

## OCXO SERIES 9400

### ■ FEATURES

Excellent frequency stability  
 High Frequency up to 100MHz  
 Low Profile

### APPLICATIONS

- TELECOM  
 - BASE STATION  
 - INSTRUMENTATION

### ■ ELECTRICAL PERFORMANCE

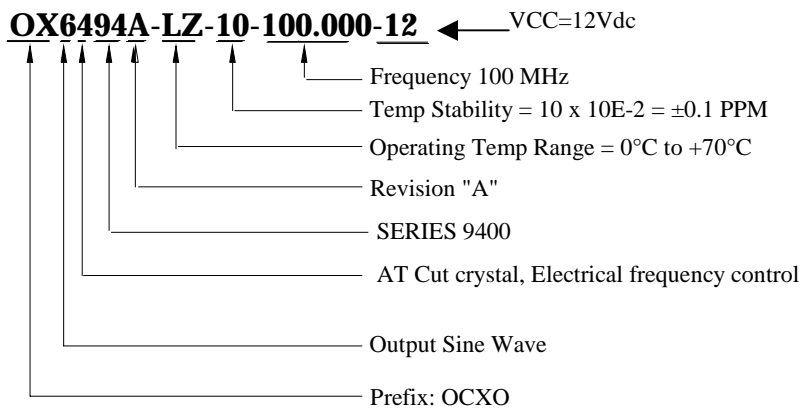
| PARAMETER   | OCXO SERIES 9400   |   |
|---|--|---|
|   | AT CUT CRYSTAL   | SC CUT CRYSTAL  |
| Supply voltage, nom.  | 12V, 5V, 3.3V $\pm 5\%$ Standard   |   |
| Power dissipation steady state  | 2 Watt Max.  |   |
| Heat up power   | 5 Watt Max.  |   |
| Heat up time.   | 5 min Max  |   |
| Frequency range   | 10 To 100MHz Standard  |   |
| Frequency Adjustment:<br>Electrical (0 to 5V)<br>Electrical (0 to 10V)  | $\pm 10$ PPM Min<br>$\pm 15$ PPM Min   | $\pm 0.7$ PPM Min<br>$\pm 1$ PPM Min  |
| Freq. stability vs. temperature<br>LX: 0°C to 60°C<br>FZ: -30°C to 70°C | $\pm 0.05$ PPM<br>$\pm 0.15$ PPM   | $\pm 0.010$ PPM<br>$\pm 0.020$ PPM  |
|   | (Standard, contact factory for different temp ranges and stabilities)  |   |
| Freq. stability vs. supply changes                                      | $\pm 0.01$ PPM Max for $\pm 5\%$ Change  | $\pm 0.005$ PPM Max for $\pm 5\%$ Change  |
| Freq. stability vs. load changes  | $\pm 0.005$ PPM Max for $\pm 5\%$ Change   | $\pm 0.002$ PPM Max for $\pm 5\%$ Change  |
| Long term stability (Aging)   | $\pm 0.5$ PPM Max for 1 Years<br>$\pm 0.005$ PPM/Day Max.  | $\pm 0.1$ PPM Max for 1 Years<br>$\pm 0.002$ PPM/Day Max.   |
| Output  | HCMOS/TTL/Sine 0 to +10dBm   |   |
| Harmonics, Sub Harmonics  | -30dBc(Sine Output)  |   |
| Spurious  | -75dBc(Sine Output)  |   |
| Duty cycle  | 40/60% to 60/40%(HCMOS)  |   |
| Rise / fall time  | 10nS Max. (HCMOS, 10%~90%Vout, 90%~10%Vout)  |   |
| Short term Stability (10MHz)  | 1 E-10 /Sec  | 5 E-11 /Sec   |
| Phase Noise typical under static conditions<br>(Sine Output 10MHZ)      | Offset      Phase Noise<br>10Hz      -95 dBc/Hz<br>100Hz     -125 dBc/Hz<br>1000Hz   -135 dBc/Hz<br>10000Hz  -150 dBc/Hz | Offset      Phase Noise<br>10Hz      -115 dBc/Hz<br>100Hz     -135 dBc/Hz<br>1000Hz   -145 dBc/Hz<br>10000Hz  -150 dBc/Hz |

Note: All Typical parameters for a 10MHz output and 5V Supply, for different frequencies consult factory

## ■ HOW TO ORDER (PART NUMBER)

| Prefix | Output Type  | Cut Type  | Series   | Revision | Temperature Range   | Stability  | Frequency | Supply Voltage                      |
|--------|--|---|----------|----------|---|--|-----------|-------------------------------------|
| OX     | 1:TTL<br>2:HCMOS<br>3:ACMOS<br>4:LVC MOS<br>6:SINE | 0:AT (No Vcontrol )<br>1: SC (No Vcontrol )<br>4: AT (Elect Vcontrol)<br>5: SC (Elect Vcontrol) | 94: 9400 | A        | First letter Lowest Temperature,<br>Second letter Highest Temperature:<br>From A=-55°C to Z=+70°C, Then:<br>1=+75°C, 2=+80°C,<br>3=+85°C... in 5°C steps Example:<br>LZ: +0°C to +70°C<br>LX: +0°C to +60°C<br>FZ: -30°C to +70°C<br>D3: -40°C to +85°C | Value x 10E-2 in PPM<br><br>Example<br><br>28=<br>0.28PPM<br><br>10=<br>0.1PPM | In MHZ    | 3.3; 3.3V<br><br>5: 5.0V<br>12; 12V |

Example:



## ■ MECHANICAL SPECIFICATION

