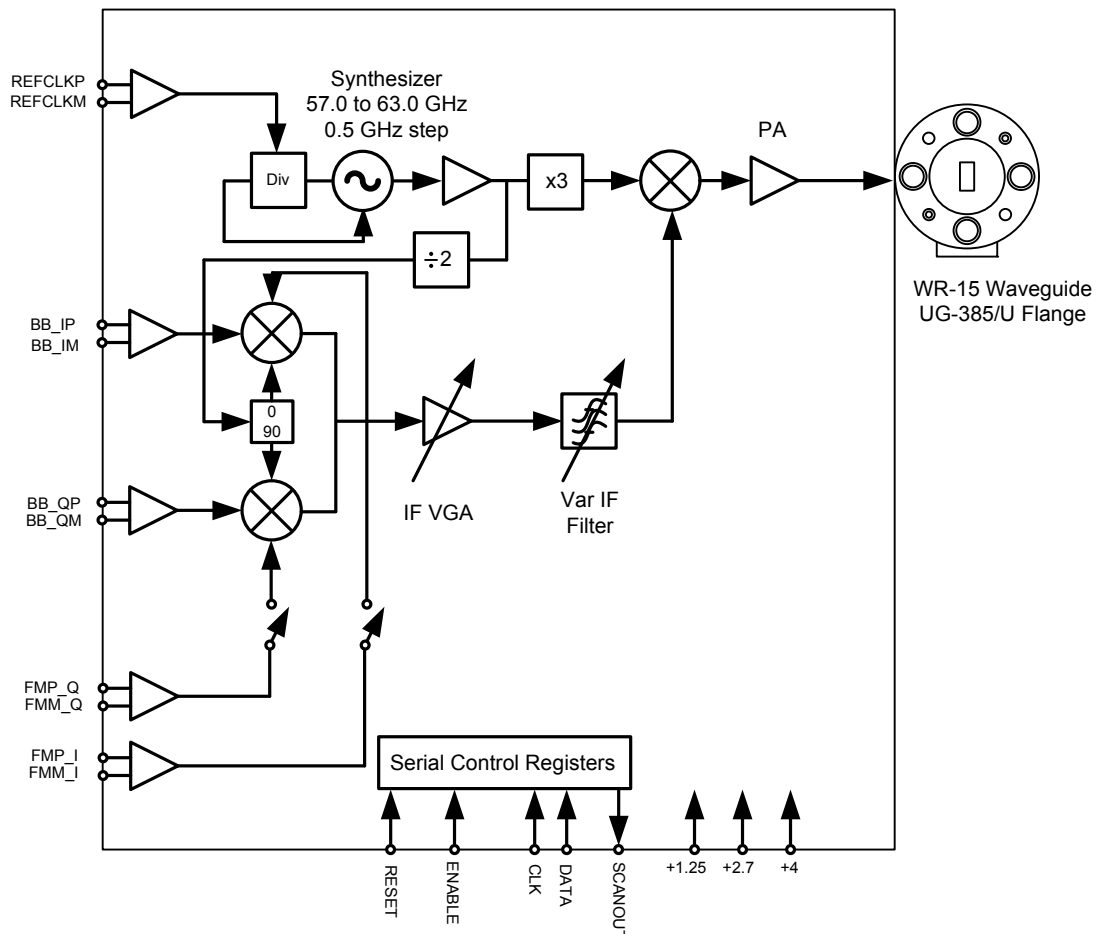
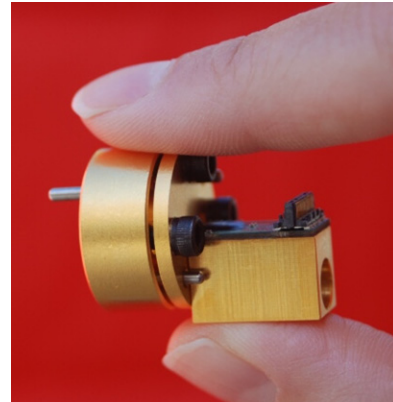


Technical Overview

Features

- Complete millimeter wave transmitter
- WR-15, UG-385/U flange
- Operates in the 57 to 64 GHz unlicensed band
- 10 mW output power
- > 500 MHz baseband channels (I/Q, FM, AM)
- Up to 1.5 GHz modulated bandwidth at 60 GHz
- On chip synthesizer covers 56.5 to 63.0 GHz with 0.5 GHz step size
- Reference clock 285.714 MHz
- Samtec ST4-20 interface connector for power, digital control, baseband and reference clock



