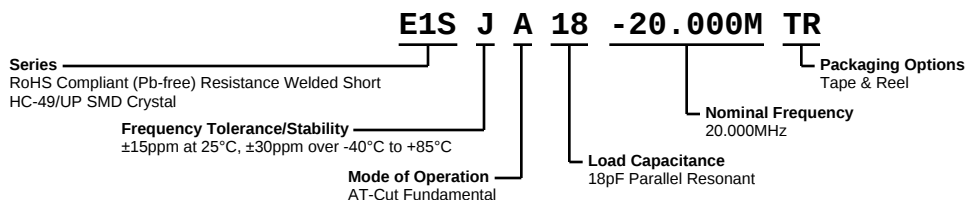


E1SJA18-20.000M TR



ECLIPTEK
CORPORATION



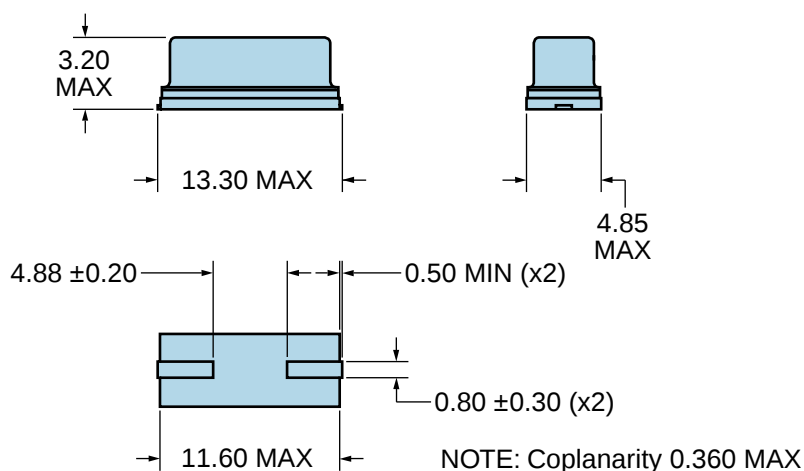
ELECTRICAL SPECIFICATIONS

Nominal Frequency	20.000MHz
Frequency Tolerance/Stability	±15ppm at 25°C, ±30ppm over -40°C to +85°C
Aging at 25°C	±5ppm/year Maximum
Load Capacitance	18pF Parallel Resonant
Shunt Capacitance (C0)	7pF Maximum
Equivalent Series Resistance	50 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	1mWatt Maximum
Storage Temperature Range	-40°C to +125°C
Insulation Resistance	500 Megaohms Minimum at 100Vdc

ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

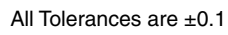
Fine Leak Test	MIL-STD-883, Method 1014 Condition A
Gross Leak Test	MIL-STD-883, Method 1014 Condition C
Lead Termination	Sn 2µm - 6µm
Mechanical Shock	MIL-STD-202, Method 213 Condition C
Resistance to Soldering Heat	MIL-STD-202, Method 210
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	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	E20.000M E=EclipseTek Designator M=MHz

