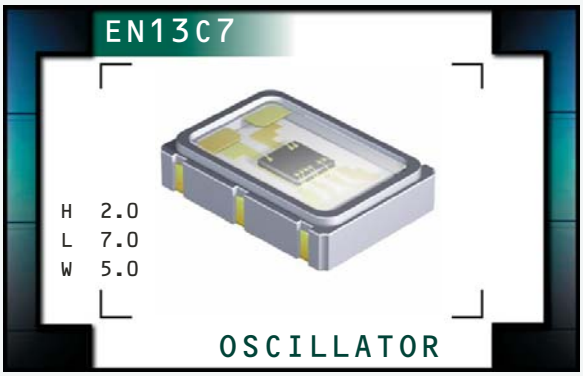
EN13C7 Series

- Crystal Clock Oscillators
- HCSL Output
- +3.3V Supply Voltage
- Complementary Output
- Tri-State Output Function
- 6 Pad Ceramic SMD Package
- Low Stand-by Current
- RoHS Compliant (Pb-Free)



ELECTRICAL SPECIFICATIONS

Nominal Frequency (MHz)		100.000MHz, 125.000MHz
Operating Temperature Range		0°C to +70°C, or -40°C to +85°C
Storage Temperature Range		-55°C to +125°C
Supply Voltage (V_{CC})		3.3V_{DC} ±5%
Input Current	Without Load	35mA Typical, 60mA Maximum
Frequency Tolerance / Stability	Inclusive of All Conditions: Calibration Tolerance at 25°C,	±100ppm Maximum
	Frequency Stability over the Operating Temperature Range,	±50ppm Maximum
	Supply Voltage Change, Output Load Change, 1st Year	±25ppm Maximum
	Aging at 25°C, Shock, and Vibration	±20ppm Maximum
Output Voltage Logic High (V_{OH})		700mV_{DC} Typical, 600mV_{DC} Minimum
Output Voltage Logic Low (V_{OL})		20mV_{DC} Typical, 50mV_{DC} Maximum
Rise Time / Fall Time	at 0.175V_{DC} to 0.525V_{DC} of waveform	300pSec Typical, 700pSec Maximum
Duty Cycle	at the crossing point	50 ±5(%)
Load Drive Capability	Output and Complementary Output	50 Ohms to Ground
Logic Control / Additional Output		Tri-State and Complementary Output
Tri-State Input Voltage	V_{IH} of 70% of V_{DD} Minimum	Enables Output
	No Connection	Enables Output
	V_{IL} of 30% of V_{DD} Maximum	Disables Output: High Impedance
Standby Current	Without Load	10µA Maximum
Start Up Time		5mSeconds Maximum
RMS Phase Jitter	at 100.000MHz (Fj = 12kHz to 20MHz)	0.5pSec Typical, 0.6pSec Maximum
	at 125.000MHz (Fj = 12kHz to 20MHz)	0.4pSec Typical, 0.5pSec Maximum
Period Jitter	Deterministic	0.2pSec Typical
	Random	1.0pSec Typical
	One Sigma	1.5pSec Typical
	Cycle to Cycle	10pSec Typical
	pk-pk	12pSec Typical
Typical Phase Noise	Fo=100.000MHz	-78dBc/Hz at 10Hz Offset
		-113dBc/Hz at 100Hz Offset
		-126dBc/Hz at 1kHz Offset
		-134dBc/Hz at 10kHz Offset
		-140dBc/Hz at 100kHz Offset
		-146dBc/Hz at 1MHz Offset
		-148dBc/Hz at 10MHz Offset
		-152dBc/Hz at 20MHz Offset

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EN13C7	CERAMIC	3.3V	OS7Q	12/09

PART NUMBERING GUIDE

EN13C7 C 2 F - 100.000M TR

FREQUENCY TOLERANCE & STABILITY/ OPERATING TEMPERATURE RANGE
C = ±100ppm Maximum over 0°C to +70°C
D = ±50ppm Maximum over 0°C to +70°C
E = ±25ppm Maximum over 0°C to +70°C
F = ±20ppm Maximum over 0°C to +70°C
G = ±100ppm Maximum over -40°C to +85°C
H = ±50ppm Maximum over -40°C to +85°C
J = ±25ppm Maximum over -40°C to +85°C

