

ECN/PCN No.: 5015

## For Manufacturer

<b>Product Description:</b> Ecliptek - Crystal	<b>Abrakon Part Number / Part Series:</b> EB1620	<input type="checkbox"/> Documentation only <input type="checkbox"/> ECN <input checked="" type="checkbox"/> EOL	<input checked="" type="checkbox"/> Series <input type="checkbox"/> Part Number
<b>Affected Revision:</b> REV A	<b>New Revision:</b> EOL	<b>Application:</b>	<input type="checkbox"/> Safety <input checked="" type="checkbox"/> Non-Safety

**Prior to Change:**  
ACTIVE

**After Change:**  
EOL

### Cause/Reason for Change:

As part of an effort to streamline our portfolio and better serve customers, we are discontinuing select products and offering a Last Time Buy period

## Change Plan

<b>Effective Date:</b> 11/6/2025	<b>Additional Remarks:</b>	
<b>Change Declaration:</b> Product Discontinuation		
<b>Issued Date:</b> 8/8/2025	<b>Issued By:</b> Stephanie Lopez	<b>Issued Department:</b> Engineering
<b>Approval:</b> Thomas Culhane Engineering Director	<b>Approval:</b> Reuben Quintanilla Quality Director	<b>Approval:</b> Ying Huang Purchasing Director

## For Abracon EOL only

<b>Last Time Buy (if applicable):</b> 1/30/2026	<b>Alternate Part Number / Part Series:</b> <a href="#">ABM11AIG</a>	
<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>

## Customer Approval (If Applicable)

### Qualification Status:

☐ Approved ☐ Not accepted

Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.

<b>Customer Part Number:</b>	<b>Customer Project:</b>	
<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>

**Customer Remarks:**

## REGULATORY COMPLIANCE



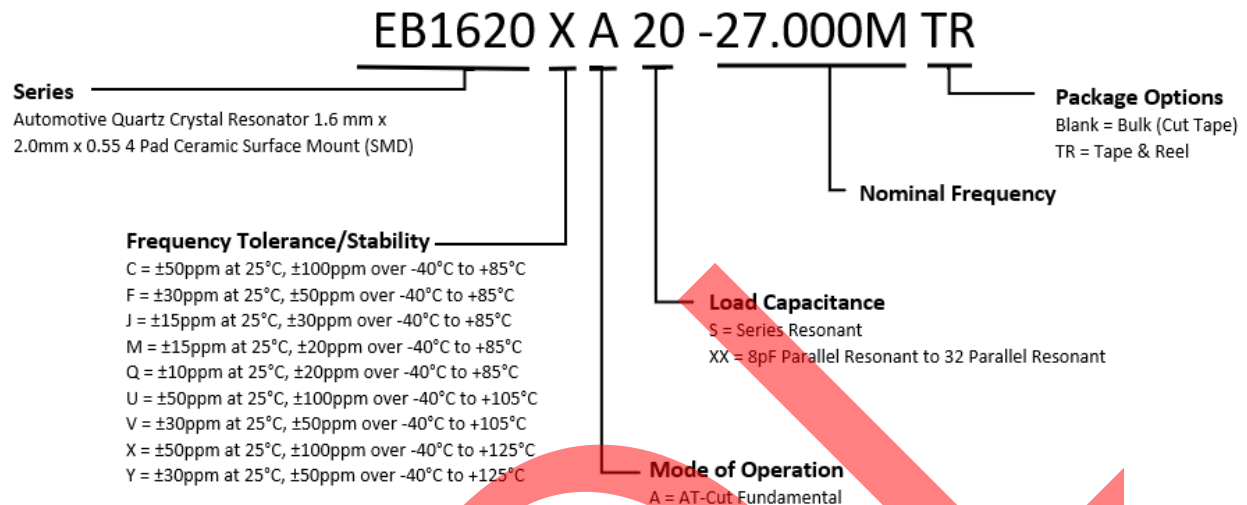
## ITEM DESCRIPTION

Automotive Grade Quartz Crystal Resonator 1.6mm x 2.0mm x 0.55mm 4 Pad Ceramic Surface Mount (SMD)