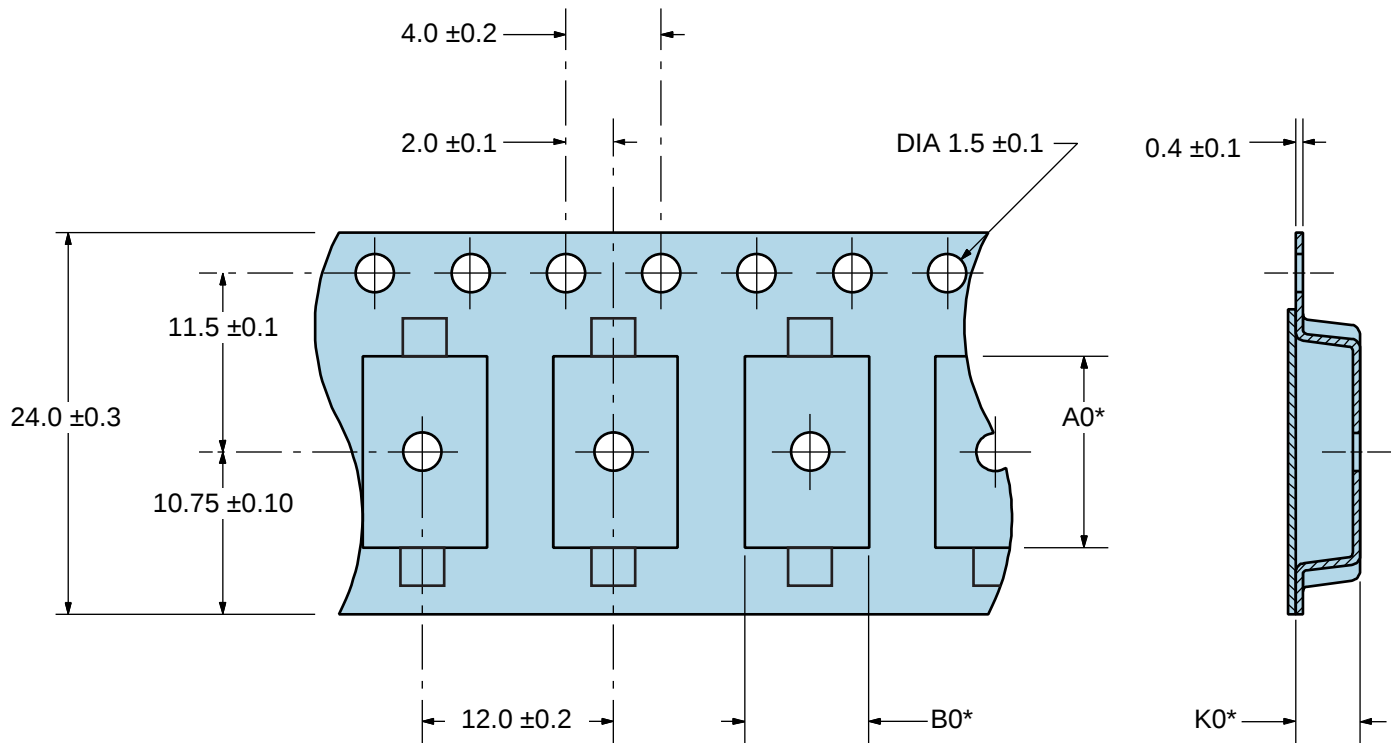
All Dimensions in Millimeters



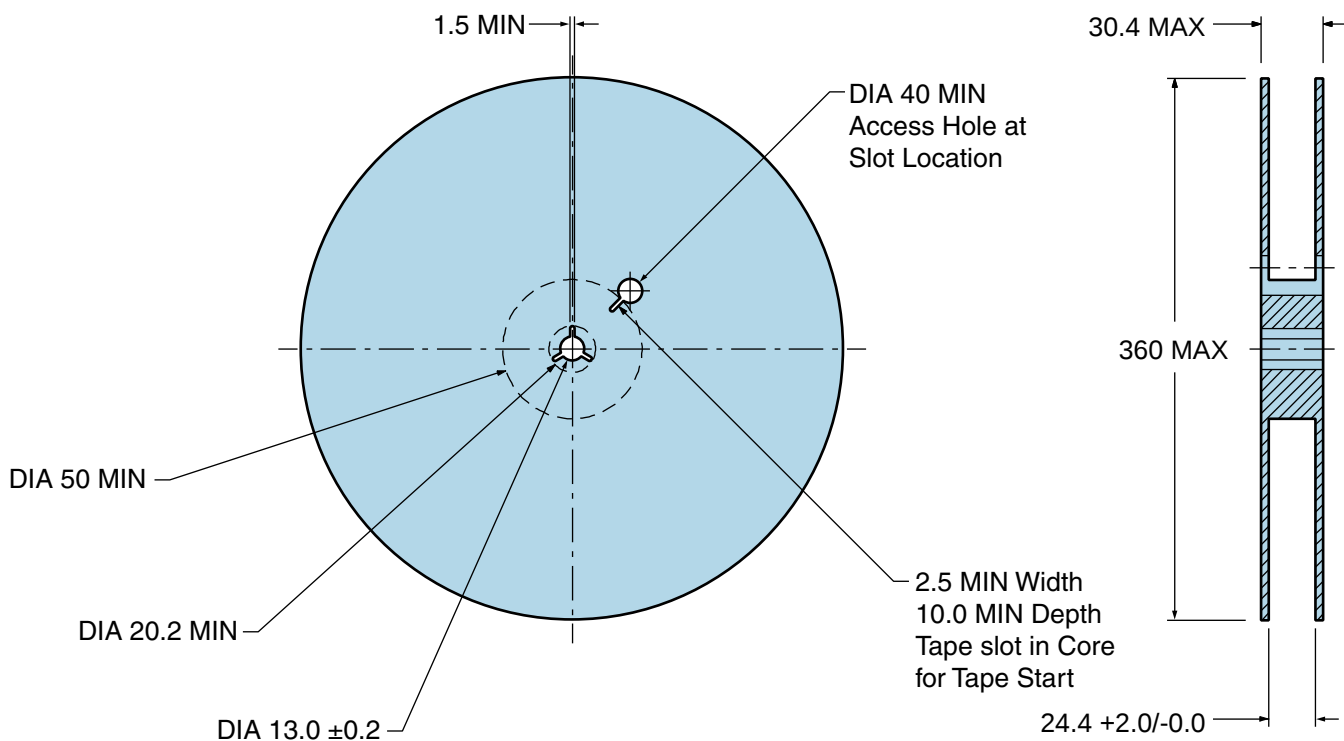
E1SJA18-20.000M TR

Tape & Reel Dimensions

Quantity Per Reel: 1,000 units



*Compliant to EIA 481A



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
---	---------------

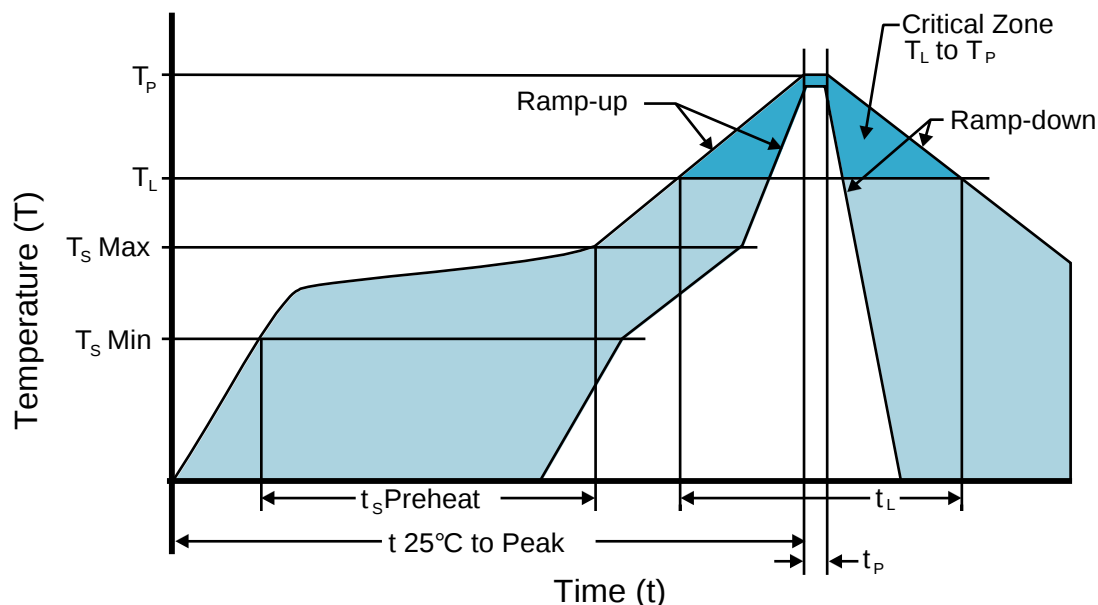
Time within 5°C of actual peak (t _P)	20 - 40 seconds
--	-----------------

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 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_L)	150°C
- Time (t_L)	200 Seconds Maximum

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

Target Peak Temperature (T_p 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.