FREQUENCY ELECTRONICS, INC.
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MODEL FE-162A

- ***High stability vs. temperature-up to*** $\pm 3x10^{-10}$
- ***Low aging***
- ***Low phase noise***
- ***Ideal for GPS, CDMA, 3G applications***

HIGH STABILITY, LOW AGING, OVEN CONTROLLED CRYSTAL OSCILLATOR

MODEL FE-162A SPECIFICATIONS

MODEL NUMBER	FE-162A		UNITS
STANDARD FREQUENCY*	10.0		MHz
Frequency Range	5 to 16.386		MHz
Output Signal Into 50 ohms (HCMOS also available)	>0.0		dBm
ORDER DESIGNATOR X Operating Temperature Range	Frequency stability over temperature ORDER DESIGNATOR XX		
	03	1	2
E (-10°C to +70°C)	$\pm 3x10^{-10}$	$\pm 1x10^{-9}$	$\pm 2x10^{-9}$
H (-40°C to +70°C)	03 $\pm 3x10^{-10}$	1 $\pm 1x10^{-9}$	2 $\pm 2x10^{-9}$
Frequency stability versus supply voltage 12V ± 5%	$<\pm 3x10^{-10}$		
Frequency stability versus Load 50 Ohm ± 10%	$<\pm 3x10^{-10}$		
Long term stability	$<\pm 0.2x10^{-9}$		per day after 30 days
	$<\pm 50x10^{-9}$		per year
	$<\pm 200x10^{-9}$		per 10year

Phase Noise (for 10 MHz) typical:		
1Hz	<-100	dBc/Hz
10Hz	<-125	dBc/Hz
100Hz	<-145	dBc/Hz
1000Hz	<-150	dBc/Hz
10000Hz	<-155	dBc/Hz
Harmonic suppression	>30	dB
Short term stability (Allan Variance) for 1s	$<5x10^{-12}$ typical	
Warm-up time:	< 5 within $\pm 5x10^{-8}$	min
Frequency control range	$>\pm 3x10^{-7}$	
Voltage control range	0 to +5(+ slope)	V
Supply voltage ±5%	12	V
Peak current consumption after switch on	<0.5	A
Current consumption at steady state	<180	mA
Package outline	Y	
	2.02X1.626X0.98	in
	51.3X41.3X25	mm
Shock	50	g
Vibration	10-200Hz,5g	

2002-07-26-Rev2-FEI

Ordering Information

FORMAT: Model number, operating temperature, temperature coefficient, package, output format, and frequency.

EXAMPLE: FE-162A-E-03-Y-[Sine]-10.0 MHz

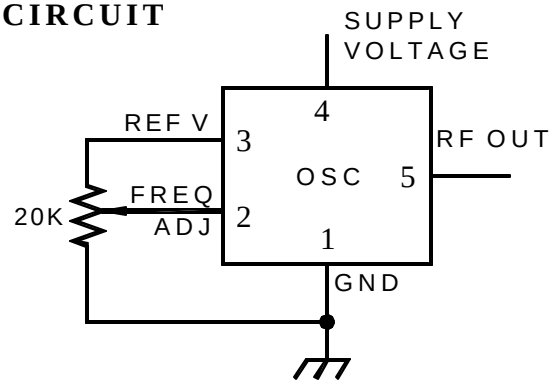
E (-10°C to +70°C), **03** (frequency stability over temperature of $\pm 3x10^{-10}$), **Y** (package), **Sine** (output format), **10.0 MHz** (frequency)

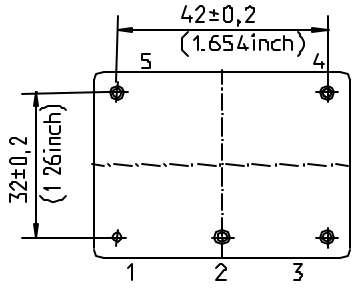
EXAMPLE: FE-162A-E-03-Y-[HCMOS]-10.0 MHz

HCMOS – for oscillators with HCMOS output

Consult factory for minimum order requirements
*Special Frequencies have minimum orders

CIRCUIT





BOTTOM VIEW
Y PACKAGE