

EP35 Series

- Programmable Crystal Oscillators
- HCMOS/TTL Output
- +5.0V Supply Voltage
- Tri-State and Power Down Options
- 4 Pad Ceramic SMD Package
- RoHS Compliant (Pb-Free)



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} ±10%
Input Current		45mA Maximum (Unloaded)
Disable Current (TS Option)		30mA Maximum (Pin 1=Ground)
Standby Current (PD Option)		50µA 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	±100ppm or ±50ppm Maximum
Output Voltage Logic High (V_{OH})	w/TTL Load w/CMOS Load	2.4V _{DC} Minimum I _{OH} =-16mA V _{DD} -0.4V _{DC} Minimum I _{OH} =-16mA
Output Voltage Logic Low (V_{OL})	w/TTL Load or w/CMOS Load	0.4V _{DC} Maximum I _{OL} =+16mA
Rise Time / Fall Time	w/TTL Load w/CMOS Load	4 nSeconds Max (0.8V _{DC} to 2.0V _{DC}) 4 nSec Max (20% to 80% of waveform)
Duty Cycle	at 1.4V _{DC} w/TTL Load; at 50% of waveform w/CMOS Load at 1.4V _{DC} w/TTL Load (≤27.000MHz only), or at 50% of waveform w/CMOS Load (≤50.000MHz Only)	50 ±10(%) 50 ±5(%)
Load Drive Capability / Output Type-HCMOS	≤50.000MHz >50.000MHz	50pF CMOS Load Maximum 15pF CMOS Load Maximum
Load Drive Capability / Output Type-TTL	≤40.000MHz >40.000MHz	10TTL Load Maximum 5TTL Load Maximum
Output Control Function	TS PD	Tri-State Power Down
Output Control Function Input Voltage	V _{IH} : No Connection or ≥2.0V _{DC} V _{IL} : (TS Option) ≤0.8V _{DC} V _{IL} : (PD Option) ≤0.8V _{DC}	Enables Output Disable Output: High Impedance Disable Output: Logic Low
Aging (at 25°C)		±5ppm / year Maximum
Start Up Time		10 mSeconds Maximum
Period Jitter: Absolute	≤33.000MHz >33.000MHz	±250pSec Maximum, ±100pSec Typical ±100pSec Maximum, ±50pSec Typical
Period Jitter: One Sigma	≤33.000MHz >33.000MHz	±50pSec Maximum ±30pSec Maximum

MANUFACTURER	CATEGORY	SERIES	PACKAGE	VOLTAGE	CLASS	REV. DATE
ECLIPTEK CORP.	OSCILLATOR	EP35	CERAMIC	5.0V	OS89	01/04

PART NUMBERING GUIDE

EP35 00 ET TTS L - 24.000M TR

FREQUENCY TOLERANCE / STABILITY

00=±100ppm Maximum, 45=±50ppm Maximum

OPERATING TEMP. RANGE

Blank=-20°C to 70°C

ET=-40°C to 85°C

DUTY CYCLE

Blank=50±10(%), T=50±5(%)

OUTPUT CONTROL FUNCTION

TS=Tri-State, PD=Power Down

AVAILABLE OPTIONS

Blank=Bulk

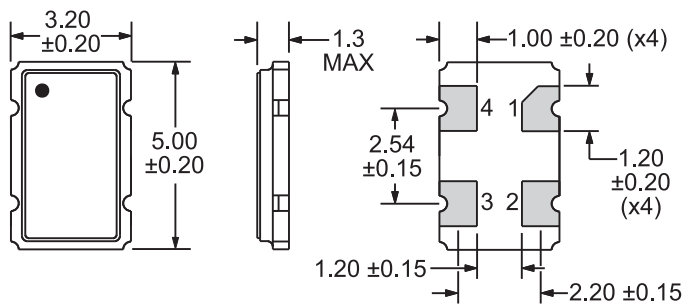
TR=Tape & Reel

FREQUENCY

OUTPUT TYPE

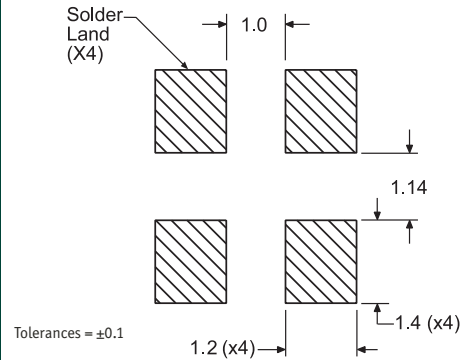
L=TTL, C=CMOS

MECHANICAL DIMENSIONS
ALL DIMENSIONS IN MILLIMETERS



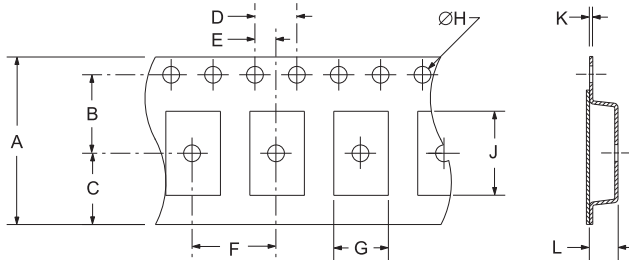
Pin 1: Tri-State or Power Down
Pin 2: Case Ground
Pin 3: Output
Pin 4: Supply Voltage

SUGGESTED SOLDER PAD LAYOUT
ALL DIMENSIONS IN MILLIMETERS

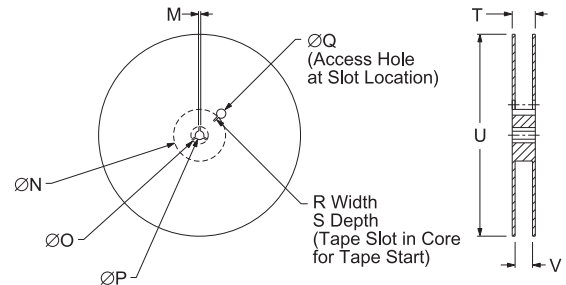


Tolerances = ±0.1

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	Specification
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Vibration	MIL-STD-883, Method 2007, Condition A
Solderability	MIL-STD-883, Method 2002
Temperature Cycling	MIL-STD-883, Method 1010
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215

MARKING SPECIFICATIONS

Line 1: E XX.XXX — Frequency in MHz (5 Digits Maximum + Decimal)

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