## ELECTRICAL SPECIFICATIONS

Nominal Frequency	16MHz to 54MHz
Frequency Tolerance/Stability	$\pm 50$ ppm at 25°C, $\pm 100$ ppm over -40°C to +85°C $\pm 30$ ppm at 25°C, $\pm 50$ ppm over -40°C to +85°C $\pm 15$ ppm at 25°C, $\pm 30$ ppm over -40°C to +85°C $\pm 15$ ppm at 25°C, $\pm 20$ ppm over -40°C to +85°C $\pm 10$ ppm at 25°C, $\pm 20$ ppm over -40°C to +85°C $\pm 50$ ppm at 25°C, $\pm 100$ ppm over -40°C to +105°C $\pm 30$ ppm at 25°C, $\pm 50$ ppm over -40°C to +105°C $\pm 50$ ppm at 25°C, $\pm 100$ ppm over -40°C to +125°C $\pm 30$ ppm at 25°C, $\pm 50$ ppm over -40°C to +125°C
Aging at 25°C	$\pm 3$ ppm/year Maximum
Load Capacitance	Series Resonant, 8pF Parallel Resonant to 32pF Parallel Resonant
Shunt Capacitance	3pF Maximum
Equivalent Series Resistance	200 Ohms Maximum over Nominal Frequency of 16MHz to 19.999999MHz 120 Ohms Maximum over Nominal Frequency of 20MHz to 24.999999MHz 100 Ohms Maximum over Nominal Frequency of 25MHz to 39.999999MHz 60 Ohms Maximum over Nominal Frequency of 40MHz to 54MHz
Mode of Operation	AT-Cut Fundamental
Drive Level	100µWatts Maximum
Spurious Response	Measured from $F_0$ to $F_0 + 5000$ ppm -3dB Minimum
Storage Temperature Range	-50°C to +150°C
Insulation Resistance	Measured at 100Vdc 500 Megaohms Minimum

