

EP35 Series

- RoHS Compliant (Pb-Free)
- EPO™ Programmable Oscillators
- 5.0V supply voltage
- HCMOS/TTL output
- Ceramic SMD package
- Stability to $\pm 50\text{ppm}$
- Available on tape and reel

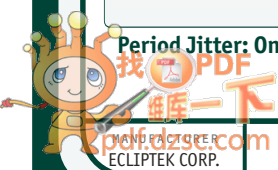


ECLIPTEK®
CORPORATION



ELECTRICAL SPECIFICATIONS

Frequency Range	1.000MHz to 125.000MHz	
Operating Temperature Range	-20°C to 70°C or -40°C to 85°C	
Storage Temperature Range	-55°C to 125°C	
Supply Voltage (V_{DD})	5.0V _{DC} $\pm 10\%$	
Input Current	45mA Maximum (Unloaded)	
Disable Current (TS Option)	30mA Maximum (Pin 1=Ground)	
Standby Current (PD Option)	50 μ A Maximum (Pin 1=Ground)	
Frequency Tolerance / Stability	Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration	
Output Voltage Logic High (V_{OH})	w/TTL Load	2.4V _{DC} Minimum $I_{OH} = -16\text{mA}$
	w/HCMOS Load	$V_{DD} - 0.4V_{DC}$ Minimum $I_{OH} = -16\text{mA}$
Output Voltage Logic Low (V_{OL})	w/TTL Load or w/HCMOS Load	0.4V _{DC} Maximum $I_{OL} = +16\text{mA}$
Rise Time / Fall Time	w/TTL Load	4 nSeconds Max (0.8V _{DC} to 2.0V _{DC})
	w/HCMOS Load	4 nSec Max (20% to 80% of waveform)
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of waveform w/HCMOS Load	50 $\pm 10\%$ (Standard)
	at 1.4V _{DC} w/TTL Load ($\leq 27.000\text{MHz}$ only), or	50 $\pm 5\%$ (Optional)
	at 50% of waveform w/HCMOS Load ($\leq 50.000\text{MHz}$ Only)	
Load Drive Capability /	$\leq 50.000\text{MHz}$	50pF HCMOS Load Maximum
Output Type-HCMOS	$> 50.000\text{MHz}$	15pF HCMOS Load Maximum
Load Drive Capability /	$\leq 40.000\text{MHz}$	10TTL Load Maximum
Output Type-TTL	$> 40.000\text{MHz}$	5TTL Load Maximum
Output Control Function	TS	Tri-State
	PD	Power Down
Output Control Function Input Voltage	V_{IH} : No Connection or $\geq 2.0V_{DC}$	Enables Output
	V_{IL} : (TS Option) $\leq 0.8V_{DC}$	Disable Output: High Impedance
	V_{IL} : (PD Option) $\leq 0.8V_{DC}$	Disable Output: Logic Low
Aging (at 25°C)	$\pm 5\text{ppm}$ / year Maximum	
Start Up Time	10 mSeconds Maximum	
Period Jitter: Absolute	$\leq 33.000\text{MHz}$	$\pm 250\text{pSec}$ Maximum, $\pm 100\text{pSec}$ Typical
	$> 33.000\text{MHz}$	$\pm 100\text{pSec}$ Maximum, $\pm 50\text{pSec}$ Typical
Period Jitter: One Sigma	$\leq 33.000\text{MHz}$	$\pm 50\text{pSec}$ Maximum
	$> 33.000\text{MHz}$	$\pm 30\text{pSec}$ Maximum



PART NUMBERING GUIDE

EP35 00 ET TTS L - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Max (Standard), 45=±50ppm Maximum

OPERATING TEMP. RANGE

Blank=-20°C to 70°C (Standard)

ET=-40°C to 85°C

DUTY CYCLE

Blank=50±10(%) (Standard), T=50±5(%)

