

EA2532WA12-27.120M TR

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REGULATORY COMPLIANCE (Data Sheet downloaded on Jun 21, 2020)


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ITEM DESCRIPTION

Quartz Crystal Resonator 2.5mm x 3.2mm x 0.8mm 4 Pad Ceramic Surface Mount (SMD) 27.120MHz ± 10 ppm at 25°C, ± 10 ppm over 0°C to +70°C 12pF Parallel Resonant

ELECTRICAL SPECIFICATIONS

Nominal Frequency	27.120MHz
Frequency Tolerance/Stability	± 10 ppm at 25°C, ± 10 ppm over 0°C to +70°C
Aging at 25°C	± 3 ppm/Year Maximum
Load Capacitance	12pF Parallel Resonant
Shunt Capacitance (C0)	5pF Maximum
Equivalent Series Resistance	60 Ohms Maximum
Mode of Operation	AT-Cut Fundamental
Drive Level	100 μ Watts Maximum
Crystal Cut	AT-Cut
Spurious Response	-3dB Minimum (Measured from Fo to Fo +5000ppm)
Storage Temperature Range	-40°C to +150°C
Insulation Resistance	500 Megaohms Minimum (Measured at 100Vdc)

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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The drawing illustrates the mechanical specifications of the 100-pin BGA package. The top view shows a square package with a side length of 2.50 ± 0.10 mm. The height is 3.20 ± 0.10 mm. The side view shows a maximum thickness of 0.80 mm. The bottom view shows a central area with four numbered pads (1, 2, 3, 4) and a central pad. The dimensions for the bottom view are: 0.70 ± 0.10 mm for the central pad, 1.00 ± 0.10 mm (X4) for the corner pads, 1.20 ± 0.10 mm for the side pads, and 0.90 ± 0.10 mm (X4) for the side pads.

LINE	MARKING
1	E27.1 <i>E=Ecliptek Designator</i>
2	XXXXX <i>XXXXX=Ecliptek Manufacturing Identifier</i>

Terminal Plating Thickness: Gold (0.3 to 1.0µm) over Nickel (1.27 to 8.89µm).