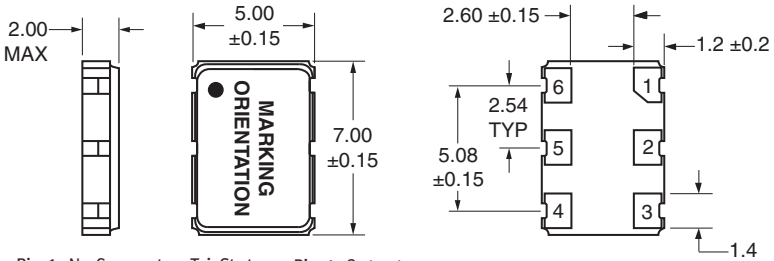
DUTY CYCLE
2 = 50 ±5(%)

LOGIC CONTROL/ADDITIONAL OUTPUT
F = Tri-State (Pad 1) and Complementary Output
H = Tri-State (Pad 2) and Complementary Output

FREQUENCY

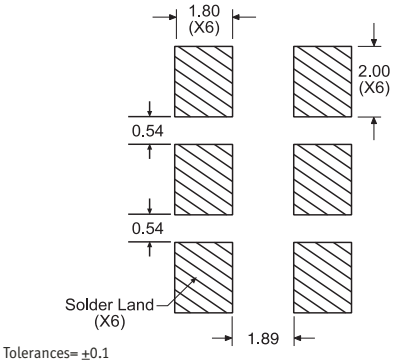
AVAILABLE OPTIONS
Blank = Bulk
TR = Tape & Reel

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



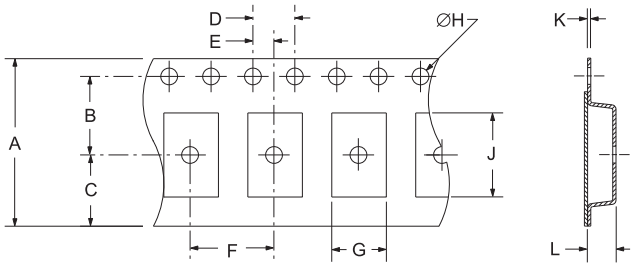
Pin 1: No Connect or Tri-State
Pin 2: No Connect or Tri-State
Pin 3: Case Ground
Pin 4: Output
Pin 5: Complementary Output
Pin 6: Supply Voltage

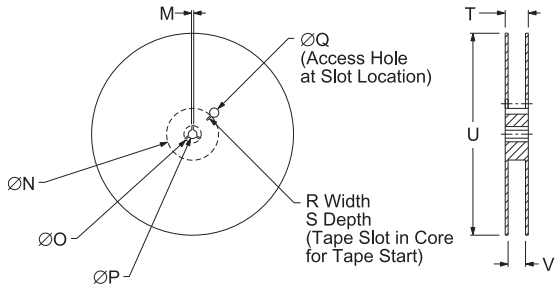
SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS



Tolerances= ±0.1

TAPE AND REEL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS





TAPE	A	B	C	D	E
	16±.3-.1	7.5±.1	6.75±.1	4±.1	2±.1
F	G	H	J	K	L
8±.1	B0*	1.5 +.1-0	A0*	.3±.05	K0*

REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13±.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	22.4 MAX	360 MAX	16.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic	Specification
ESD Susceptibility	MIL-STD-883, Method 3015, Class 1, HBM: 1500V
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Flammability	UL94-V0
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Moisture Resistance	MIL-STD-883, Method 1004
Moisure Sensitivity	J-STD-020, MSL 1
Resistance Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A

MARKING SPECIFICATIONS

Line 1: ECLIPTEK

Line 2: XX.XXX M
- Frequency in MHz (5 Digits Maximum + Decimal)

Line 3: XX Y ZZ
- Week of Year
- Last Digit of Year
- Ecliptek Manufacturing Identifier

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EN13C7	CERAMIC	3.3V	OS7Q	12/09