

EC2625ETTS-20.000M



ELECTRICAL SPECIFICATIONS

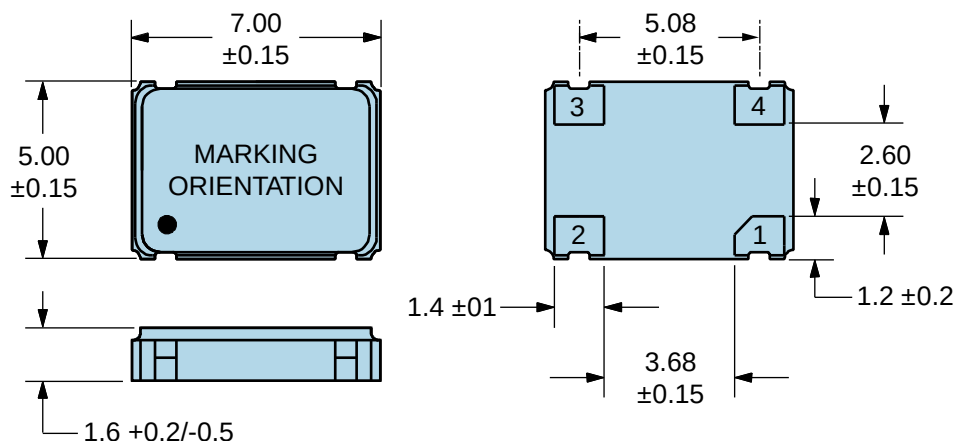
Nominal Frequency	20.000MHz
Frequency Tolerance/Stability	±25ppm Maximum (Inclusive of all conditions: Calibration Tolerance at 25°C, Frequency Stability over the Operating Temperature Range, Supply Voltage Change, Output Load Change, First Year Aging at 25°C, Shock, and Vibration)
Aging at 25°C	±5ppm/year Maximum
Operating Temperature Range	-40°C to +85°C
Supply Voltage	3.3Vdc ±10%
Input Current	10mA Maximum
Output Voltage Logic High (Voh)	90% of Vdd Minimum (IOH=-8mA)
Output Voltage Logic Low (Vol)	10% of Vdd Maximum (IOL=+8mA)
Rise/Fall Time	5nSec Maximum (w/15pF Load), 7nSec Maximum (w/30pF Load) (Measured at 20% to 80% of waveform)
Duty Cycle	50 ±10(%) (Measured at 50% of waveform)
Load Drive Capability	30pF Maximum
Output Logic Type	CMOS
Pin 1 Connection	Tri-State (High Impedance)
Tri-State Input Voltage (Vih and Vil)	+0.7Vdd Minimum or No Connect to Enable Output, +0.3Vdd Maximum to Disable Output (High Impedance)
Standby Current	10µA Maximum (Disabled Output: High Impedance)
RMS Phase Jitter	1pSec Maximum (12kHz to 20MHz offset frequency)
Start Up Time	10mSec Maximum
Storage Temperature Range	-55°C to +125°C

ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to 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

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MECHANICAL DIMENSIONS (all dimensions in millimeters)

