

General Description

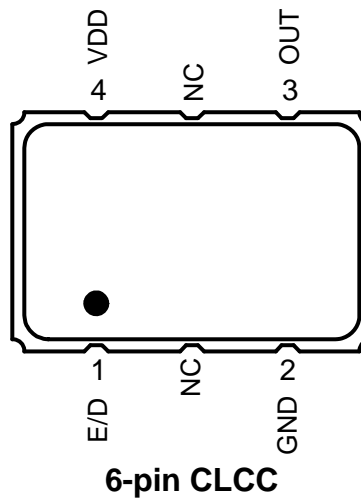
The XUH is an HCMOS Crystal Oscillator with 300fs typical phase jitter over 12kHz to 20 MHz bandwidth. Available in a wide frequency range from 0.016MHz to 167MHz, the IDT XUH Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

The 4th order Delta Sigma Modulator reduces noise to the levels that are comparable to traditional Bulk Quartz and SAW oscillators. With short lead-time, low cost, low noise, wide frequency range, excellent ambient performance, the XUH is an excellent choice over the conventional technologies. The XUH has stabilities as tight as $\pm 20\text{ppm}$ with extremely quick delivery for both standard and custom frequencies

Features

- Frequency range: 0.016 to 167MHz
- Output Type: HCMOS
- Frequency Stability: $\pm 20\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, or $\pm 100\text{ppm}$
- Supply Voltage: 1.8V, 2.5V or 3.3V
- Phase Jitter (1.875MHz to 20MHz): 100fs typical
- Phase Jitter (12kHz to 20MHz): 300fs typical
- Package options: 5.0mm x 3.2mm x 1.2mm (JS4)
7.0mm x 5.0mm x 1.3mm (JU4)
- Operating Temperatures: -20°C to $+70^{\circ}\text{C}$ or -40°C to $+85^{\circ}\text{C}$