1-800-ECLIPTEK or 714.433.1200

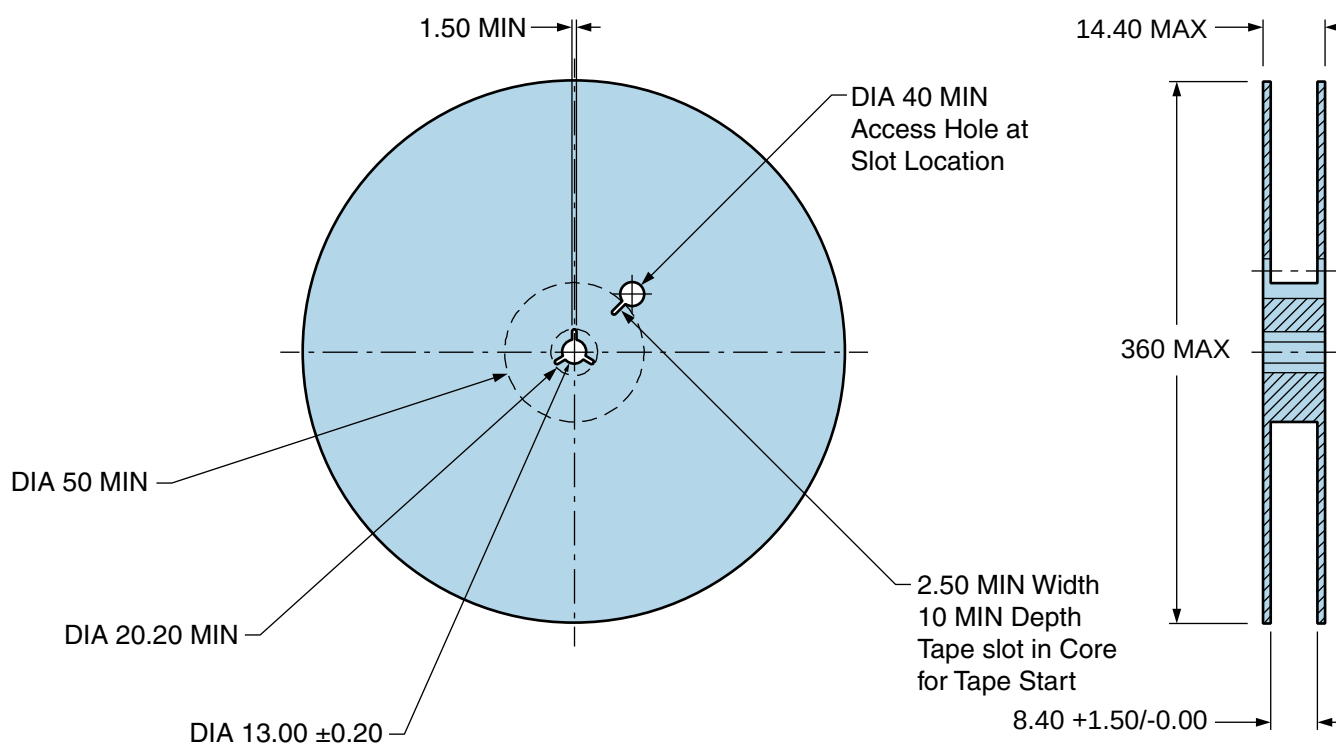
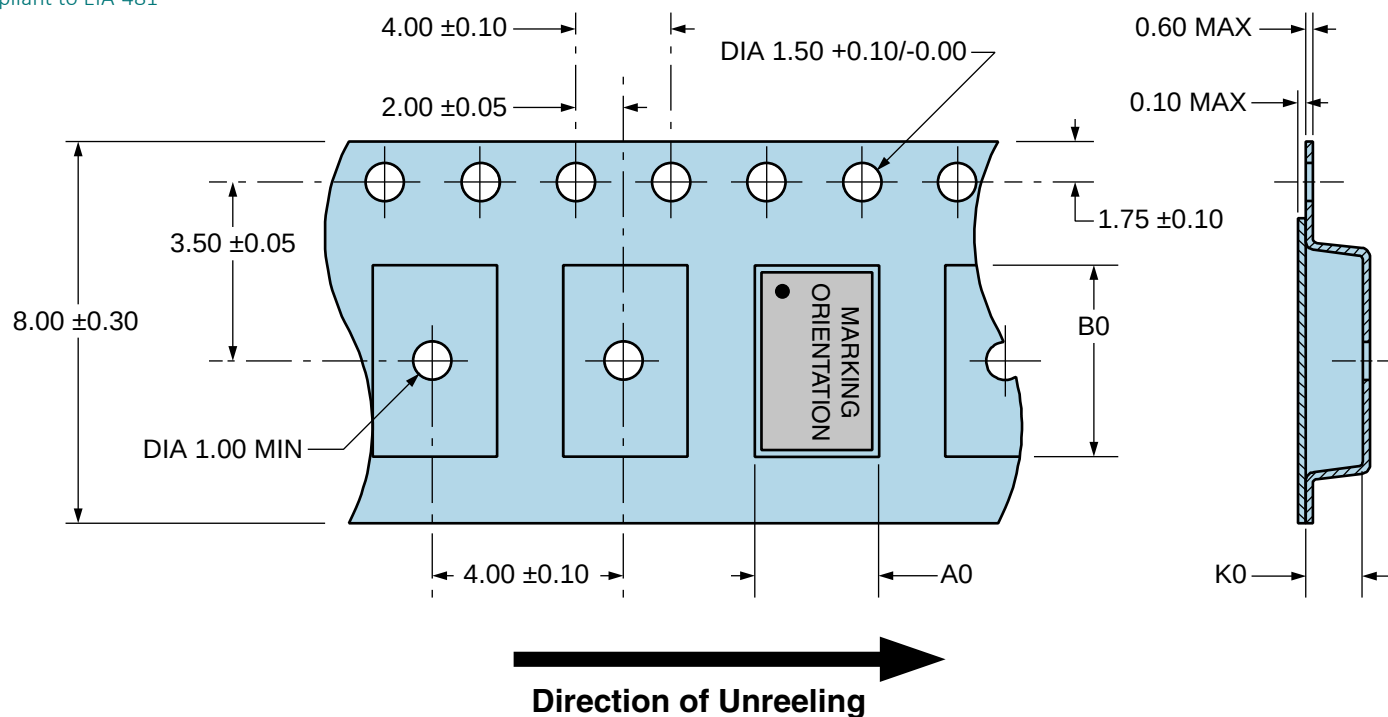
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Tape & Reel Dimensions

