



Dynamic Engineers Inc.

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## OCXO3627MC-40MHz-A-V

High Stability 40MHz OCXO\_Oven Controlled  
Crystal Oscillator

### Features and Benefits

Frequency range: 40MHz  
Supply voltage: 3.3V  
Steady current: 450mA Max  
Output waveform: HCMOS  
Frequency stability vs. operating temperature:  $\pm 2$ ppb  
Aging:  $\pm 0.02$ ppm per year  
Operating temperature:  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
Size: 35.4x26.7x12.1mm  
Package type: Through hole

### Typical Applications

Wireless Communications  
Test equipment  
Synthesizers

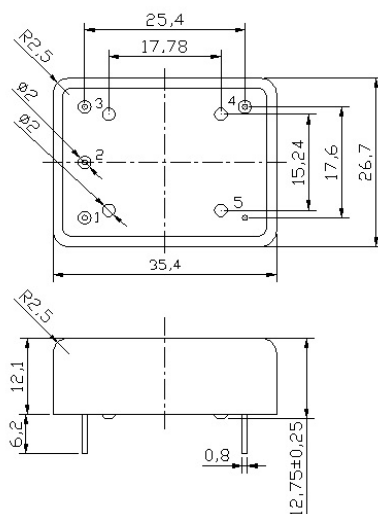
### Description

OCXO3627MC-40MHz-A-V offers high frequency stability, good long-term aging and low phase noise, all in a compact package to suit the different communication needs.

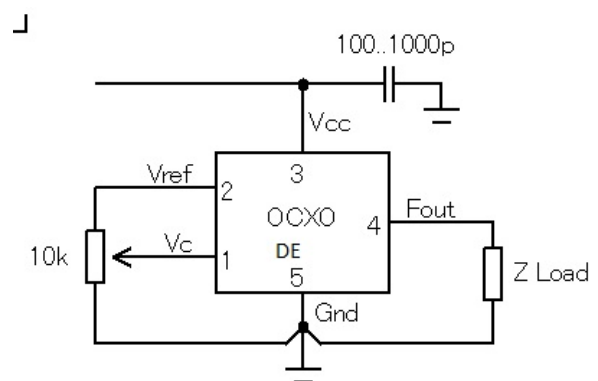
### Mechanical Drawing & Pin Connections

Drawing No: MD250005-1

#### Physical dimensions



#### Schematic connections





## Specifications

Oscillator Specification	Sym	Condition	Value			Unit	Note
			Min.	Typ.	Max.		
Operational Frequency	f <sub>0</sub>			40		MHz	
RF Output							
Signal Waveform			HCMOS 2.8V				
High level			2.4			V	
Low level					0.4	V	
Sub-harmonics		f <sub>SH</sub> =f <sub>0</sub> ±(n*f <sub>0</sub> /3) n=1,2,3...			-40	dBc	
Load			10			kohm	
Load					8	pF	
Rise/Fall time		10%-90%			5	ns	
Power Supply							
Reference Voltage	Vref		2.7	2.8	2.9	V	
Supply Voltage	Vcc		3.15	3.3	3.45	V	
Warm-up current		V <sub>CC</sub> =3.3V	850		1100	mA	
Continuous current		at +25°C, V <sub>CC</sub> =3.3V			450	mA	
Frequency warm-up time		to df/f=1e-7 at +25°C ref at 15 min			180	sec	
Frequency Adjustment Range							
Electronic Frequency Control (EFC)	(f <sub>L</sub> -f)/f	Vc=0 V			-0.3	ppm	note
	(f-f)/f	Vc=V <sub>c0</sub>		0		ppm	
	(f <sub>H</sub> -f)/f	Vc=Vref	+0.3			ppm	note
EFC voltage	Vc		0		2.8	V	
Input impedance	Rin			11		Kohm	
Preset control voltage	V <sub>C0</sub>	disconnected Vc pin	1.1	1.4	1.7	V	
Output resistance of Vref				91		ohm	
Frequency Stability							
Versus Operating Temperature Range		ref +25°C			±2	ppb	note
Initial Tolerance @+25°C	(f-f <sub>0</sub> )/f <sub>0</sub>	V <sub>c</sub> = V <sub>C0</sub>	-0.1		+0.1	ppm	note
Versus supply voltage		ref V <sub>CC</sub> typ.			±1	ppb	
SSB Phase noise (Static. Values are for reference only and are subject to change.)		10Hz		-115		dBc/Hz	
		100Hz		-135			
		1KHz		-145			
		10KHz		-150			
		100KHz		-155			
Aging Per Day		After 30 days of operation			±0.2	ppb	
Aging 1 <sup>st</sup> Year					±0.02	ppm	
Maximum ratings, environmental, mechanical conditions							
Operating temperature range	-40°C to +85°C						
Storage temperature range	-60°C to +90°C						
Power voltage	-0.5 to 4.0 V						
Control voltage	-1.0 to 4.0 V						
Air flow velocity	0.5 m/s maximum						
Humidity	Hermetically sealed						
Mechanical shock	Per MIL-STD-202, 30G, 11ms						
Vibration	Per MIL-STD-202, 5G to 500Hz						
Soldering conditions	Hand solder only – not reflow compatible 260°C 10s (on pins)						
Washing conditions	Washing with water or alcohol based detergent allowed only with final enough drying stage						

Note: Included in the test data