

Model SP6618 Low Spurious Fast Indirect Synthesizer

SP6618 LOW PHASE NOISE FAST INDIRECT SYNTHESIZER

Herley General Microwave Israel has developed a low Spurious Fast Indirect Synthesizer covering the frequency range of 6 to 18 GHz for ELINT and other applications. Other frequency bands can be supplied as well. This synthesizer was developed to replace YIG-based synthesizers as well to improve their switching time and reliability for airborne applications.

Fig. 1 is the basic block diagram of the Low Phase Noise Indirect Synthesizer.

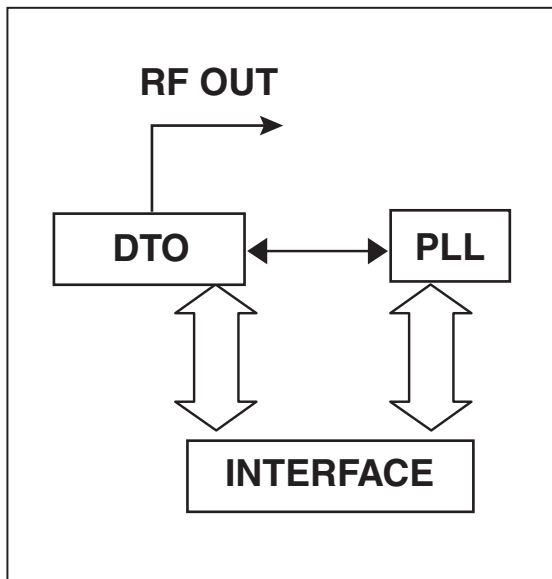


Fig. 1—Block Diagram

- **Low Spurious**
- **Wide Frequency Range**
- **High Reliability**
- **Replacement for YIG**



Synthesizer Model SP6618

SPECIAL ORDER PRODUCT
—CONSULT FACTORY BEFORE ORDERING—



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Low Spurious Fast Indirect Synthesizer

SP6618 LOW PHASE NOISE FAST INDIRECT SYNTHESIZER SPECIFICATIONS

PARAMETER		SPECIFICATION
1	FREQUENCY RANGE (GHz)	6 to 18
2	ACCURACY @25°C	As per reference crystal (<100 kHz typically)
3	OUTPUT POWER (dBm) min.	+10
4	OUTPUT POWER VARIATION OVER TEMPERATURE (dB)	±2.5
5	FREQUENCY SETTling (μsec)	15 typical
		25 max.
6	PHASE NOISE,	
6.1	@ 10 kHz Offset (dBc/Hz) max	-95
6.2	@ 100 kHz Offset (dBc/Hz) max	-95
6.4	@ 1 MHz Offset (dBc/Hz) max	-96
7	HARMONICS (dBc)	-20
8	SPURIOUS, max (dBc)	-60
9	STEP SIZE max (MHz)	1
10	EXTERNAL REFERENCE OSCILLATOR	
10.1	Frequency (MHz)	100
10.2	Power (dBm)	0 ±3
11	INTERNAL REFERENCE OSCILLATOR	option
12	OPERATING TEMPERATURE RANGE⁽¹⁾	-20 to +70°C

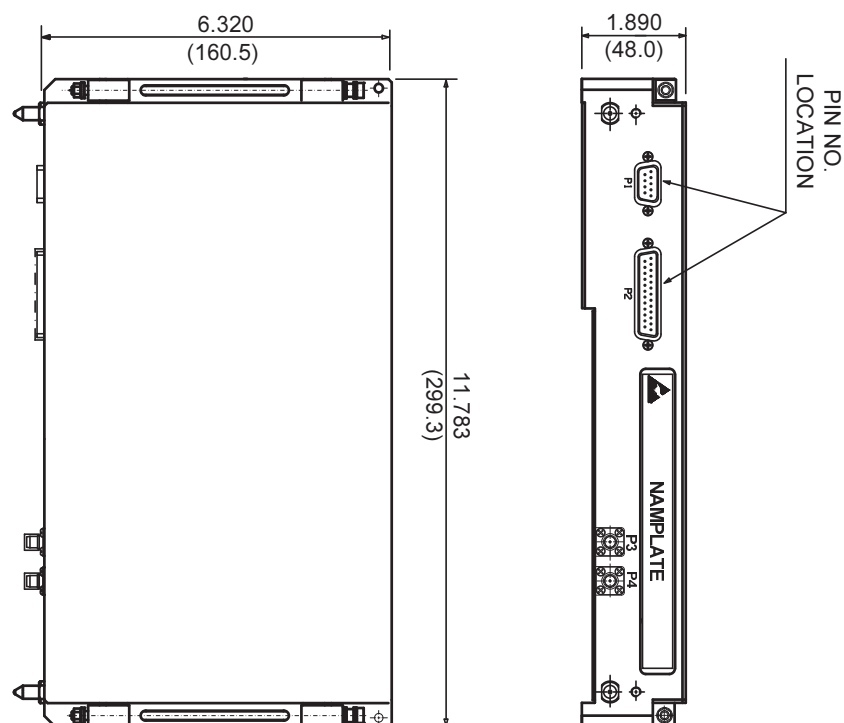
(1) Other operating temperatures – Option



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OUTLINE AND DIMENSIONS



Pin Assignment for Connector P2:			
Pin No.	Signal Name	Pin No.	Signal Name
1	Frequency Bit 0 (LSB)	15	Strobe
2	Frequency Bit 1	16	Power Indication
3	Frequency Bit 2	17	Lock Indication
4	Frequency Bit 3	18	Lock Indication
5	Frequency Bit 4	19	Spare
6	Frequency Bit 5	20	Return
7	Frequency Bit 6	21	For Factory Use
8	Frequency Bit 7	22	For Factory Use
9	Frequency Bit 8	23	Spare
10	Frequency Bit 9	24	Spare
11	Frequency Bit 10	25	+5V
12	Frequency Bit 11		
13	Frequency Bit 12		
14	Frequency Bit 13 (MSB)		

CONNECTORS DATA		
Port	Port Function	
P1	Supply Voltage Inputs	9 Pin D-Type plug
P2	Control Inputs/Outputs	25 Pin D-Type plug
P3	100 MHz External Reference Input	OSP Plug In
P4	Synthesizer Output 1	OSP Plug In

Pin Assignment for Connector P1:	
Pin No.	Signal Name
1	+28V
2	+15V
3	+15V
4	-15V
5	+12V
6	+28V
7	Return
8	-15V Return
9	+12V Return

