

Datasheet

FBO2736L

OCXO WITH LOW PHASE NOISE

FEATURES

- High Frequency Stability
- Wide Temperature Range
- Fast Warming-up
- Low Phase Noise

Applications

- Base Stations
- Instrumentations
- Synthesizer
- Medical Electronics
- Others



Parameter	min.	typ.	max.	Unit	Condition	
Nominal frequency		10.000		MHz		
Frequency Range		10 to 40		MHz		
Frequency stability						
Initial Frequency Tolerance		± 10		ppb	At shipment, nominal EFC	
Short-term Stability (1S)	-	-	5×10 ⁻¹¹		Test after 15 Min.	
Warm-Up Time	-	-	10	Min	At +25°C, with accuracy of ±5ppb	
Frequency Stability Vs. Temperature		±10, ±5, ±3, ±1		ppb	-20°C ~ +70°C	
		±10, ±5, ±3, ±1		ppb	-40°C ~ +70°C	
		±10, ±5		ppb	-40°C ~ +85°C	
Supply Sensitivity		±3			Vcc± 5%	
Load Sensitivity		±3		ppb	Load±5%	
Aging per Day		±0.5			After 30 days of operation	
Aging per Year		±50			After 30 days of operation	
SSB Phase Noise @100MHz	-	-	-120		Offset 10Hz @ +25°C	
	-	-	-140		Offset 100Hz @ +25°C	
	-155	-	-145	dBc/Hz	Offset 1kHz @ +25°C	
	-	-	-158		Offset 10kHz @ +25°C	
	-	-	-160		Offset 100kHz @ +25°C	
RF output						
Sine Wave	Output Level	7	-	-	dBm	
	Harmonics	-	-	-35	dBc	
	Spurious	-	-	-70	dBc	
	Load	-	50	-	Ω	
Square HCMOS	V _{OH}	2.4	-	-	V	@HCMOS Output, Load=15pf
	V _{OL}	-	-	0.4	V	@HCMOS Output, Load=15pf
	Duty Cycle	45	-	55	%	@(V _{OH} -V _{OL})/2
	Rise/Fall Edge	-	-	6	ns	@HCMOS Output, Load=15pf
	Load	-	-	15	pf	
Electronic Frequency Control						
Control Voltage Range		0~5		Vdc		
Frequency Turning Range	±300	±400	±500	ppb		
Turning Slope	Positive					

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Environmental Conditions

Operating Temperature Range	-20°C~+70°C
	-40°C~+70°C
	-40°C~+85°C

Maximum Ratings

Parameter	Symbol	Rating
Storage Temperature Range	Ts	-55°C~+125°C
Supply Voltage	Vdd	-0.3V/15V
Control Voltage	Vcon	0~5V
ESD, HBM/CDM/MM		3KV/1KV/200V

Reliability

Parameter	Condition
Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESDD22-B102-C
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC

Power Supply

Parameter	Min.	Typ.	Max.	Unit	Condition
Supply Voltage	-	5	-	Vdc	
	-	12	-	Vdc	
Power Consumption	-	-	4.5	W	During Warming-up
	-	-	1.5	W	Steady at +25°C & still air

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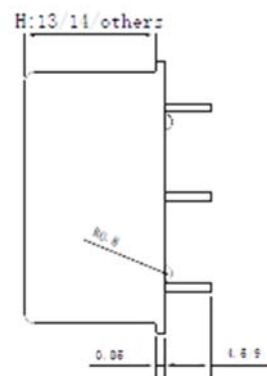
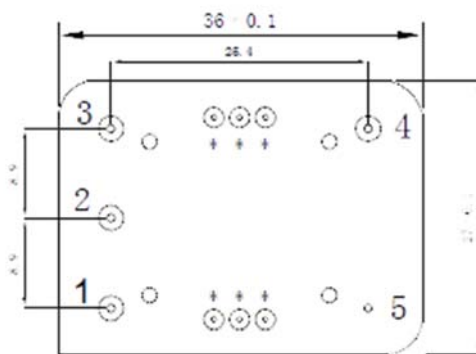
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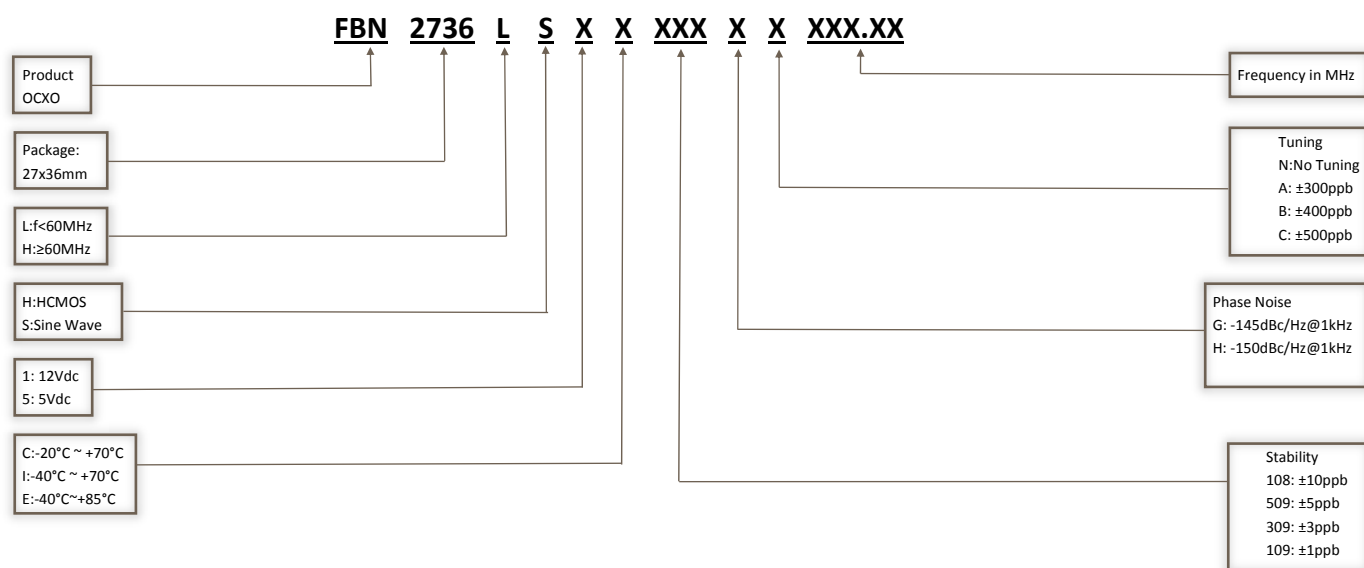
Outline Dimension & Pin Connections

Pin Connections		
Pin1	Vcon	Control Voltage
Pin2	NC	NC
Pin3	Vdd	Power Supply
Pin4	Fout	Output
Pin5	GND	Ground, Case

Note: The pin with '*' are for factory test.



Ordering Guide



Example: FBN2736LS1C107MN10.23