

FREQUENCY ELECTRONICS, INC.

55 Charles Lindbergh Blvd. Mitchell Field, NY 11553
 北京建普奇正技术发展有限公司
 Tel:86-10-68118120
 Fax: 86-10- 68118130

MODEL FE-180

- High stability vs. temperature-up to $\pm 1 \times 10^{-10}$
- Low aging
- Low phase noise
- Ideal for GPS, CDMA, 3G applications

HIGH STABILITY, LOW AGING, OVEN CONTROLLED CRYSTAL OSCILLATOR

MODEL FE-180 SPECIFICATIONS

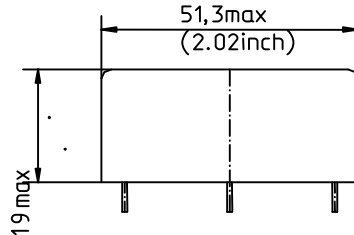
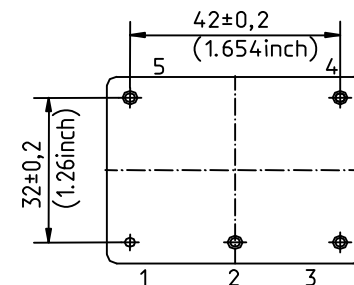
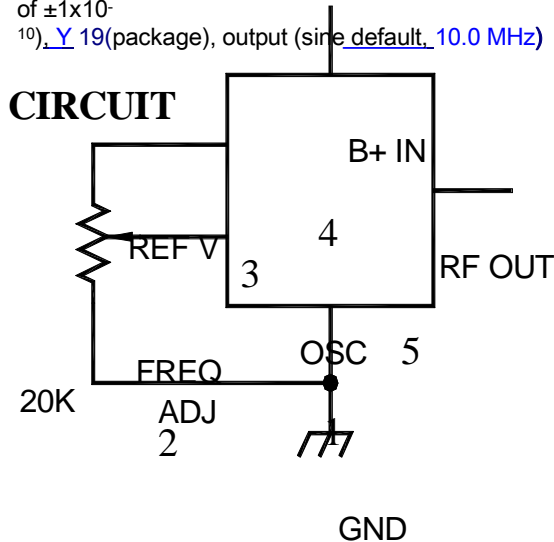
MODEL NUMBER STANDARD	FE-180 10.0	UNITS MHz
FREQUENCY* Frequency Range	5 to 16.386	MHz
Output Signal Into 50 ohms	>0.0	dBm
ORDER DESIGNATOR X Operating	Frequency stability over temperature ORDER DESIGNATOR XX	
Temperature Range E (-20°C to +70°C)	<u>01</u> $\pm 1 \times 10^{-10}$	<u>2</u> $\pm 2 \times 10^{-10}$
H (-40°C to +70°C)	<u>01</u> $\pm 1 \times 10^{-10}$	<u>2</u> $\pm 2 \times 10^{-9}$
Frequency stability versus supply voltage 12V \pm 5%	$< \pm 1 \times 10^{-10}$	
Frequency stability versus Load 50 Ohm \pm 10%	$< \pm 1 \times 10^{-10}$	
Long term stability	$< \pm 10 \times 10^{-9}$ per year	

Phase Noise (for 10 MHz) typical:		
1Hz	<-100	dBc/Hz
10Hz	<-125	dBc/Hz
100Hz	<-140	dBc/Hz
1000Hz	<-145	dBc/Hz
10000Hz	<-150	dBc/Hz
Harmonic suppression	>30	dB
Short term stability (Allan Variance) for 1s	$< 2 \times 10^{-12}$ typical	
Warm-up time:	< 5 within $\pm 1 \times 10^{-8}$	min
Frequency control range	$> \pm 3 \times 10^{-7}$	
Voltage control range	0 to +5(+ slope)	V
Supply voltage $\pm 5\%$	12	V
Peak current consumption after switch on	<0.5	A
Current consumption at steady state	<250	mA
Package outline	Y19 Y17 Z19	
Y19(17)	51.3X51.3X19(17)	mm
Z19	51.3X41.3X19	mm
Shock	150	g
Vibration	10-200Hz,5g	

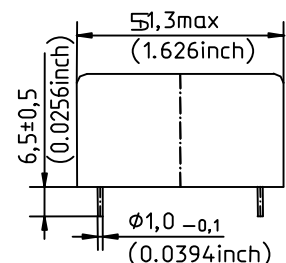
Ordering Information

FORMAT: Model #, operating temperature, temp coef, aging, package, output format, and frequency.

EXAMPLE: FE-180-E01-Y19-10.0 MHz for sine output
 E (-20°C to +70°C), 01(Frequency stability over temperature of $\pm 1 \times 10^{-10}$), Y 19(package), output (sine default, 10.0 MHz)



BOTTOM VIEW
 IEWY PA
 CKAGE



2002-12-06-Rev1-FE1

EXAMPLE: FE-180-E01-Y19-[HCMOS] 10.0 MHz

Default output – Sine Wave output typically 0.0 dBm

[HCMOS] – for oscillators with HCMOS output

Consult factory for minimum order requirements

*Special Frequencies have minimum orders