Pin Assignment

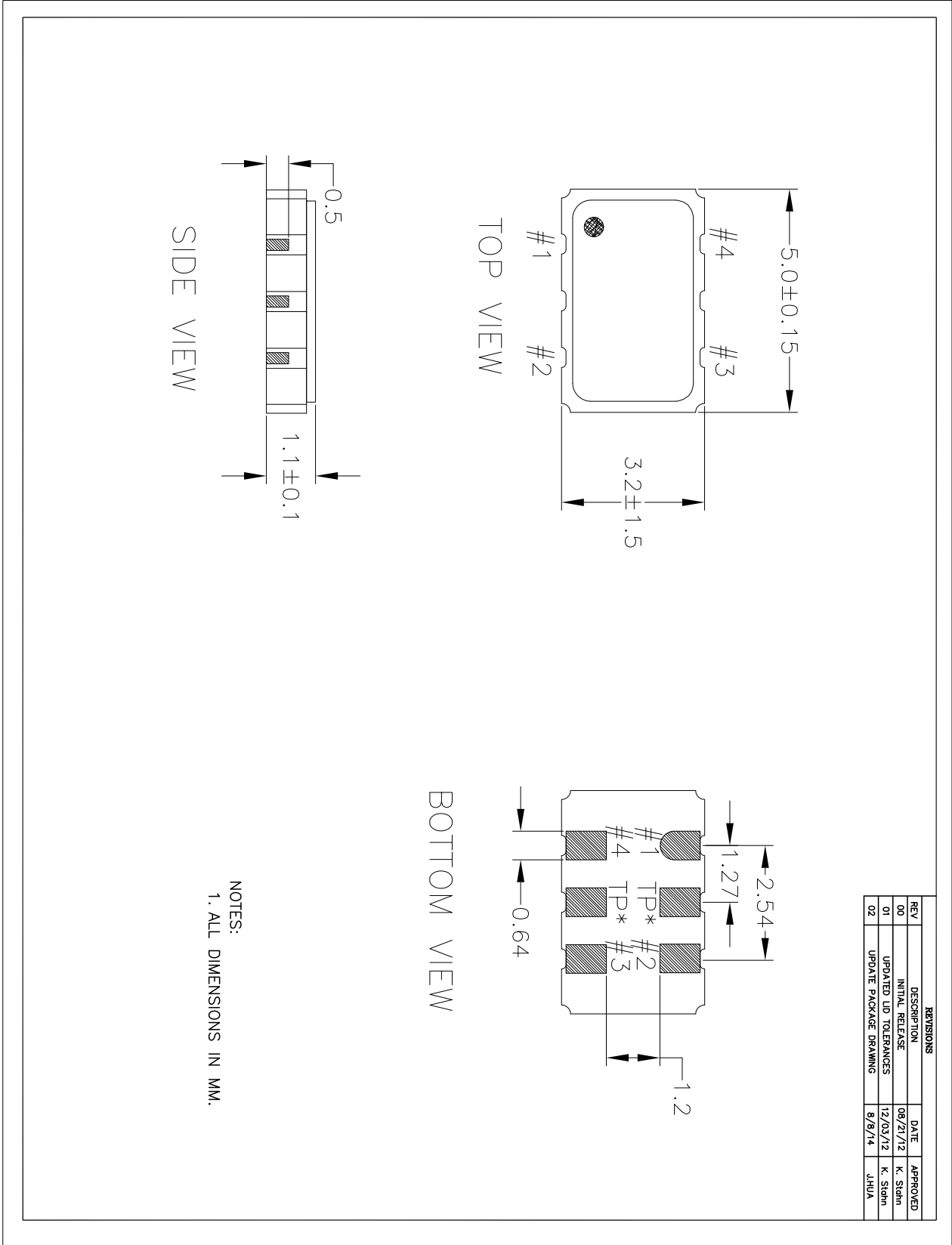


Pin Descriptions

Pin Number	Pin Name	Description
1	E/D	Enable/Disable ¹ (0=Output Disabled)
2	GND	Connect to ground
3	OUT	Output
4	VDD	Supply voltage

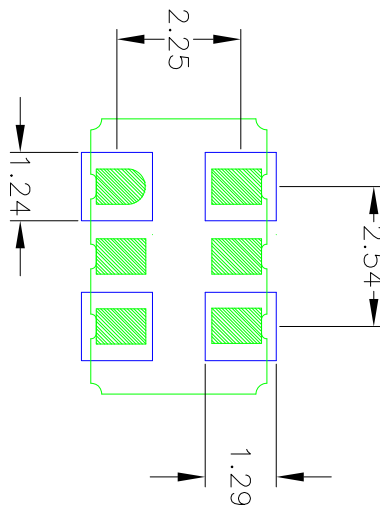
1. Pulled high internally.

JS4 Package Outline and Dimensions



JS4 Package Outline and Dimensions (cont.)

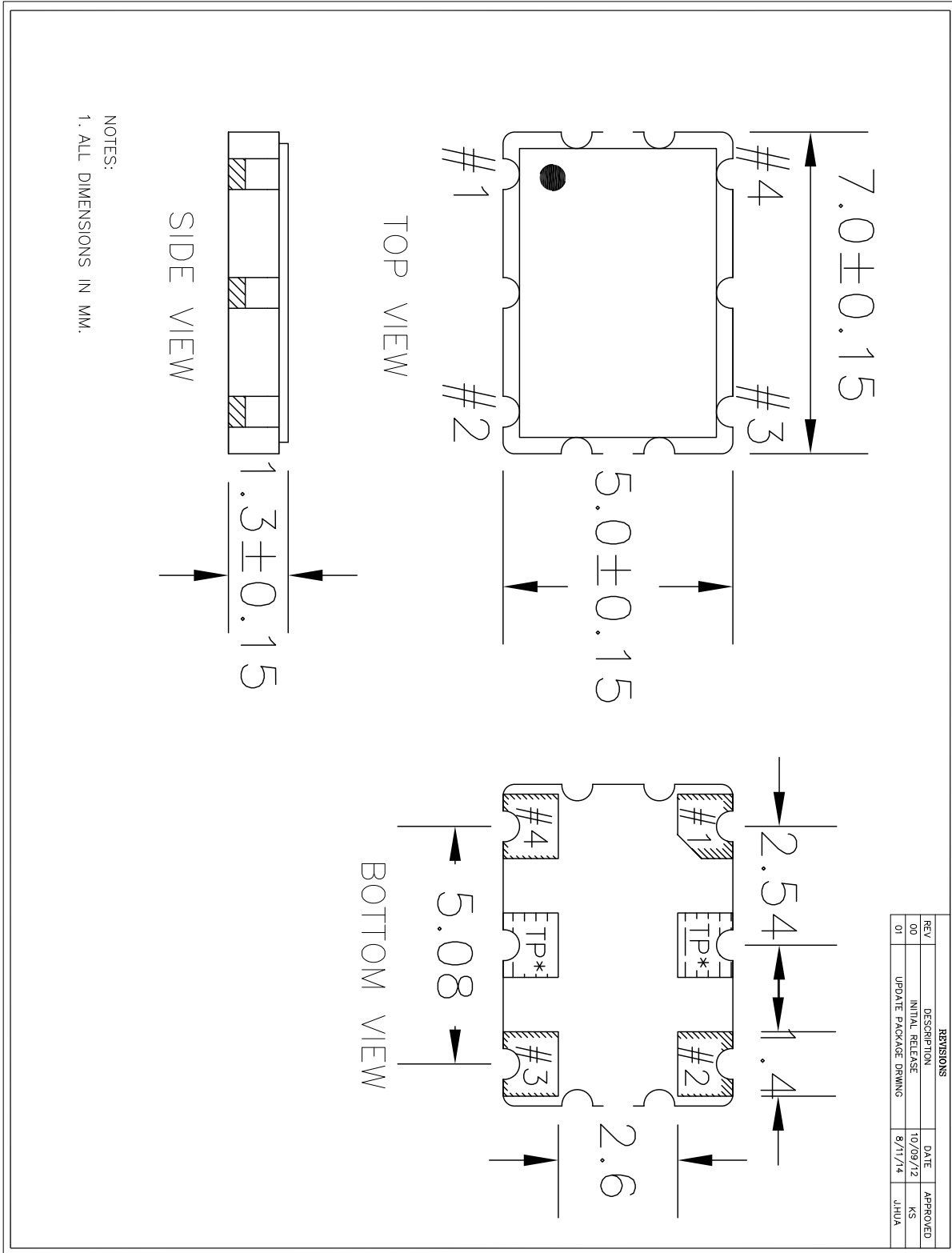
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	08/21/12	K. Shah
01	UPDATED LID TOLERANCES	12/03/12	K. Shah
02	UPDATE PACKAGE DRAWING	8/8/14	JHUA



