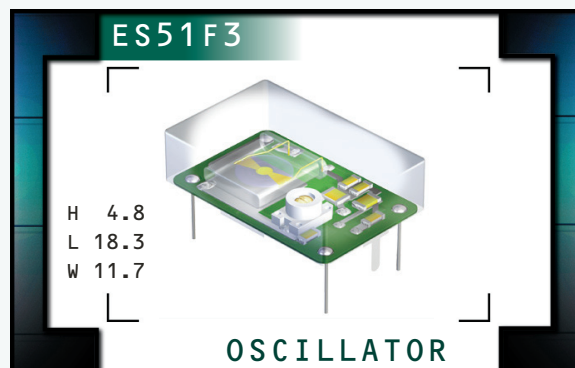


ES51F3 Series

- Temperature Compensated Crystal Oscillator (TCXO)
- Clipped Sinewave Output
- 5.0V Supply Voltage
- Stability to 1.5ppm
- External voltage control option available



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		9.600MHz to 44.736MHz
Operating Temperature Range		See Table 1
Storage Temperature Range		-40°C to 85°C
Supply Voltage (V_{DD})		5.0V _{DC} ±5%
Input Current	9.600MHz to 20.000MHz	1.5mA Maximum
	20.001MHz to 29.999MHz	2.0mA Maximum
	30.000MHz to 44.736MHz	3.0mA Maximum
Frequency Stability	vs. Operating Temperature Range	See Table 1
	vs. Input Voltage (V_{DD} ±5%)	±0.3ppm Maximum
	vs. Load (±2kΩ // ±2pF)	±0.2ppm Maximum
Aging (at 25°C)		±1ppm / year Maximum
Output Voltage		1.0V _{p-p} Minimum
Load Drive Capability		10kOhms//10pF
Internal Trim (Top of Can)		±3ppm Minimum
Control Voltage (External)		2.5V _{DC} ±2.0V _{DC} , Positive Transfer Characteristic
Frequency Deviation	Referenced to F_0 at $V_C = 2.5V_{DC}$; $V_{DD} = 5.0V_{DC}$	±7ppm Minimum, ±20ppm Maximum
Input Impedance		10kOhms Typical
Modulation Bandwidth	Measured at -3dB, $V_C = 2.5V_{DC}$	10kHz Minimum
Typical Phase Noise	at 10Hz Offset	-70dBc/Hz
	at 100Hz Offset	-100dBc/Hz
	at 1kHz Offset	-130dBc/Hz
	at 10kHz Offset	-140dBc/Hz
	at 100kHz Offset	-145dBc/Hz

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	ES51F3	14-PIN DIP	5.0V	OS1X	01/04

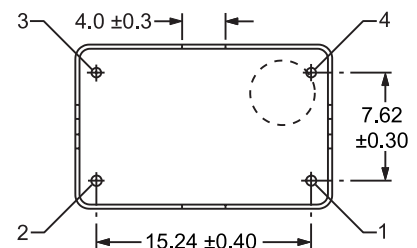
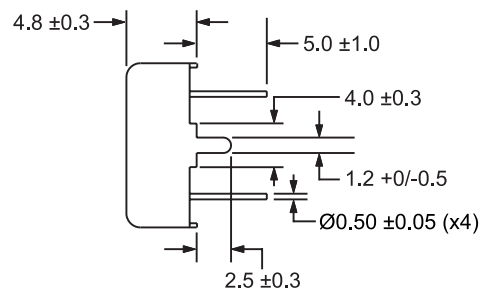
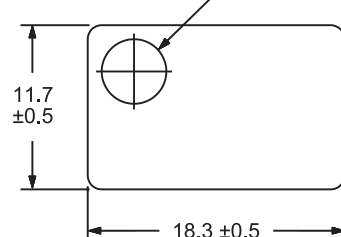
PART NUMBERING GUIDE

ES51F3 A 15 V - 12.800M**OPERATING TEMP. RANGE**
One Letter Code Per Table 1**FREQUENCY STABILITY**
Two Digit Code Per Table 1**FREQUENCY****EXTERNAL TRIM**N=None (No Connection on Pin 1)
V=Voltage Control on Pin 1

TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability			
		X = Available from 9.6MHz to 32.768MHz Y = Available at any Frequency			
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm
0°C to +50°C	A	Y	Y	Y	Y
0°C to 70°C	B	X	Y	Y	Y
-20°C to +70°C	C	X	Y	Y	Y
-30°C to +75°C	D		X	Y	Y
-40°C to +85°C	E			X	Y

NOTES

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERSInternal Trim Access
Hole $\varnothing 3.5 \pm 0.5$ 

Pin 1: Voltage Control or No Connect
 Pin 2: Case Ground
 Pin 3: Output
 Pin 4: Supply Voltage

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
 Gross Leak Test
 Mechanical Shock
 Vibration
 Lead Integrity
 Solderability
 Temperature Cycling
 Resistance to Soldering Heat
 Resistance to Solvents

Specification

MIL-STD-883, Method 1014, Condition A
 MIL-STD-883, Method 1014, Condition C
 MIL-STD-202, Method 213, Condition C
 MIL-STD-883, Method 2007, Condition A
 MIL-STD-883, Method 2004
 MIL-STD-883, Method 2002
 MIL-STD-883, Method 1010
 MIL-STD-883, Method 210
 MIL-STD-883, Method 215

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M

M=MHz

Frequency (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ

Week of Year

Last Digit of Year

Ecliptek Manufacturing Identifier

Note: Pin 1 shall be designated with a dot

MANUFACTURER
ECLIPTEK CORP.CATEGORY
OSCILLATORSERIES
ES51F3PACKAGE
14 pin DIPVOLTAGE
5.0VCLASS
OS1XREV. DATE
01/04