

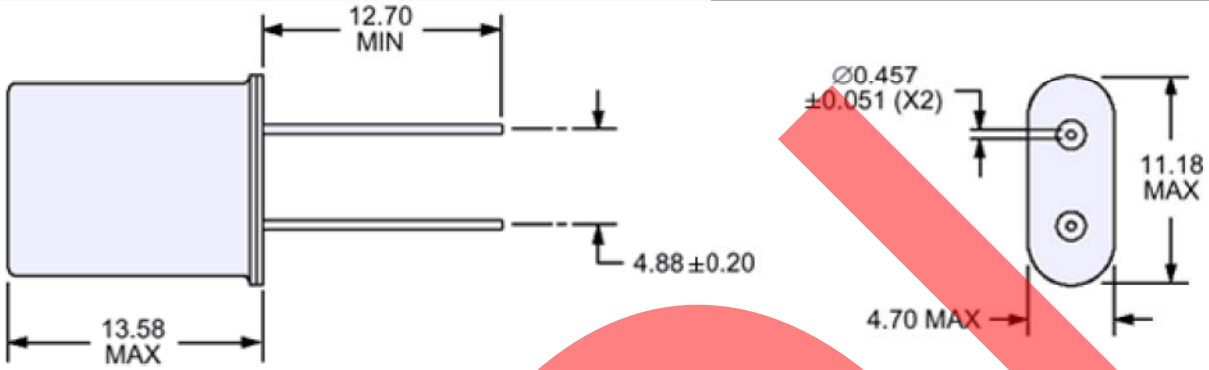
ECN/PCN No.: 3817

| For Manufacturer   |   |  |  |
|--|---|--|--|
| <b>Product Description:</b><br>HC-49/U Crystal   | <b>Abracon Part Number / Part Series:</b><br>ECX-6155-24.576M     | <input type="checkbox"/> Documentation only<br><input type="checkbox"/> ECN<br><input checked="" type="checkbox"/> EOL | <input type="checkbox"/> Series<br><input checked="" type="checkbox"/> Part Number |
| <b>Affected Revision:</b><br>5/31/2005   | <b>New Revision:</b><br>EOL                                       | <b>Application:</b>  | <input type="checkbox"/> Safety<br><input checked="" type="checkbox"/> Non-Safety  |
| <b>Prior to Change:</b><br><br>ECX-6155-24.576M (See page 2)   |   |  |  |
| <b>After Change:</b><br><br>EOL  |   |  |  |
| <b>Cause/Reason for Change:</b><br><br>Discontinuation of this older product package type and associated manufacturing capability.   |   |  |  |
| Change Plan  |   |  |  |
| <b>Effective Date:</b><br>5/05/2021  | <b>Additional Remarks:</b>  |  |  |
| <b>Change Declaration:</b>   |   |  |  |
| <b>Issued Date:</b><br>5/05/2021   | <b>Issued By:</b><br><i>Stephanie Lopez</i>                       | <b>Issued Department:</b><br>Engineering   |  |
| <b>Approval:</b><br><i>Thomas Culhane</i><br>Engineering Director  | <b>Approval:</b><br><i>Reuben Quintanilla</i><br>Quality Director | <b>Approval:</b><br><i>Ying Huang</i><br>Purchasing Director   |  |
| For Abracon EOL only   |   |  |  |
| <b>Last Time Buy (if applicable):</b><br><i>None</i>   | <b>Alternate Part Number / Part Series:</b><br><i>None</i>        |  |  |
| <b>Additional Approval:</b>  | <b>Additional Approval:</b>                                       | <b>Additional Approval:</b>  |  |
| Customer Approval (If Applicable)  |   |  |  |
| <b>Qualification Status:</b><br><br><input type="checkbox"/> Approved <input type="checkbox"/> Not accepted<br><i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i> |   |  |  |
| <b>Customer Part Number:</b>   |   | <b>Customer Project:</b>   |  |
| <b>Company Name:</b>   | <b>Company Representative:</b>                                    | <b>Representative Signature:</b>   |  |
| <b>Customer Remarks:</b>   |   |  |  |

