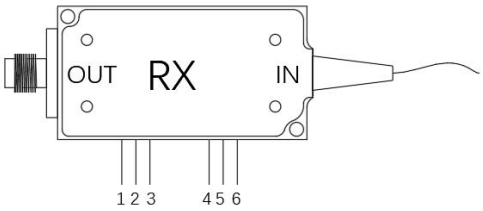
(500Mhz~1000Mhz)



(1000Mhz~2500Mhz)

Pin Definitions





TX No.	Definition	Note
1	VCC	Power supply pin +5V
2	GND	Power Ground Wire
3	NC	Please keep this pin suspended and do NOT make any connections
4	LED-	Negative terminal of indicator light
5	LED+	Positive terminal of indicator light
6	NC	Please keep this pin suspended and do NOT make any connections

RX No.	Definition	Note
1	VCC	Power supply pin +5V
2	GND	Power Ground Wire
3	NC	Please keep this pin suspended and do NOT make any connections
4	GLED-	Green Indicator Light
5	COM	Bicolor lamp anode
6	RLED-	Red Indicator Light

Order Informations and Available Options

Part number	Description	Part number	Description
GOM25-TX	TX, 1550nm, FC/APC	GOM25-RX	RX, FC/APC
GOM25-TX-10	TX, 1310nm, FC/APC	GOM25-RX-01	RX, SC/APC
GOM25-TX-01	TX, 1550nm, SC/APC	GOM25-RX-L200	RX, With 200Ω load on coaxial port, FC/APC
GOM25-TX-11	TX, 1310nm, SC/APC	GOM25-RX-L200-01	RX, With 200Ω load on coaxial port, SC/APC
GOM25-TX-BT	TX, Pass DC 5V on Coaxial port, 1550nm, FC/APC		
GOM25-TX-BT-10	TX,Pass DC 5V on Coaxial port, 1310nm, FC/APC		
GOM25-TX-BT-01	TX, Pass DC 5V on Coaxial port,1550nm, SC/APC		
GOM25-TX-BT-11	TX, Pass DC 5V on Coaxial port,1310nm, SC/APC		

Product Dimension

46x24x12.5 (mm)