

Datasheet

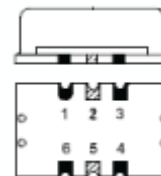
AXIS10LN

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	ppm	Option II = "070"
			10	ppm	Option II = "2070"
			15	ppm	Option II = "4085"
Operating temperature range	0		+70	°C	Option II = "070"
	-20		+70	°C	Option II = "2070"
	-40		+85	°C	Option II = "4085"
vs. supply voltage variation			± 3	ppm	V _s ± 5 %
vs. load change			± 3	ppm	Load ± 10 %
long term (aging) 1 st year			± 3	ppm	@ 40°C
Aging following years			± 1	ppm	@ 40°C
Frequency adjustment range					
Electronic Frequency Control (EFC)	± 40			ppm	50 MHz ... < 90 MHz
	± 25			ppm	90 MHz ... < 120 MHz
	± 15			ppm	120 MHz ... 165 MHz
EFC voltage V _C	0.25		4.75	V	Option 1 = "50" (5 V)
	0.15		3.15	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)		-132		dBc/Hz	@ 1 kHz
		-155		dBc/Hz	@ 10 kHz
Note 2		-160		dBc/Hz	@ 100 kHz
		-162		dBc/Hz	@ 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	5.0	5.25	V	Option 1 = "50" (5 V)
	3.13	3.3	3.47	V	Option 1 = "33" (3.3 V)
Current consumption (Note 3)			20...30	mA	Option 1 = "50" (5 V)
			25...50	mA	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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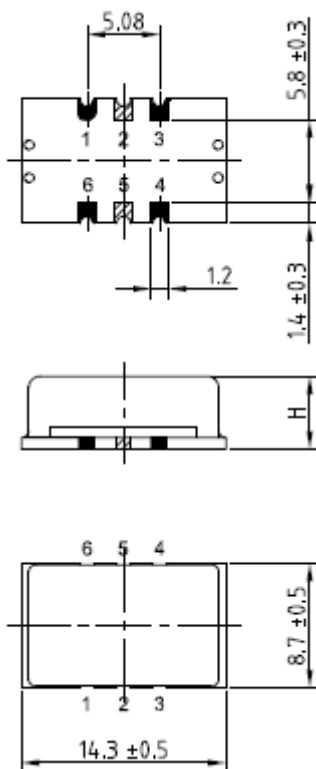
Notes:

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	2-20	4.6.3	Test Ta (235 ± 5)°C Method 1
Resistance to soldering heat	2-58		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		4.7.1	30 days @ 85°C, OCXO @25°C
- extended aging		4.7.2	1000h, 2000h, 8000h @85°C

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