December 16, 2013

To:  All customers using the TXE-315-KH2, TXE-418-KH2, TXE-433-KH2, EVAL-315-KH2, EVAL-418-KH2 or EVAL-433-KH2

Re:  Product Change Notice

Dear customer,

Linx Technologies is announcing the End of Life for the TXE-***-KH2 and EVAL-***-KH2 product lines and the introduction of the TXM-***-KH3 and EVAL-***-KH3 product lines.

The end of life is a result of the discontinuance of critical components from Holtek®.  The KH3 product line incorporates the Linx DS Series Encoder/Decoder IC, providing backwards compatibility for the majority of KH2 applications.

We are committed to working closely with our customers during the transition to address any questions or concerns.

**Wireless made simple**®

# Product Change Notice for TXE-315-KH2, TXE-418-KH2, TXE-433-KH2, EVAL-315-KH2, EVAL-418-KH2 and EVAL-433-KH2

PCN #: LPCN-131216-2

Publish Date: December 16, 2013

## Type of Change

End of life notice for the TXE-***-KH2 and EVAL-***-KH2 product lines and introduction of the TXM-***-KH3 and EVAL-***KH3 product lines.

## Products Affected

- TXE-315-KH2
- TXE-418-KH2
- TXE-433-KH2
- EVAL-315-KH2
- EVAL-418-KH2
- EVAL-433-KH2

## Description of Change

The HT640 Encoder used in the previous version of the KH2 product line has gone end-of-life by the manufacturer (Holtek)®.  The KH2 product line has been redesigned to incorporate the Linx DS series encoder, and is being introduced as the KH3 product line.  The design change provides for backwards compatibility with existing fielded devices using the Holtek® dip switch addressing scheme.

The new generation of product offers additional functionality and optional configuration pins, resulting in a new naming convention for the product line.  The KH3 product will fit in the PCB footprint for those customers who have followed Linx recommended layout guidelines for the KH2 product – the additional pins would be unused and non-connected.

## Reason for Change

Component end-of-life.

## Effect of Change

Form: 3 additional pins added to support address interpretation
Fit: No change to overall module size
Function: No support for tri-state addressing
Quality: No change

## Anticipated First Ship Date

Samples available December 2013

## Qualification Data

Qualification plan specifics are not for general release.  Please contact Linx directly for additional information or assistance.

## Last Time Buy Date

No formal last time buy date is established.

## Specification Comparison

| ELECTRICAL SPECIFICATIONS | | TXM-***-KH3 | | | TXE-***-KH2 | | | Units | Notes |
|---|---|---|---|---|---|---|---|---|---|
| POWER SUPPLY | | Min. | Typical | Max. | Min. | Typical | Max. | | |
| Operating Voltage | $V_{CC}$ | 2.7 | | 5.2 | 2.7 | | 5.2 | VDC | - |
| Supply Current | $I_{CC}$ | | 1.5 | | | 1.5 | | mA | 1,2,3,5 |
| Power-Down Current | $I_{PDN}$ | | 1.0 | | | 1.0 | | μA | 5 |
| **TRANSMITTER SECTION** | | | | | | | | | |
| Transmit Frequency | $F_C$ | | | | | | | | |
|   TXM/E-315-KH3/2 | | | 315 | | | 315 | | MHz | - |
|   TXM/E-418-KH3/2 | | | 418 | | | 418 | | MHz | - |
|   TXM/E-433-KH3/2 | | | 433.92 | | | 433.92 | | MHz | - |
| Center Frequency Accuracy | - | -75 | - | +75 | -75 | - | +75 | kHz | 2, 5 |
| Output Power | $P_O$ | -4 | -1 | +4 | -4 | +2 | +4 | dBm | 2,3,4 |
| Harmonic Emissions | $P_H$ | | | | | | | | |
|   TXM/E-315-KH3/2 | | | | -36 | | | -36 | dBc | 2 |
|   TXM/E-418-KH3/2 | | | | -36 | | | -36 | dBc | 2 |
|   TXM/E-433-KH3/2 | | | | -36 | | | -36 | dBc | 2 |
| **ANTENNA PORT** | | | | | | | | | |
| RF Output Impedance | $R_{OUT}$ | | 50 | | | 50 | | Ω | 4 |
| **ENCODER** | | | | | | | | | |
| Data Length | - | | | | | | | | |
|   Holtek® Protocol | | | 26 bits 3x | | | 26 bits 3x | | | |
|   DS Serial Protocol | | | | | | - | | - | |
| Average Duty Cycle | - | - | 50% | - | - | 50% | - | - | 4 |
| Encoder Oscillator | $F_{ENC}$ | - | N/A | - | - | 70 | - | kHz | |
| Data Input | | | | | | | | | |
|   Logic Low | $V_{IL}$ | 0 | - | $0.2xV_{CC}$ | 0 | - | $0.2xV_{CC}$ | VDC | 4 |
|   Logic High | $V_{IH}$ | $V_{CC}x0.8$ | - | $V_{CC}$ | $V_{CC}x0.8$ | - | $V_{CC}$ | VDC | 4 |
| Input Sink Current | - | - | 0.0001 | 0.005 | 0.6 | 1.0 | 1.2 | mA | 4 |
| **ENVIRONMENTAL** | | | | | | | | | |
| Operating Temperature Range | - | -30 | - | +70 | -30 | - | +70 | °C | - |

Notes:
1. Current draw with 50% mark / space ratio.
2. Into a 50 ohm load.
3. With 430 ohm resistor on LADJ.
4. Characterized, but not tested.
5. At 25°C, with 3V supply.
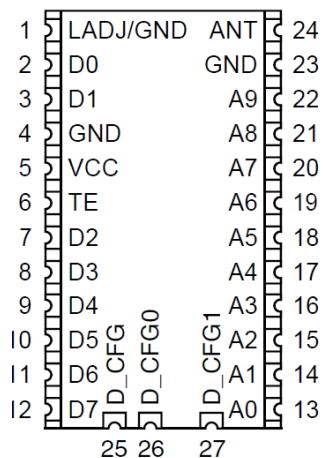
Wireless made simple®

## Footprint Comparison



Figure 1a: TXM-***-KH3 Footprint
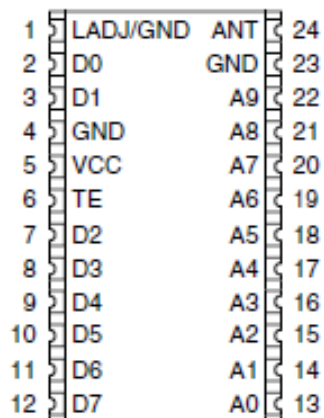


Figure 1b: TXE-***-KH2 Footprint

## Part Number Comparison

| PRODUCT GOING END OF LIFE | REPLACEMENT PRODUCT |
|---|---|
| TXE-315-KH2 | TXM-315-KH3 |
| TXE-418-KH2 | TXM-418-KH3 |
| TXE-433-KH2 | TXM-433-KH3 |
| EVAL-315-KH2 | EVAL-315-KH3 |
| EVAL-418-KH2 | EVAL-418-KH3 |
| EVAL-433-KH2 | EVAL-433-KH3 |

Wireless made simple®