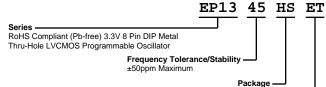
EP1345HSETPD-75.000M





PD -75.000M

Nominal Frequency

75.000MHz

Pin 1 Connection Power Down (Disable Output: Logic Low)

Duty Cycle 50 ±10(%)

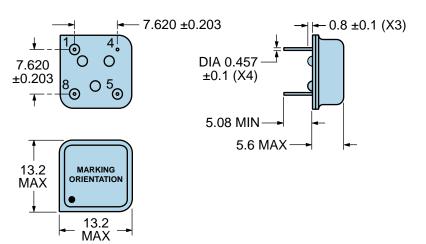
Operating Temperature Range -40°C to +85°C

Nominal Frequency	75.000MHz
Frequency Tolerance/Stability	±50ppm Maximum (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)
Aging at 25°C	±5ppm/year Maximum
Operating Temperature Range	-40°C to +85°C
Supply Voltage	3.3Vdc ±0.3Vdc
Input Current	28mA Maximum (Unloaded)
Output Voltage Logic High (Voh)	Vdd-0.4Vdc Minimum (IOH = -8mA)
Output Voltage Logic Low (Vol)	0.4Vdc Maximum (IOL = +8mA)
Rise/Fall Time	4nSec Maximum (Measured at 20% to 80% of waveform)
Duty Cycle	50 ±10(%) (Measured at 50% of waveform)
Load Drive Capability	15pF Maximum
Output Logic Type	CMOS
Pin 1 Connection	Power Down (Disable Output: Logic Low)
Pin 1 Input Voltage (Vih and Vil)	70% of Vdd Minimum to enable output, 20% of Vdd Maximum to disable output, No Connect to enable output.
Standby Current	20µA Maximum (Pin 1 = Ground)
Disable Current	16mA Maximum (Pin 1 = Ground)
Peak to Peak Jitter (tPK)	100pSec Maximum, 60pSec Typical
RMS Period Jitter (tRMS)	13pSec Maximum, 10pSec Typical
Start Up Time	10mSec Maximum
Storage Temperature Range	-55°C to +125°C

Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Lead Integrity	MIL-STD-883, Method 2004
Mechanical Shock	MIL-STD-202, Method 213, Condition C
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003
Temperature Cycling	MIL-STD-883, Method 1010
Vibration	MIL-STD-883, Method 2007, Condition A

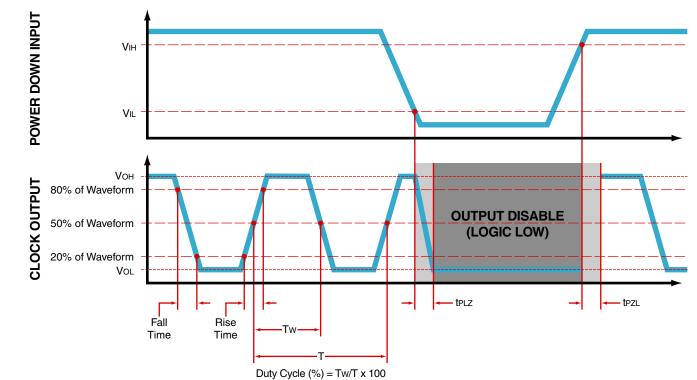
EP1345HSETPD-75.000M

MECHANICAL DIMENSIONS (all dimensions in millimeters)



PIN	CONNECTION
1	Power Down (Logic Low)
4	Case/Ground
5	Output
8	Supply Voltage
1.1510	
LINE	MARKING
1	ECLIPTEK
2	EP13PD
	EP13=Product Series
3	75.000M
4	XXYZZ XX=Ecliptek Manufacturing Code
	Y=Last Digit of the Year
	ZZ=Week of the Year

OUTPUT WAVEFORM & TIMING DIAGRAM

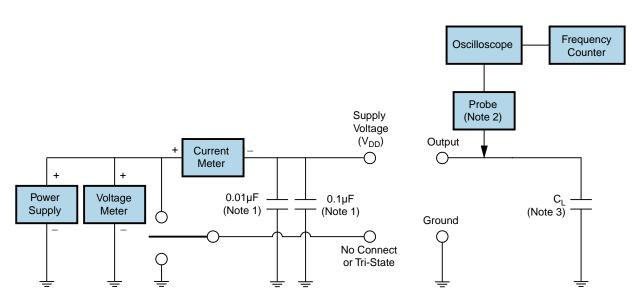




EP1345HSETPD-75.000M



Test Circuit for CMOS Output



Note 1: An external 0.1µF low frequency tantalum bypass capacitor in parallel with a 0.01µF high frequency ceramic bypass capacitor close to the package ground and V_{DD} pin is required.