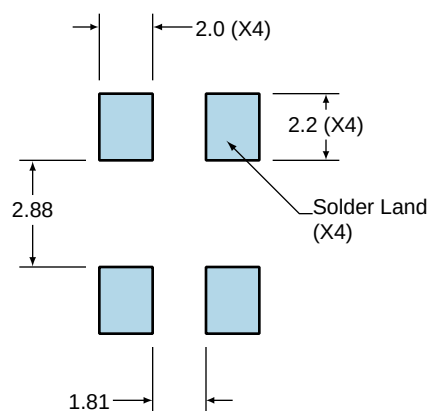


PIN	CONNECTION
1	Tri-State
2	Ground/Case Ground
3	Output
4	Supply Voltage

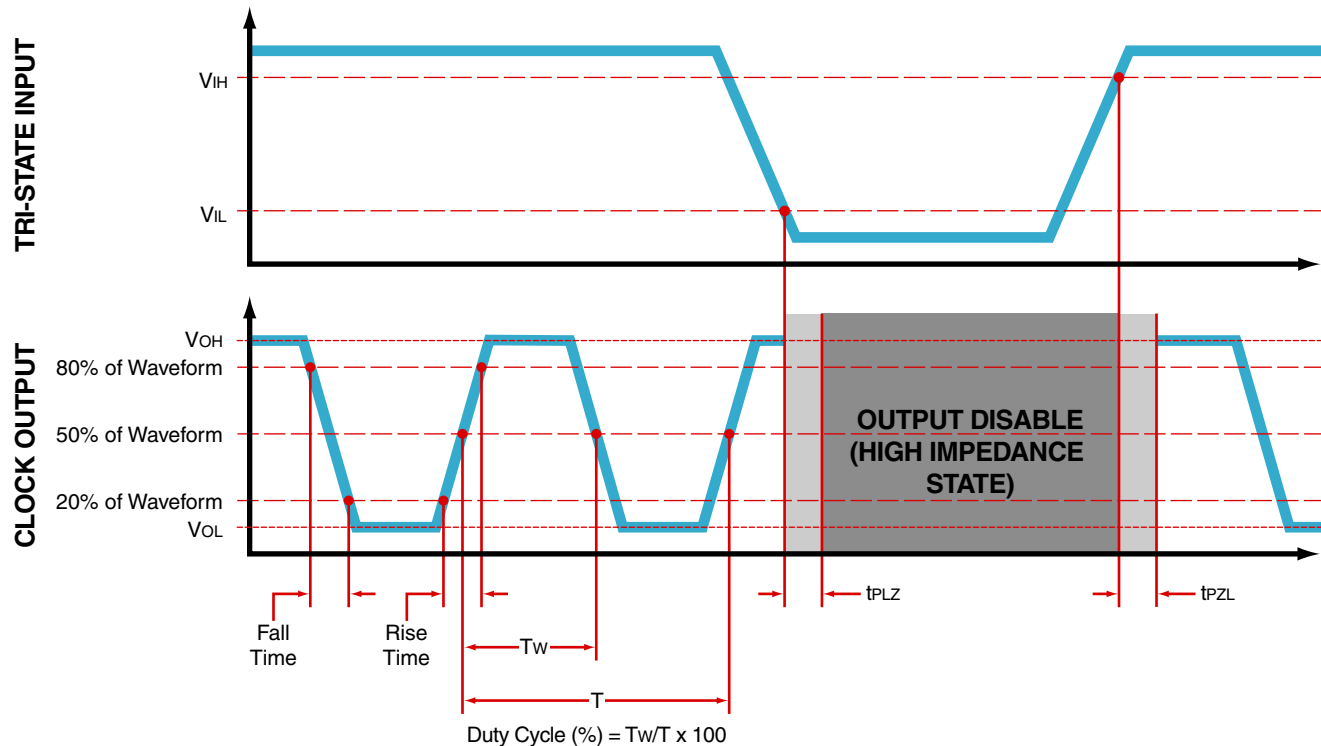
LINE	MARKING
1	ECLIPTEK
2	20.000M
3	XXXXXX XXXXXX=Ecliptek Manufacturing Identifier

