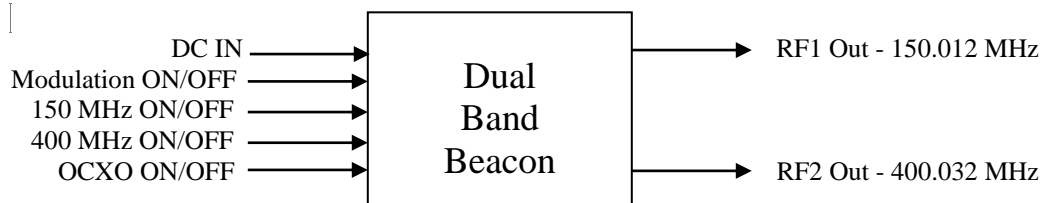


TDF-1620
DUAL BAND CUBESAT BEACON

DOC #: TDF-1620

Created: 1/3/12	Revision: 1	Revision Date: 3/8/12
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Functional Diagram



Specifications

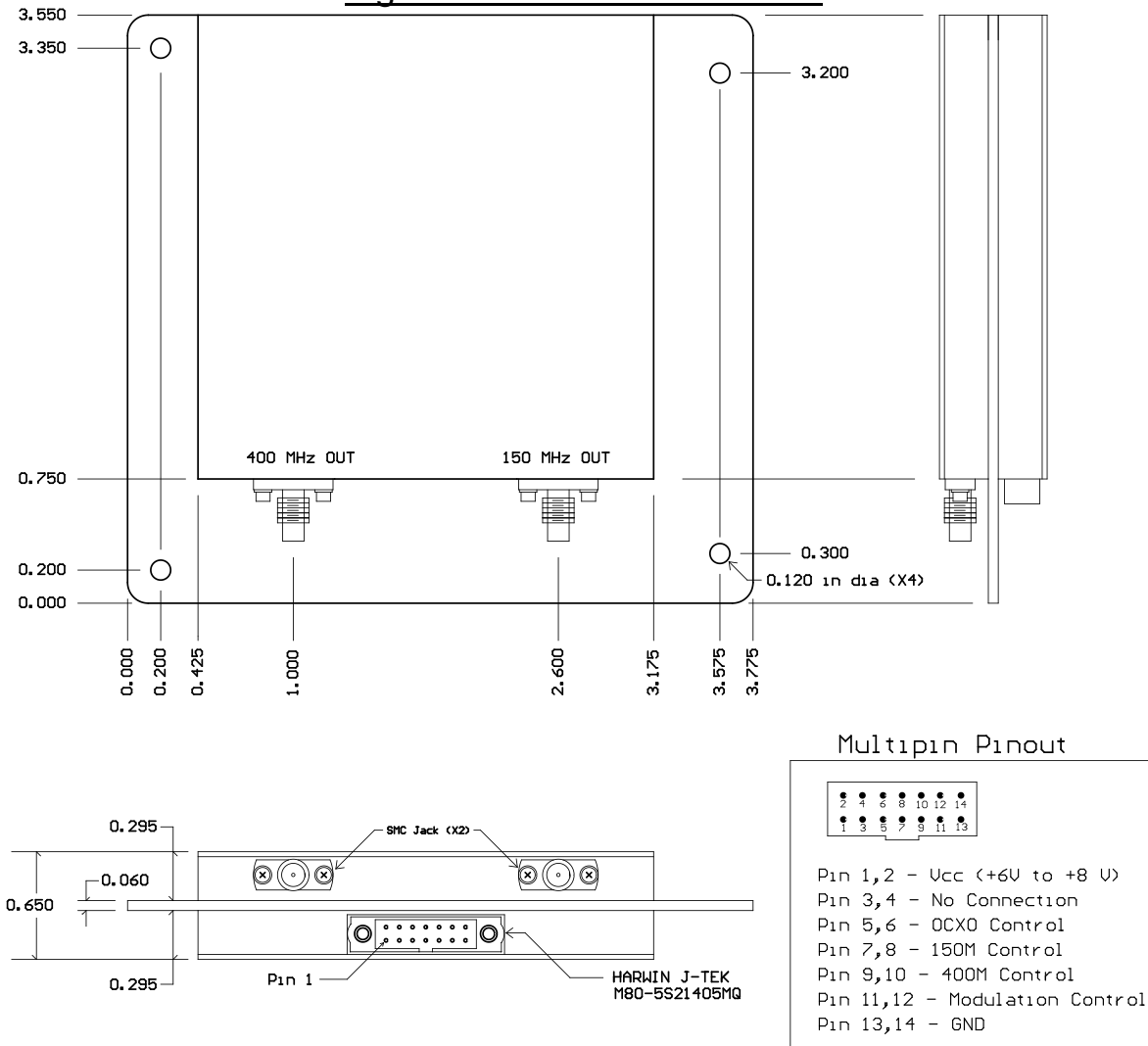
Para #	Description	Limit
1.0	Output Frequency	
1.1	RF1 Output	150.012 MHz
1.2	RF2 Output	400.032 MHz
2.0	Output Power RF1	+27.0 dBm min
	RF2	+27.0 dBm min
3.0	Frequency Accuracy (absolute)	+/- 0.25 PPM max
3.1	Frequency Stability (-20C to +60C)	+/- 0.25 PPM max
3.2	Aging (over 90 minutes)	+/- 0.10 PPB max
4.0	Phase Jitter	10 pS RMS max
5.0	Spurious	-40 dBc max
6.0	Harmonics	-30 dBc max
7.0	Modulation Type	PSK
7.1	Modulation Level (Fmod = 166.68 KHz)	+/- 60 Deg
8.0	RF Connectors	SMC, Jack
9.0	Impedance	50 Ohms
10.0	VSWR	1.5:1 max
11.0	DC Power and Control Connector	HARWIN 14 Pin J-TEK (M80-5S21405MQ)
12.0	Connections	See Table 1
13.0	Input Voltage	+6.00V min, +8.00V max
14.0	Input Current	600 mA typ (RF ON)
15.0	Weight	TBD Max (g)
16.0	Size	See Figure 1
17.0	Finish	Gold Iridite per MIL-C-5541E

TDF-1620 DUAL BAND BEACON

Table 1 - J1 DC/Control Interface pinout assignments

Pin #	Function	Level
1	Vcc IN	+6V to +8V
2	Vcc IN	+6V to +8V
3	No Connection	-
4	No Connection	-
5	OCXO Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
6	OCXO Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
7	150M Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
8	150M Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
9	400M Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
10	400M Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
11	Modulation Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
12	Modulation Control (0=OFF, +5V=ON)	0 to +5V (50K OHM Pulldown)
13	GROUND	0V
14	GROUND	0V

Figure 1 - Mechanical Outline



Syntech Microwave, Inc. 8 Rebel Road, Hudson, NH 03052 Ph: 603-880-9767 Fax: 603-821-5129