OUTPUT CONTROL FUNCTION

TS=Tri-State, PD=Power Down

AVAILABLE OPTIONS

Blank=Bulk (Standard)

TR=Tape and Reel

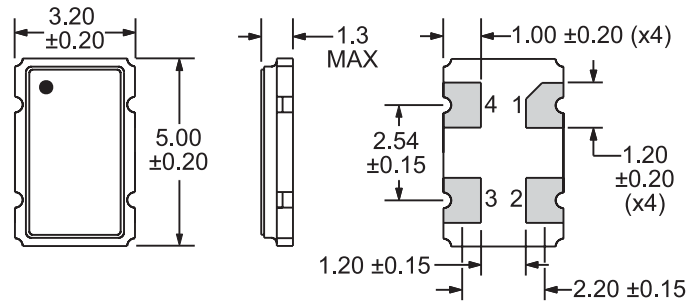
FREQUENCY

OUTPUT TYPE

L=TTL, C=HCMOS

MECHANICAL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS

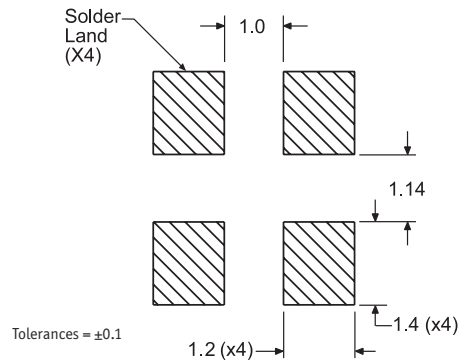


Pin 1: Tri-State or Power Down
Pin 2: Case Ground

Pin 3: Output
Pin 4: Supply Voltage

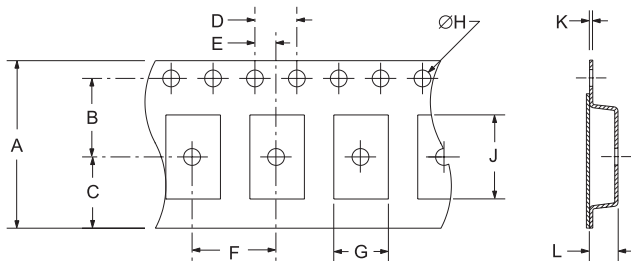
SUGGESTED SOLDER PAD LAYOUT

ALL DIMENSIONS IN MILLIMETERS

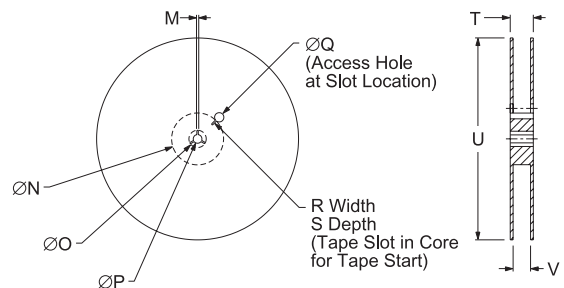


TAPE AND REEL DIMENSIONS

ALL DIMENSIONS IN MILLIMETERS



TAPE	A	B	C	D	E
	12.0±0.2	5.5±0.1	6.5±0.1	4.0±0.1	2.0±0.1
F	G	H	J	K	L
8.0±0.1	B0*	1.5+0.1-0.0	A0*	0.30±0.05	K0*



REEL	M	N	O	P	Q
	1.5 MIN	50 MIN	20.2 MIN	13.0±0.2	40 MIN
R	S	T	U	V	QTY/REEL
2.5 MIN	10 MIN	18.4 MAX	180 MAX	12.4+2-0	1,000

*Compliant to EIA 481A

ENVIRONMENTAL/MECHANICAL SPECIFICATIONS

Characteristic

Fine Leak Test
Gross Leak Test
Mechanical Shock
Vibration
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 2002
MIL-STD-883, Method 1010
MIL-STD-202, Method 210
MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: E XX.XXX

Frequency in MHz (5 Digits Maximum + Decimal)