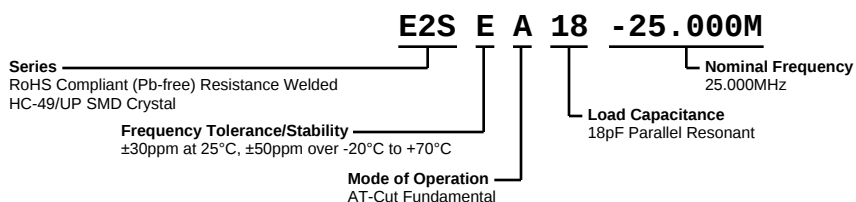


E2SEA18-25.000M



ECLIPTEK
CORPORATION



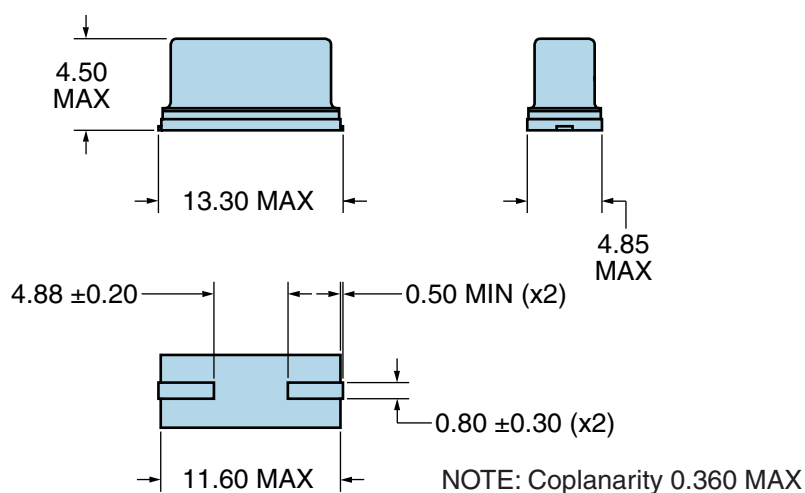
ELECTRICAL SPECIFICATIONS

Nominal Frequency	25.000MHz
Frequency Tolerance/Stability	$\pm 30\text{ppm}$ at 25°C , $\pm 50\text{ppm}$ over -20°C to $+70^\circ\text{C}$
Aging at 25°C	$\pm 5\text{ppm}/\text{year}$ Maximum
Load Capacitance	18pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	40 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	1mWatt Maximum
Storage Temperature Range	-40°C to $+125^\circ\text{C}$
Insulation Resistance	500 Megaohms Minimum at 100Vdc

ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Fine Leak Test	MIL-STD-883, Method 1014 Condition A
Gross Leak Test	MIL-STD-883, Method 1014 Condition C
Lead Termination	Sn $2\mu\text{m}$ - $6\mu\text{m}$
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

MECHANICAL DIMENSIONS (all dimensions in millimeters)

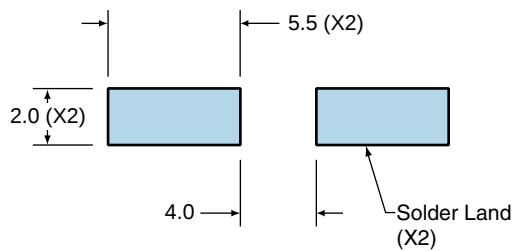


LINE	MARKING
1	E25.000M E=EclipseTek Designator M=MHz

E2SEA18-25.000M

Suggested Solder Pad Layout

All Dimensions in Millimeters



All Tolerances are ± 0.1

Recommended Solder Reflow Methods



High Temperature Infrared/Convection

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_L to T_P)	3°C/second Maximum
Time Maintained Above:	
- Temperature (T _L)	217°C
- Time (t _L)	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



Low Temperature Infrared/Convection 245°C

$T_S \text{ MAX to } T_L$ (Ramp-up Rate)	5°C/second Maximum
--	--------------------

Preheat

- Temperature Minimum ($T_S \text{ MIN}$)	N/A
- Temperature Typical ($T_S \text{ TYP}$)	150°C
- Temperature Maximum ($T_S \text{ MAX}$)	N/A
- Time ($t_s \text{ MIN}$)	30 - 60 Seconds

Ramp-up Rate (T_L to T_P)	5°C/second Maximum
---------------------------------	--------------------

Time Maintained Above:

- Temperature (T_L)	150°C
- Time (t_L)	200 Seconds Maximum

Peak Temperature (T_P)	245°C Maximum
----------------------------	---------------

Target Peak Temperature ($T_P \text{ Target}$)	245°C Maximum 2 Times / 230°C Maximum 1 Time
--	--

Time within 5°C of actual peak (t_p)	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
----------------------------	---------

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.