Quantity Per Reel: 1,000 units

All Dimensions in Millimeters

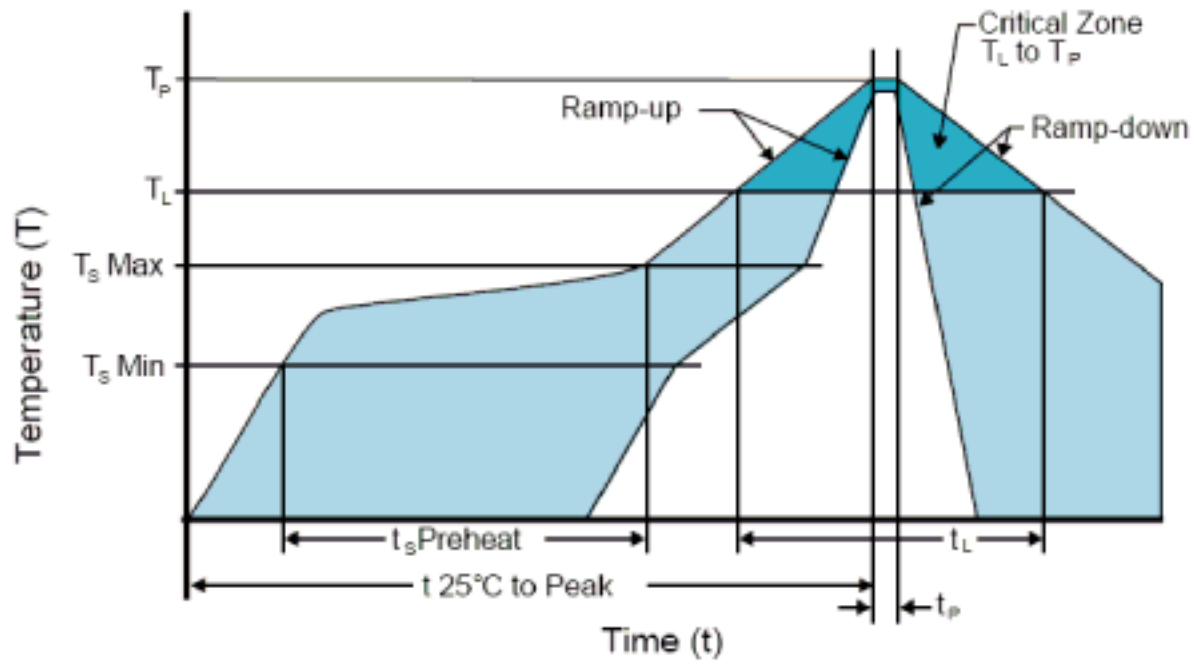
Compliant to EIA-481



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Recommended Solder Reflow Methods



High Temperature Infrared/Convection

Ts MAX to Tl (Ramp-up Rate)	3°C/Second Maximum
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
Time Maintained Above:	
- Temperature (Tl)	217°C
- Time (tL)	60 - 150 Seconds
Peak Temperature (Tp)	260°C Maximum for 10 Seconds Maximum
Target Peak Temperature (Tp Target)	250°C +0/-5°C
Time within 5°C of actual peak (tp)	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
Additional Notes	Temperatures shown are applied to body of device.

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Recommended Solder Reflow Methods



Low Temperature Infrared/Convection 245°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)	30 - 60 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)	245°C Maximum
Target Peak Temperature (TP Target)	245°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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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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