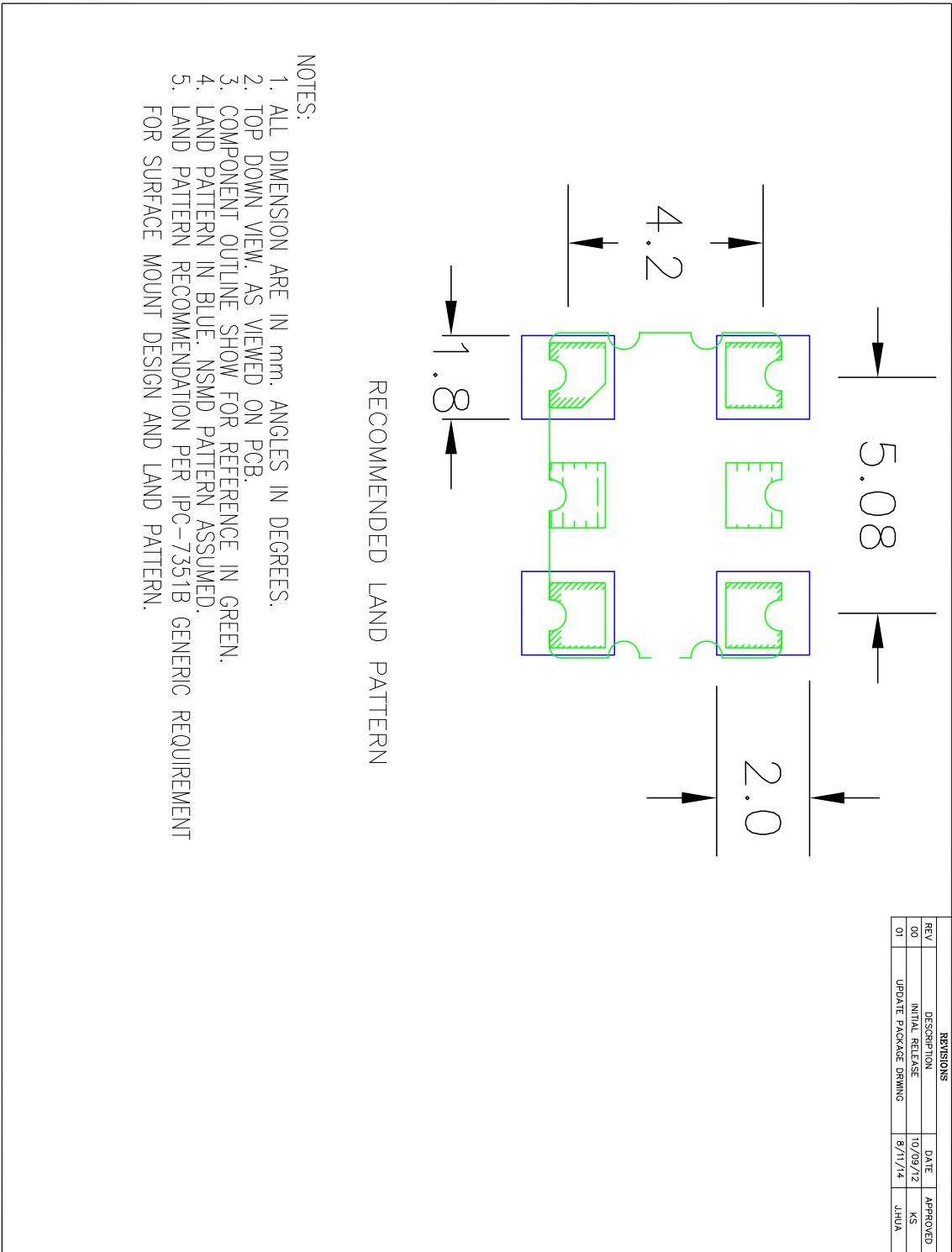
RECOMMENDED LAND PATTERN

- NOTES:
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
 2. TOP DOWN VIEW: AS VIEWED ON PCB.
 3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
 4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
 5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

JU4 Package Outline and Dimensions



JU4 Package Outline and Dimensions (cont.)



- NOTES:
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
 2. TOP DOWN VIEW, AS VIEWED ON PCB.
 3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
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