## PART NUMBERING GUIDE



### Seam Sealed

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

PIN	CONNECTION
1	Crystal
2	Cover/Ground
3	Crystal
4	Cover/Ground

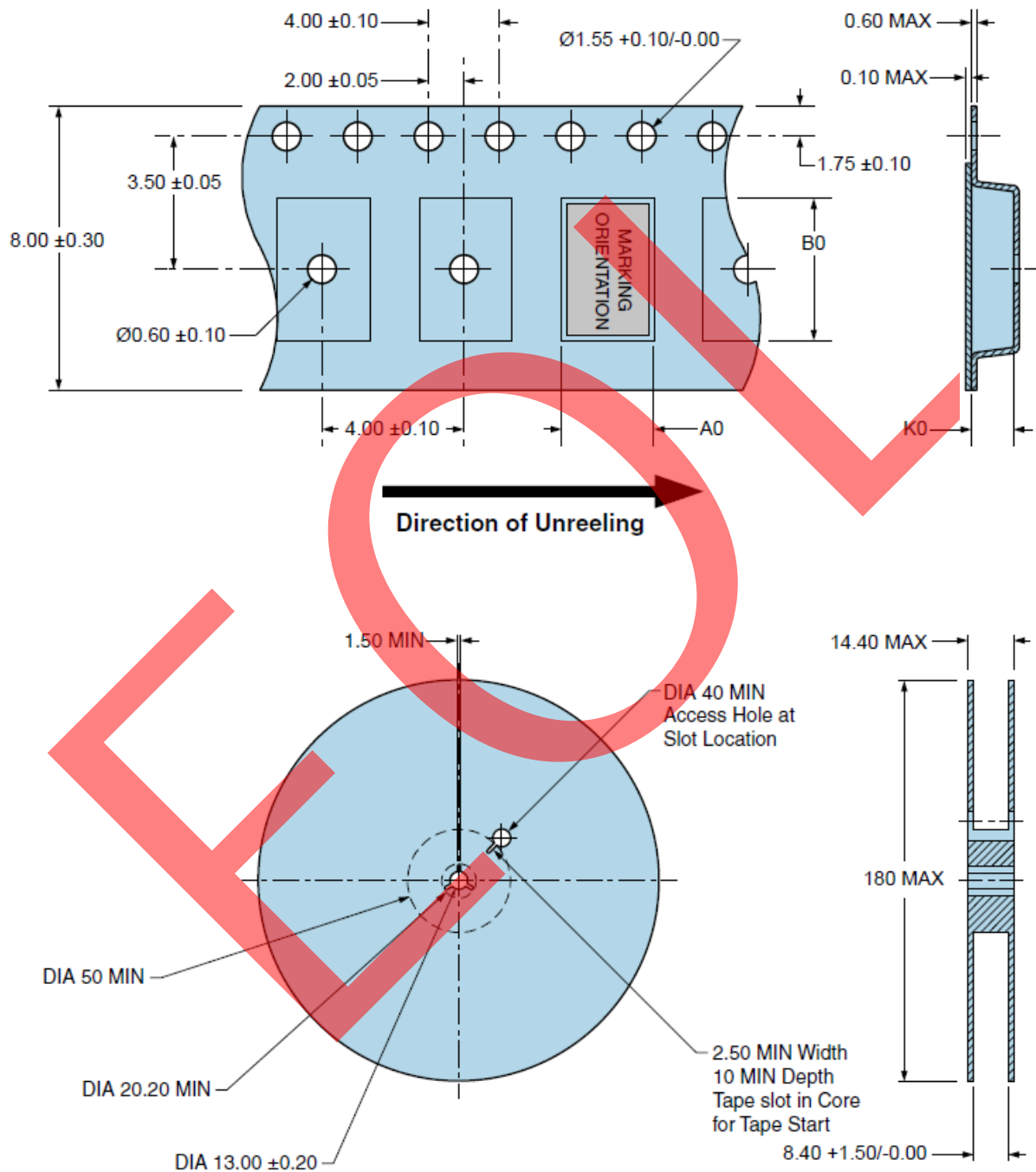
### All Dimensions in Millimeters

## TAPE & REEL DIMENSIONS

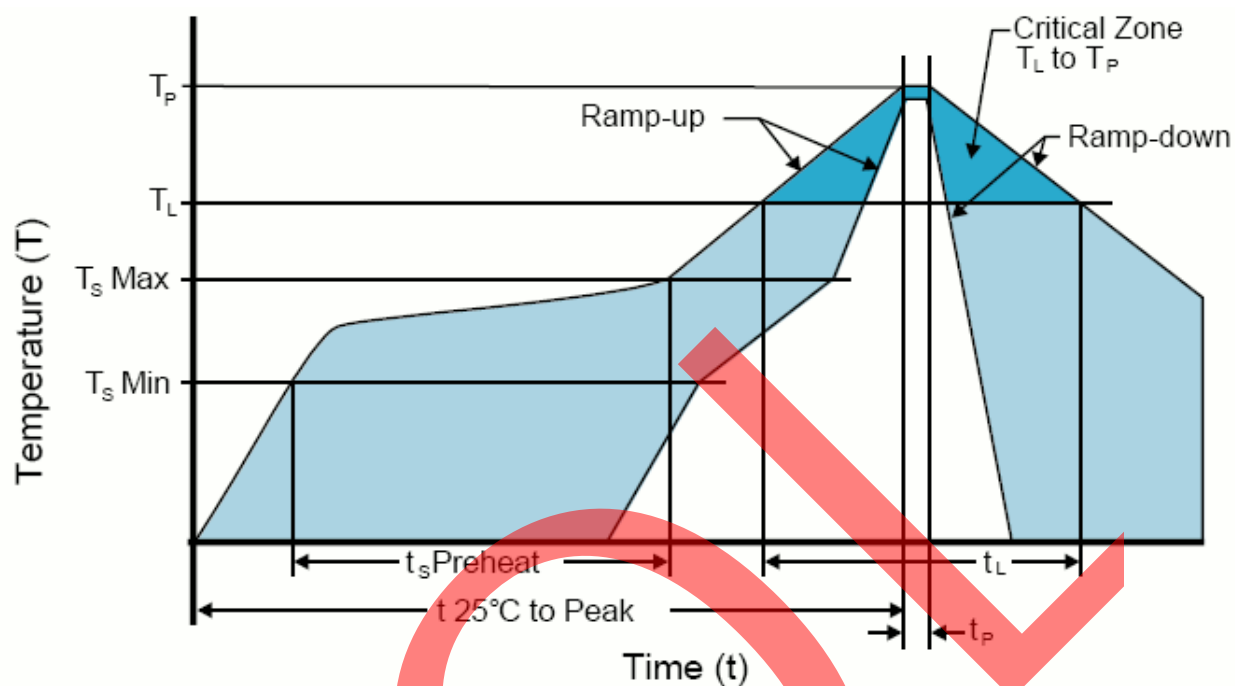
Quantity per Reel: 3,000 Units

All Dimensions in Millimeters

Compliant to EIA-481



## RECOMMENDED SOLDER REFLOW METHOD



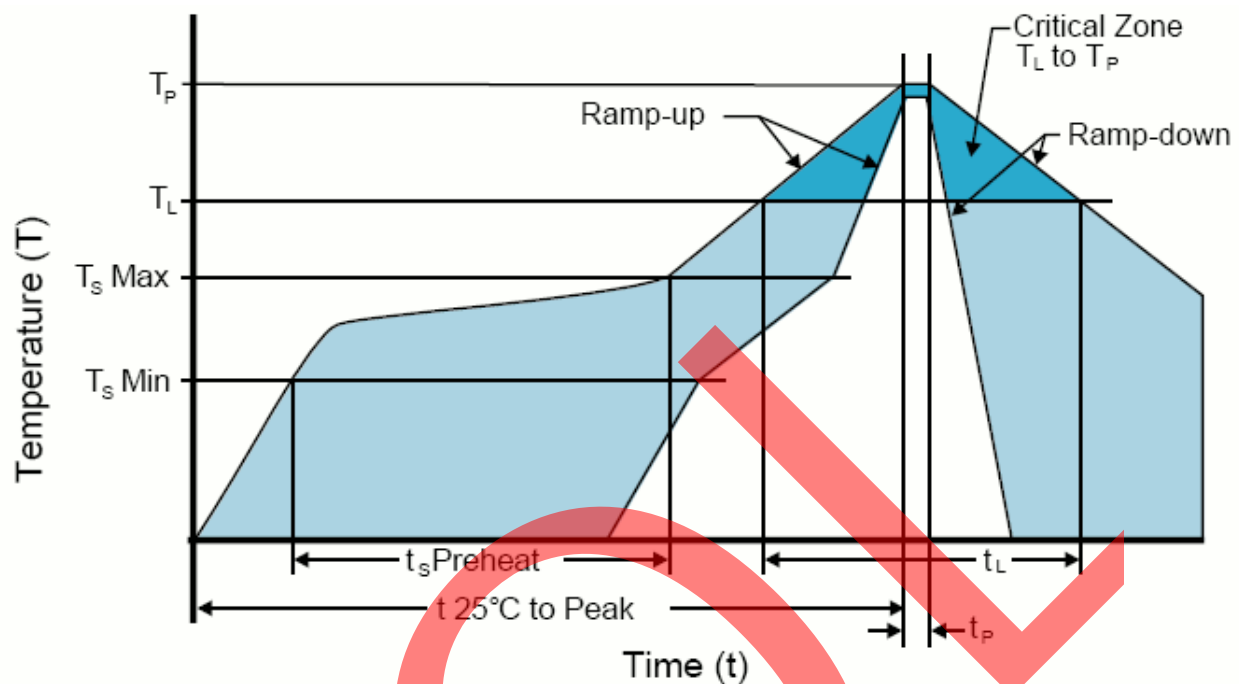
## HIGH TEMPERATURE INFRARED/CONVECTION

T <sub>S</sub> MAX to T <sub>L</sub> (Ramp-up Rate)	3°C/Second Maximum
Preheat	
- Temperature Minimum (T <sub>S</sub> MIN)	150°C
- Temperature Typical (T <sub>S</sub> TYP)	175°C
- Temperature Maximum (T <sub>S</sub> MAX)	200°C
- Time (t <sub>s</sub> )	60 - 180 Seconds
Ramp-up Rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/Second Maximum
Time Maintained Above:	
- Temperature (T <sub>L</sub> )	217°C
- Time (t <sub>L</sub> )	60 - 150 Seconds
Peak Temperature (T <sub>P</sub> )	260°C Maximum for 10 Seconds Maximum
Target Peak Temperature (T <sub>P</sub> Target)	250°C +0/-5°C
Time within 5°C of actual peak (t <sub>p</sub> )	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.