Suggested Solder Pad Layout

All Dimensions in Millimeters

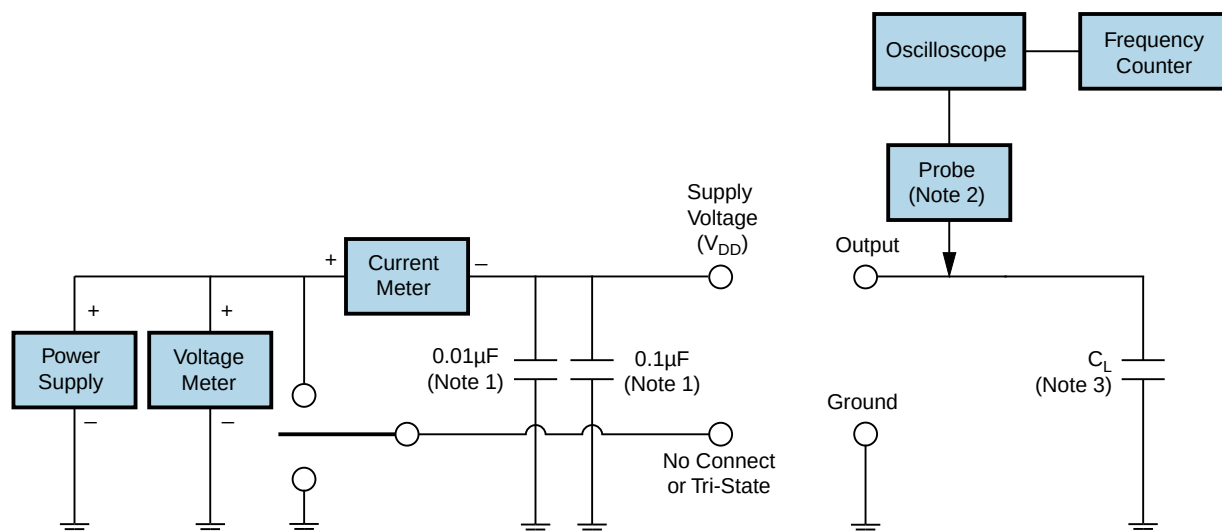


All Tolerances are ±0.1

OUTPUT WAVEFORM & TIMING DIAGRAM

EC2625ETTS-20.000M [↗](#)

Test Circuit for CMOS Output

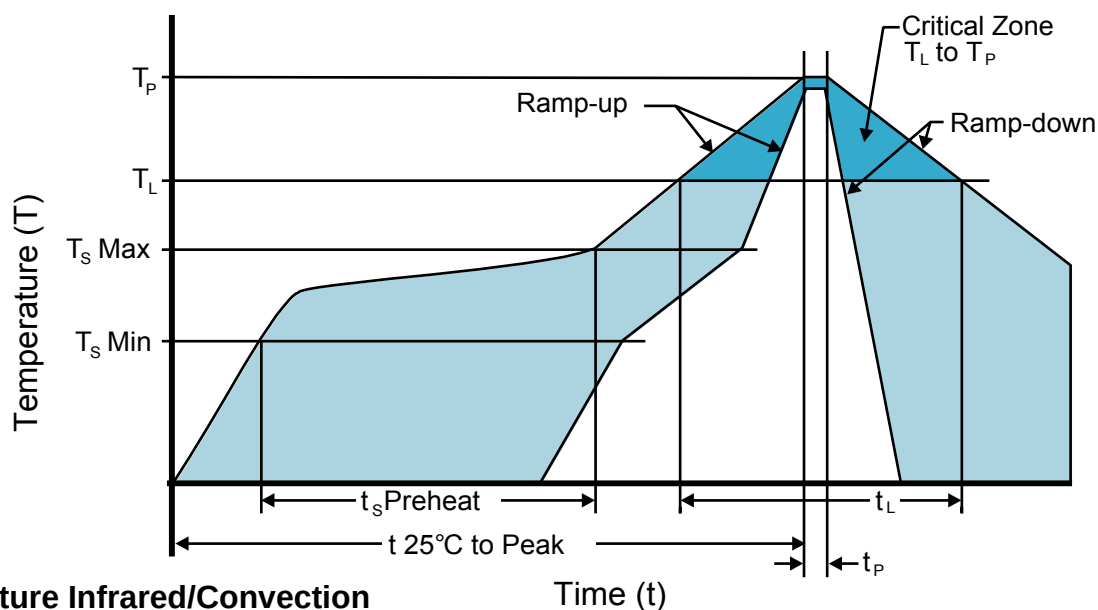


Note 1: An external $0.1\mu\text{F}$ low frequency tantalum bypass capacitor in parallel with a $0.01\mu\text{F}$ high frequency ceramic bypass capacitor close to the package ground and V_{DD} pin is required.

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

Note 3: Capacitance value C_L includes sum of all probe and fixture capacitance.

