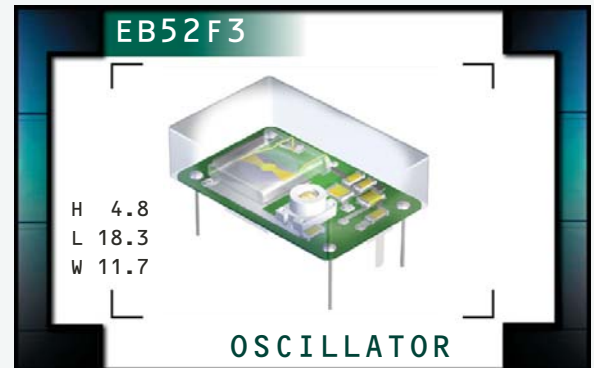


EB52F3 Series

- Temperature Compensated Crystal Oscillators (TCX0)
- LVCMOS Output
- +3.3V Supply Voltage
- Internal Mechanical Trim Function
- External Voltage Control Option
- 14 pin DIP Metal Package



NOTES

ELECTRICAL SPECIFICATIONS

Frequency Range		1.544MHz to 44.736MHz
Operating Temperature Range		See Table 1
Storage Temperature Range		-40°C to 85°C
Supply Voltage (V_{DD})		3.3V _{DC} ±5%
Input Current	1.544MHz to 20.000MHz	10mA Maximum
	20.001MHz to 44.736MHz	20mA Maximum
Frequency Stability	vs. Operating Temperature Range	See Table 1
	vs. Input Voltage (V_{DD} ±5%)	±0.3ppm Maximum
	vs. Load (±2pF)	±0.2ppm Maximum
Aging (at 25°C)		±1ppm / year Maximum
Output Voltage Logic High (V_{OH})		90% of V_{DD} Minimum
Output Voltage Logic Low (V_{OL})		10% of V_{DD} Maximum
Rise Time / Fall Time		20% to 80% of Waveform 10 nSeconds Maximum
Duty Cycle		at 50% of Waveform 50 ±10(%)
Load Drive Capability		15pF Maximum
Internal Trim (Top of Can)		±3ppm Minimum
Control Voltage (External)		1.65V _{DC} ±1.35V _{DC} , Positive Transfer Characteristic
Frequency Deviation		Referenced to F_0 at $V_C = 1.65V_{DC}$; $V_{DD} = 3.3V_{DC}$ ±7ppm Minimum, ±20ppm Maximum
Input Impedance		10kOhms Typical
Modulation Bandwidth		Measured at -3dB, $V_C = 1.65V_{DC}$ 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	EB52F3	14-PIN DIP	3.3V	OS1W	10/06

PART NUMBERING GUIDE

EB52F3 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

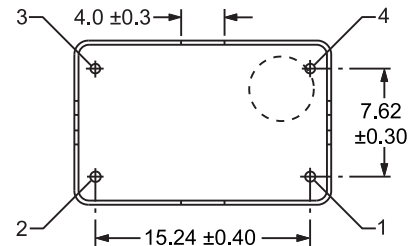
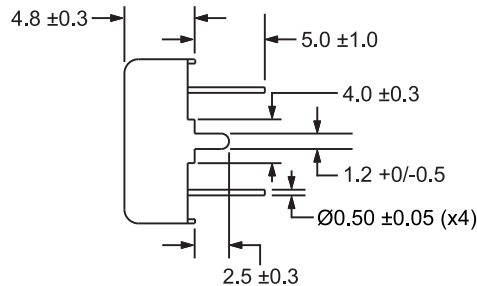
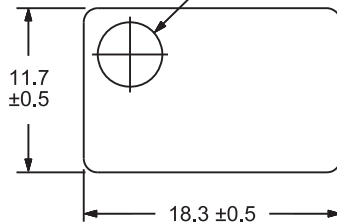
TABLE 1: PART NUMBERING CODES

Operating Temperature Range	Code	Frequency Stability			
		X = Available from 1.544MHz to 32.768MHz Y = Available at any Frequency			
		±1.5ppm	±2.0ppm	±3.0ppm	±5.0ppm
		15	20	30	50
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 MILLIMETERS

Internal 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
Lead Integrity
Mechanical Shock
Resistance to Soldering Heat
Resistance to Solvents
Solderability
Temperature Cycling
Vibration

Specification

MIL-STD-883, Method 1014, Condition A (Internal Crystal Only)
MIL-STD-883, Method 1014, Condition C (Internal Crystal Only)
MIL-STD-883, Method 2004
MIL-STD-202, Method 213 Condition C
MIL-STD-202, Method 210
MIL-STD-202, Method 215
MIL-STD-883, Method 2003
MIL-STD-883, Method 1010
MIL-STD-883, Method 2007 Condition A

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
OSCILLATOR

SERIES
EB52F3

PACKAGE
14 pin DIP

VOLTAGE
3.3V

CLASS
OS1W

REV. DATE
10/06