## High Temperature Manual Soldering

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

## RECOMMENDED SOLDER REFLOW METHOD



## LOW TEMPERATURE INFRARED/CONVECTION

<b>T<sub>s</sub> MAX to T<sub>L</sub> (Ramp-up Rate)</b>	5°C/Second Maximum
<b>Preheat</b>	
- Temperature Minimum (T <sub>s</sub> MIN)	N/A
- Temperature Typical (T <sub>s</sub> TYP)	150°C
- Temperature Maximum (T <sub>s</sub> MAX)	N/A
- Time (t <sub>s</sub> )	30 - 60 Seconds
<b>Ramp-up Rate (T<sub>L</sub> to T<sub>P</sub>)</b>	5°C/Second Maximum
<b>Time Maintained Above:</b>	
- Temperature (T <sub>L</sub> )	150°C
- Time (t <sub>L</sub> )	200 Seconds Maximum
<b>Peak Temperature (T<sub>P</sub>)</b>	245°C Maximum
<b>Target Peak Temperature (T<sub>P</sub> Target)</b>	245°C Maximum 2 Times / 230°C Maximum 1 Time
<b>Time within 5°C of actual peak (t<sub>p</sub>)</b>	10 Seconds Maximum 2 Times / 80 Seconds Maximum 1 Time
<b>Ramp-down Rate</b>	5°C/Second Maximum
<b>Time 25°C to Peak Temperature (t)</b>	N/A
<b>Moisture Sensitivity Level</b>	Level 1
<b>Additional Notes</b>	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.)