Recommended Solder Reflow Methods



High Temperature Infrared/Convection

Ts MAX to Tl (Ramp-up Rate)	3°C/Second Maximum
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Preheat

- Temperature Minimum (Ts MIN)	150°C
- Temperature Typical (Ts TYP)	175°C
- Temperature Maximum (Ts MAX)	200°C
- Time (ts MIN)	60 - 180 Seconds

Ramp-up Rate (Tl to Tp)	3°C/Second Maximum
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Time Maintained Above:

- Temperature (Tl)	217°C
- Time (tL)	60 - 150 Seconds

Peak Temperature (Tp)	260°C Maximum for 10 Seconds Maximum
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Target Peak Temperature (Tp Target)	250°C +0/-5°C
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Time within 5°C of actual peak (tp)	20 - 40 Seconds
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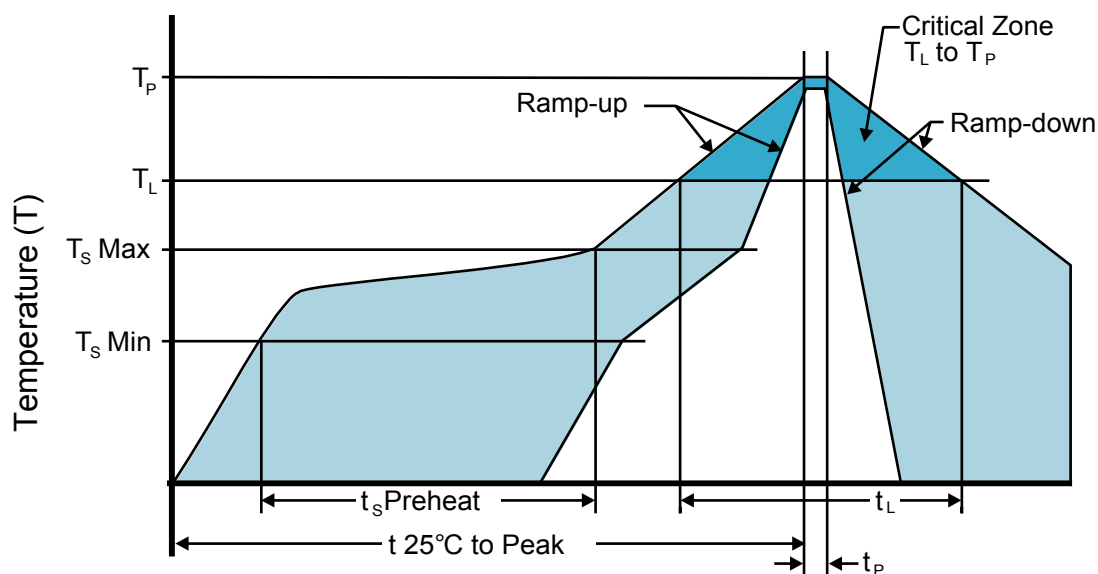
Ramp-down Rate	6°C/Second Maximum
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Time 25°C to Peak Temperature (t)	8 Minutes Maximum
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Moisture Sensitivity Level	Level 1
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Additional Notes	Temperatures shown are applied to body of device.
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Recommended Solder Reflow Methods



Low Temperature Infrared/Convection 240°C

Ts MAX to TL (Ramp-up Rate) 5°C/Second Maximum

Preheat

- Temperature Minimum (Ts MIN) N/A
- Temperature Typical (Ts TYP) 150°C
- Temperature Maximum (Ts MAX) N/A
- Time (ts MIN) 60 - 120 Seconds

Ramp-up Rate (TL to TP) 5°C/Second Maximum

Time Maintained Above:

- Temperature (TL) 150°C
- Time (tL) 200 Seconds Maximum

Peak Temperature (TP) 240°C Maximum

Target Peak Temperature (TP Target) 240°C Maximum 2 Times / 230°C Maximum 1 Time

Time within 5°C of actual peak (tp) 10 Seconds Maximum 2 Times / 80 Seconds Maximum 1 Time

Ramp-down Rate 5°C/Second Maximum

Time 25°C to Peak Temperature (t) N/A

Moisture Sensitivity Level Level 1

Additional Notes Temperatures shown are applied to body of device.

Low Temperature Manual Soldering

185°C Maximum for 10 Seconds Maximum, 2 times Maximum. (Temperatures shown are applied to body of device.)

High Temperature Manual Soldering

260°C Maximum for 5 Seconds Maximum, 2 times Maximum. (Temperatures shown are applied to body of device.)

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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