DX-170

Oven Controlled Crystal Oscillator

Features

- Ultra-High stability
- Excellent temperature stability
- SC-Cut crystal
- Previous Model: C4605
- Frequency Range: 5 MHZ to 20 MHZ

Applications

- CDMA2000 and UMTS base stations
- Test and Measurement equipment

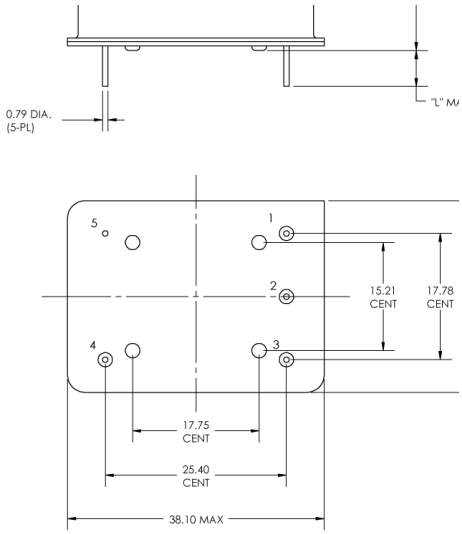
Performance Specifications

Frequency Stabilities[1] (SC-Cut Crystal)					
Parameter	Min	Typical	Max	Units	Condition
vs. operating temperature range (referenced to +25°C)	-0.4 -0.2 -0.4		+0.4 +0.2 +0.4	ppb ppb ppb	0 to +70°C 0 to +70°C -20 to +70°C
Initial tolerance vs. supply voltage change vs. load change vs. aging / 1 day vs. aging / 1 day vs. aging / 1 year	-100 -0.2 -0.2 -0.5 -0.2 -25		+100 +0.2 +0.2 +0.5 +0.2 +25	ppb ppb ppb ppb ppb ppb	at time of shipment, nominal EFC V_S ±5% Load ±5% after 72 hours of operation after 7 days of operation after 7 days of operation
Warm-up time			5	minutes	to ±10ppb of final frequency (1 hour reading) @ +25°C
Supply Voltage (Vs)					
Supply voltage	11.4	12.0	12.6	VDC	
Supply voltage	4.75	5.0	5.25	VDC	
Power Consumption			9	Watts	during warm-up
			3	Watts	steady state @ +25°C

Performance Specifications

RF Output						
Parameter	Min	Typical	Max	Units	Condition	
Signal [Option]	HCMOS					
Load			15 pF			
Signal Level (Vol)			0.5	VDC	15 pF Load, 12 V supply	
Signal Level (Vol)			0.3	VDC	15 pF Load, 5V supply	
Signal Level (Voh)	2.8			VDC	15 pF Load,12 V supply	
Signal Level (Voh)	4.5			VDC	15 pF Load, 5V supply	
Duty Cycle	45		55	%	@ (Voh-Vol)/2	
Signal [Standard]	Sinewave					
Load		50		Ohms		
Output Power	+5.0	+7.0	+9.0	dBm	50 Ohm load	
Harmonics			-30	dBc	50 Ohm load	
Frequency Tuning (EFC)						
Tuning Range	±0.25	±0.5	±0.75	ppm		
Linearity			20	%		
Tuning Slope	Positive					
Control Voltage Range	0.0	2.5	5.0	VDC		
Additional Parameters						
Phase Noise			-90 -120 -135 -140 -140	dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz	1 Hz 10 Hz 100 Hz 1 kHz 10 kHz	@ 10MHz
Weight			50	g		
Absolute Maximum Ratings						
supply voltage (Vs)			15 7	V V	with 12V supply with 5V supply	
Output Load			50 25	pF Ohm	with HCMOS signal with Sinewave signal	
Operable Temperature Range	-55		+85	°C		
Storage Temperature Range	-55		+125	°C		

Outline Drawing / Enclosure



Dimensions in inches (mm)

Type A		
Code	Height "H"	Pin Length "L"
0	19.00	5.00

Pin Connections	
1	Electronic Frequency Control Input (EFC)
2	No Connect
3	Supply Voltage Input (Vs)
4	RF Output
5	Ground (Case)

Ordering Information

DX - 170 0 - B A J - 400 1 - 10M0000000

- **Product Family**
  DX: DOCXO
- **Package**
  25x38mm
- **Height**
  0: A19.00mm
- **Supply Voltage**
  B: +12V
  D: +5V
- **RF Output Code**
  A: HCMOS
  E: Sinewave
- **Temperature Range**
  J: -20°C to +70°C
  T: 0°C to +70°C
- **Stability Code**
  400: ±0.4ppb
  200: ±0.2ppb
- **Frequency Control**
  1: ±0.25 to ±0.75ppm
- **Frequency**

Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

For Additional Information, Please Contact

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