**STANDARD SPECIFICATIONS**

|                              |                                       |
|------------------------------|---------------------------------------|
| Nominal Frequency            | 24.576MHz                             |
| Frequency Tolerance          | ±10ppm Maximum (at 25°C)              |
| Frequency Stability          | ±50ppm Maximum (over 0°C to +70°C)    |
| Aging at 25°C                | ±5ppm/year Maximum                    |
| Operating Temperature Range  | 0°C to 70°C                           |
| Load Capacitance             | 18pF                                  |
| Shunt Capacitance (C0)       | 7pF Maximum                           |
| Equivalent Series Resistance | 30 Ohms Maximum                       |
| Mode of Operation            | Third Overtone                        |
| Drive Level                  | 1mWatt Maximum, 100µWatts Correlation |
| Crystal Cut                  | AT-Cut                                |
| Storage Temperature Range    | -40°C to +85°C                        |

**HC-49/U**



**Marking**

- Line 1: **ECX6155**
- Line 2: **24.576M**
- Line 3: **XXXXX** (Where XXXXX = Ecliptek Manufacturing Code)

**NOTE:** Marking shall conform to conditions listed in TQC41-001-000

**ECX-6155 -24.576M -I2 TR**

- |   |  |
|---|--|
| <p>Series<br/>Ecliptek Custom Crystal</p> <p>Nominal Frequency<br/>24.576MHz</p> <p>Value Added Options</p> <ul style="list-style-type: none"> <li>CB = Cut Leads to 2.540 ±0.500 (0.100" ±0.020")</li> <li>CC = Cut Leads to 3.175 ±0.500 (0.125" ±0.020")</li> <li>CD = Cut Leads to 3.810 ±0.500 (0.150" ±0.020")</li> <li>CE = Cut Leads to 4.445 ±0.500 (0.175" ±0.020")</li> <li>CF = Cut Leads to 5.080 ±0.500 (0.200" ±0.020")</li> <li>CG = Cut Leads to 6.350 ±0.500 (0.250" ±0.020")</li> <li>CH = Cut Leads to 6.985 ±0.500 (0.275" ±0.020")</li> <li>CJ = Cut Leads to 7.620 ±0.500 (0.300" ±0.020")</li> <li>CL = Cut Leads to 8.255 ±0.500 (0.325" ±0.020")</li> <li>CN = Cut Leads to 8.890 ±0.500 (0.350" ±0.020")</li> <li>CP = Cut Leads to 9.525 ±0.500 (0.375" ±0.020")</li> <li>CQ = Cut Leads to 10.160 ±0.500 (0.400" ±0.020")</li> <li>D = Add Double Sided Tape</li> <li>G = Gull Wing</li> <li>I2 = Mylar Insulator Tab</li> <li>L = Third Lead</li> <li>V = Vinyl Sleeving</li> </ul> | <p>Packaging Options</p> <ul style="list-style-type: none"> <li>Blank = Bulk</li> <li>A = Tray</li> <li>TR = Tape &amp; Reel</li> <li>TR1 = Tape &amp; Reel (Variant 1)</li> <li>TR2 = Tape &amp; Reel (Variant 2)</li> <li>TR3 = Tape &amp; Reel (Variant 3)</li> </ul> |
|---|--|

**SPECIFICATION CONTROL DRAWING**

|   |  |
|---|--|
|   | Drawing Number:<br>CCX00-006-155                   |
|   | Title:<br>Ecliptek Generic (ECLMF) ECX-6155 Series |
| Effectivity Date:<br>5/31/2005  | PAGE 1 OF 2  |
| Signature approved copy on file at Ecliptek.<br><b>UNCONTROLLED IF PRINTED OR DISTRIBUTED</b> |  |

ENVIRONMENTAL & MECHANICAL


|                              |                                       |                        |                                       |
|------------------------------|---------------------------------------|------------------------|---------------------------------------|
| Fine Leak Test               | MIL-STD-883, Method 1014, Condition A | Gross Leak Test        | MIL-STD-883, Method 1014, Condition C |
| Lead Integrity               | MIL-STD-883, Method 2004              | 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 |                        |                                       |

**RoHS Compliance Information**

| RoHS Compliant | Pb-Free | Date of RoHS Compliance |
|----------------|---------|-------------------------|
| Yes            | Yes     | 5/31/2005               |

**Note:** Please refer to TEN02-030-000 more information regarding RoHS compliance.

**SPECIFICATION CONTROL DRAWING**

|  |                                  |
|--|----------------------------------|
|  | Drawing Number:<br>CCX00-006-155 |
| Title:<br>Ecliptek Generic (ECLMF) ECX-6155 Series                                   |                                  |
| Effectivity Date:<br>5/31/2005   | PAGE 2 OF 2                      |