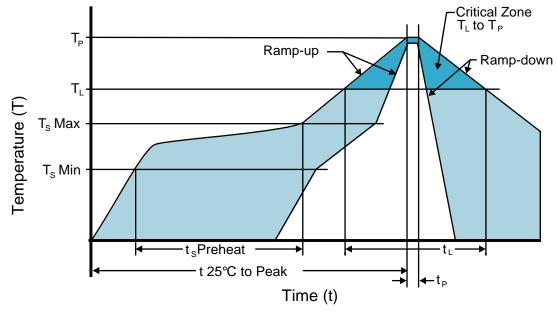
Note 2: A low capacitance (<12pF), 10X attenuation factor, high impedance (>10Mohms), and high bandwidth (>300MHz) passive probe is recommended.

Note 3: Capacitance value \dot{C}_L includes sum of all probe and fixture capacitance.



Recommended Solder Reflow Methods

EP1345HSETPD-75.000M



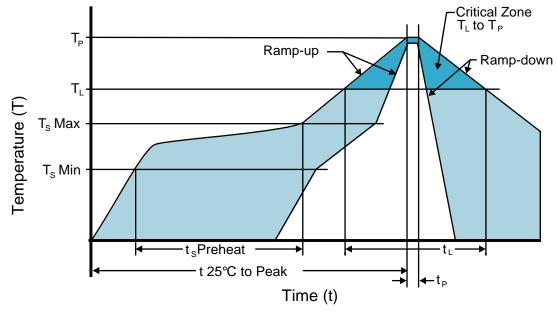
High Temperature Solder Bath (Wave Solder)

·	•
T _s MAX to T _L (Ramp-up Rate)	3°C/second Maximum
Preheat	
- Temperature Minimum (T _s MIN)	150°C
 Temperature Typical (T_s TYP) 	175°C
 Temperature Maximum (T_s MAX) 	200°C
- Time (t _s MIN)	60 - 180 Seconds
Ramp-up Rate (T⊾ to T _P)	3°C/second Maximum
Time Maintained Above:	
- Temperature (T∟)	217°C
- Time (t∟)	60 - 150 Seconds
Peak Temperature (T _P)	260°C Maximum for 10 Seconds Maximum
Target Peak Temperature (T _P Target)	250°C +0/-5°C
Time within 5°C of actual peak (t _p)	20 - 40 seconds
Ramp-down Rate	6°C/second Maximum
Time 25°C to Peak Temperature (t)	8 minutes Maximum
Moisture Sensitivity Level	Level 1



Recommended Solder Reflow Methods

EP1345HSETPD-75.000M



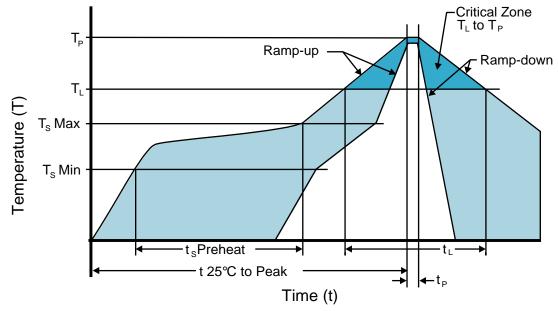
Low Temperature Infrared/Convection 185°C

T _s MAX to T _L (Ramp-up Rate)	5°C/second Maximum
Preheat	
 Temperature Minimum (T_s MIN) 	N/A
- Temperature Typical (T _s TYP)	150°C
 Temperature Maximum (T_s MAX) 	N/A
- Time (t _s MIN)	60 - 120 Seconds
Ramp-up Rate (T⊾ to T _P)	5°C/second Maximum
Time Maintained Above:	
- Temperature (T∟)	150°C
- Time (t∟)	200 Seconds Maximum
Peak Temperature (T _P)	185°C Maximum
Target Peak Temperature (T _P Target)	185°C Maximum 2 Times
Time within 5°C of actual peak (t _p)	10 seconds Maximum 2 Times
Ramp-down Rate	5°C/second Maximum
Time 25°C to Peak Temperature (t)	N/A
Moisture Sensitivity Level	Level 1



Recommended Solder Reflow Methods

EP1345HSETPD-75.000M



Low Temperature Solder Bath (Wave Solder)

T _s MAX to T _L (Ramp-up Rate)	5°C/second Maximum
Preheat	
- Temperature Minimum (T _s MIN)	N/A
- Temperature Typical (T _s TYP)	150°C
- Temperature Maximum (T _s MAX)	N/A
- Time (t _s MIN)	30 - 60 Seconds
Ramp-up Rate (T _L to T _P)	5°C/second Maximum
Time Maintained Above:	
- Temperature (T∟)	150°C
- Time (t∟)	200 Seconds Maximum
Peak Temperature (T _P)	245°C Maximum
Target Peak Temperature (T _P Target)	245°C Maximum 1 Time / 235°C Maximum 2 Times
Time within 5°C of actual peak (t _p)	5 seconds Maximum 1 Time / 15 seconds Maximum 2 Times
Ramp-down Rate	5°C/second Maximum
Time 25°C to Peak Temperature (t)	N/A
Moisture Sensitivity Level	Level 1

Low Temperature Manual Soldering

185°C Maximum for 10 seconds Maximum, 2 times Maximum.

High Temperature Manual Soldering

260°C Maximum for 5 seconds Maximum, 2 times Maximum.