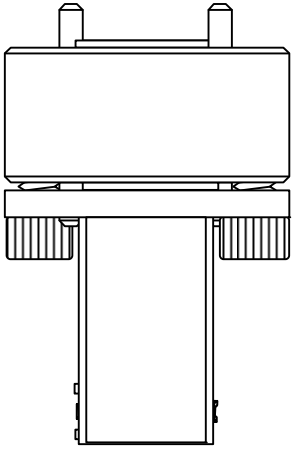
Rev 1.0

65 Enterprise
Aliso Viejo, CA 92656, U.S.A
Telephone 949-226-8482
FAX 815-572-0386

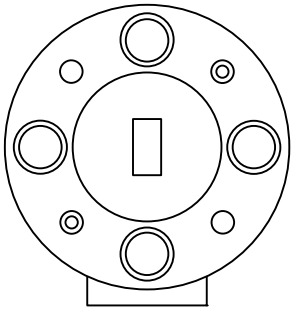
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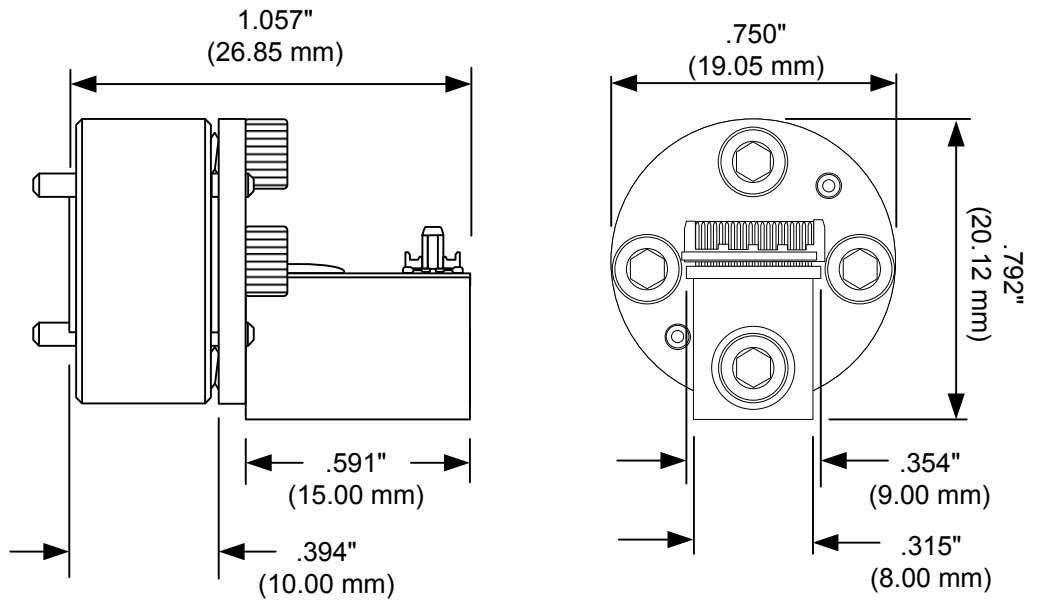
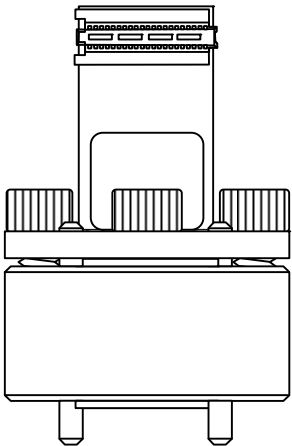
Dimensions



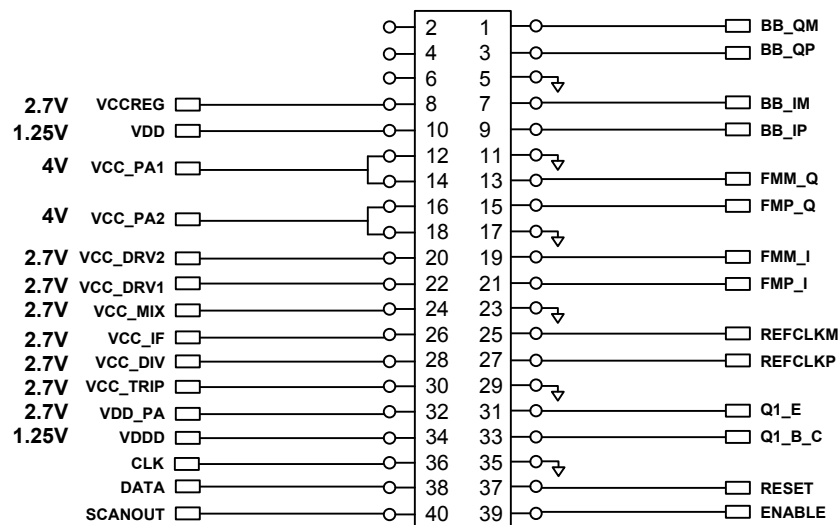
WR-15 UG-385/U Flange



Samtec ST4-20 Connector



Samtec ST4-20



Mating Connector:
Samtec SS4-20-3.00-L-D-K-TR

Power and Signal Specifications

Parameter	Pin Name	Min	Typ	Max	Unit	Comment
Reference Clock	REFCLKP REFCLKM	-3	0	+3	dBm	100 ohm differential 285.714 MHz
I/Q Baseband Input	BB_QM, BB_QP, BB_IM, BB_IP		100		mVPP	100 ohm differential
FM Baseband Input	FMM_I, FMP_I FMM_Q, FMP_Q		100		mVPP	100 ohm differential
Digital Control Inputs	RESET, CLK, DATA, ENABLE		1.25		V	1.25V CMOS
Digital Control Output	SCANOUT		1.25		V	1.25V CMOS
+1.25	+1.25	1.19	1.25	1.31	V	
+2.7	+2.7	2.57	2.7	2.83	V	
+4	+4	3.8	4.0	4.2	V	
+1.25 supply current			11		mA	
+2.7 supply current			190		mA	
+4 supply current			70		mA	
Temperature Sensor	Q1_E Q1_B_C					2N3904 connected as diode (E, B-C)

Performance Specifications

Parameter	Min	Typ	Max	Unit	Comment
Gain		35		dB	Referenced to baseband input
IF Gain Adjustment Range		20		dB	IF Atten adjustment
IF Filter Q Tuning Range	800		1500	MHz	IF Filter Q adjustment
PA Output P1db	+7	+10	+13	dBm	
PA Output Psat		+15		dBm	
Image Rejection		-25		dBc	
Carrier Suppression		-23		dBc	
3x LO Spur		-25		dBc	
Phase Noise		-113		dBc/Hz	10 MHz from carrier
I/Q Balance Phase		+/- 3		degrees	
I/Q Balance Amplitude		+/- 1		dB	