Datasheet

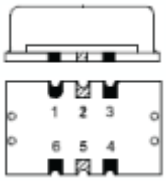
AXIS10LN

VCXO WITH VERY LOW PHASE NOISE

FEATURES

- SMD Package, size 14.4 x 9.5 x 6 mm.
- Very low Phase Noise till -162 dBc/Hz @ 1 MHz
- HCMOS output logic
- Frequency range : 50.00 to 165.00 MHz

14.4 x 9.5 x 6 mm max.



Parameter	min.	typ.	max.	Unit	Condition
Frequency range	50		165	MHz	
Standard frequencies				MHz	
Frequency stability				ppm	
Initial tolerance				ppm	
vs. operating temperature range			10 10 15	ppm ppm ppm	Option II = “070” Option II = “2070” Option II = “4085”
Operating temperature range	0 -20 -40		+70 +70 +85	°C °C °C	Option II = “070” Option II = “2070” Option II = “4085”
vs. supply voltage variation			± 3	ppm	V_S ± 5 %
vs. load change			± 3	ppm	Load ± 10 %
long term (aging) 1st year			± 3	ppm	@ 40°C
Aging following years			± 1	ppm	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 40 ± 25 ± 15			ppm ppm ppm	50 MHz … < 90 MHz 90 MHz … < 120 MHz 120 MHz … 165 MHz
EFC voltage V_C	0.25 0.15		4.75 3.15	V V	Option 1 = “50” (5 V) Option 1 = “33” (3.3 V)
EFC slope (Df / DV_C)		positive			
Linearity		± 10		%	
EFC input impedance	100			kΩ	
RF output					
Signal waveform		HCMOS			
Load		15		pF	
Rise & decay time			3	ns	20% to 80%
Symmetry (duty cycle)	40	45…55	60	%	@ V_S/2
Sub-harmonics		None			
Phase noise (@ 60 MHz) Note 2		-132 -155 -160 -162		dBc/Hz dBc/Hz dBc/Hz dBc/Hz	@ 1 kHz @ 10 kHz @ 100 kHz @ 1 MHz
Phase noise floor		-160	-155	dBc/Hz	
Phase jitter (RMS)		0.5	1	ps	12 kHz ~ 80 MHz
Supply voltage V_S	4.75 3.13	5.0 3.3	5.25 3.47	V V	Option 1 = “50” (5 V) Option 1 = “33” (3.3 V)
Current consumption (Note 3)			20…30 25…50	mA mA	Option 1 = “50” (5 V) Option 1 = “33” (3.3 V)
Operable temperature range	-45		+90	°C	
Storage temperature range	-55		+95	°C	
Enclosure (see drawing)		14.4x9.5x6 max		mm	IEC 61837 CO 27
Weight			3	gram	
Packing		Tape & reel			IEC 60286-3

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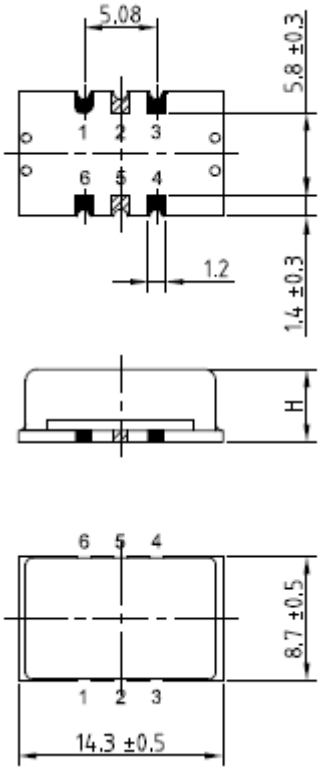
Notes:

1. Terminology and test conditions are according to IEC standard IEC60679-1, unless otherwise stated
2. Phase noise for other frequencies on request
3. Current consumption depends of frequency

Ordering Code

Model (Specification)	Option 1	Option 2	Frequency [MHz]
	Supply	Temperature Range	
AXIS10LN	50	070	60.000

Enclosure drawing



Pin connections

Pin #	Symbol	Function
1	VC	Control Voltage (EFC)
2	N.C.	No connection
3	GND	Ground
4	RF OUT	RF Output (see table)
6	Vs	Supply Voltage

Environmental conditions

Test	*IEC 60068* Part ...	IEC 60679-1 clause ...	Test conditions
Visual inspection, dimensions		4.3	Enclosure styles as in IEC 60679-3 or 61837, if applicable
Solderability Resistance to soldering heat	2-20 2-58	4.6.3	Test Ta (235 ± 5)°C Method 1 Test Tb Method 1A, 5s
Shock*	2-27	4.6.8	Test Ea, 3 x per axes 100g, 6 ms half-sine pulse
Vibration, sinusoidal*	2-6	4.6.7	Test Fc, 30 min per axes, 10 Hz - 55 Hz 0,75mm; 55 Hz - 2 kHz, 10g
Endurance tests - ageing - extended aging		 4.7.1 4.7.2	 30 days @ 85°C, OCXO @25°C 1000h, 2000h, 8000h @85°C

Rev. 2.1 Date : 01-10-2012