

General Description

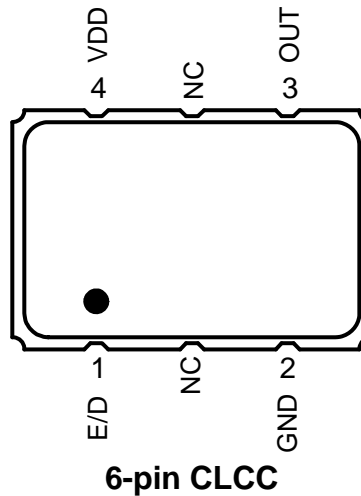
The XUH is an HCMOS Crystal Oscillator with 300fs typical phase jitter over 12kHz to 20 MHz bandwidth. Available in a wide frequency range from 0.016MHz to 167MHz, the IDT XUH Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

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

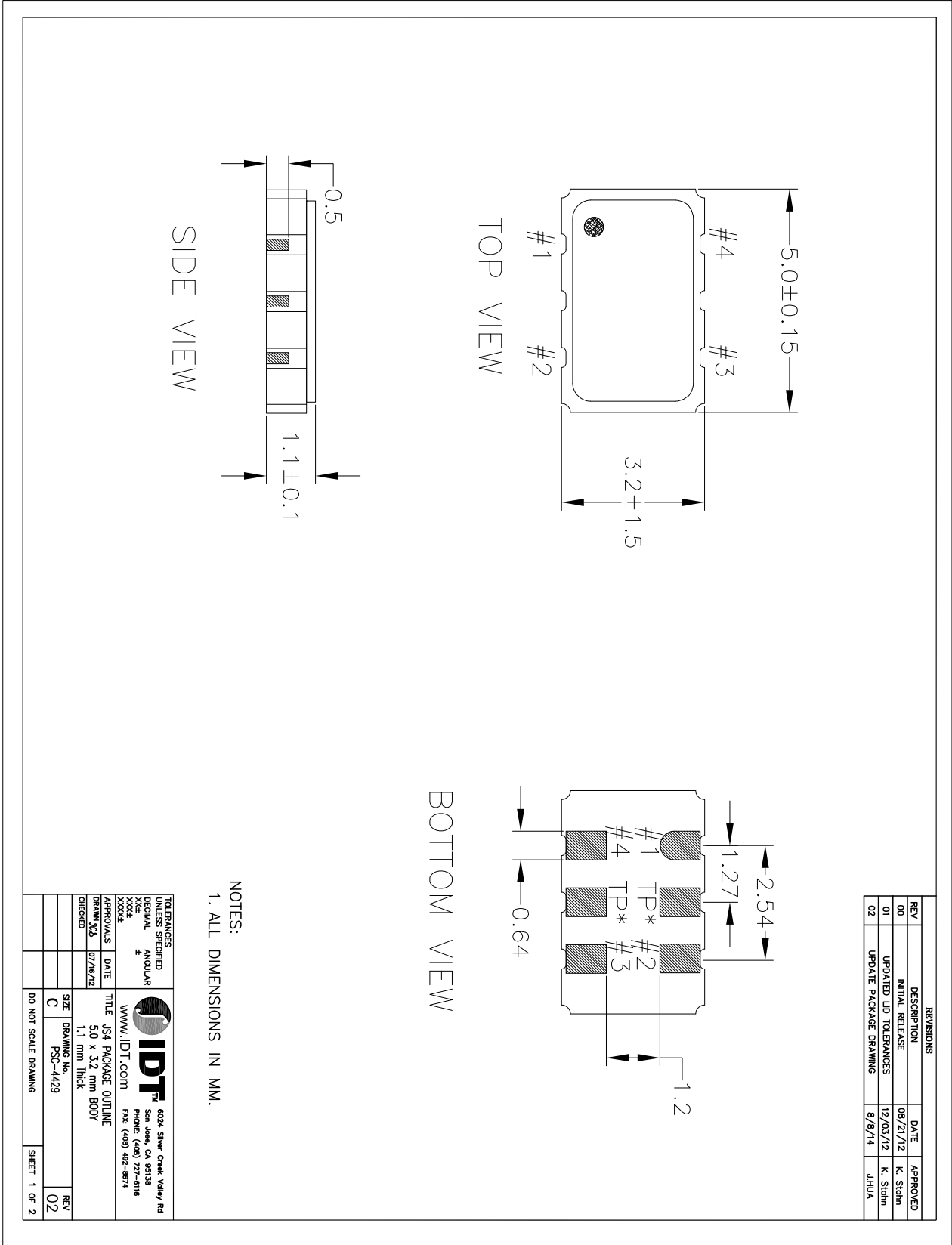


Pin Descriptions

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



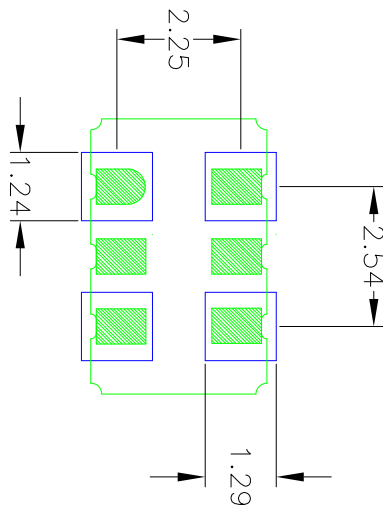
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	08/21/12	K. Stohm
01	UPDATED LID TOLERANCES	12/03/12	K. Stohm
02	UPDATE PACKAGE DRAWING	8/8/14	JHUA

NOTES:
1. ALL DIMENSIONS IN MM.

TOLERANCES UNLESS SPECIFIED		<p>6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 482-8874</p>
DECIMAL	ANGULAR	
±	±	<p>www.IDT.com</p>
XXXX		<p>DATE: 07/18/12</p>
APPROVALS	DATE	<p>TITLE: JS4 PACKAGE OUTLINE</p>
DRAWN: XJA	07/18/12	<p>SIZE: 5.0 x 3.2 mm BODY</p>
CHECKED:		<p>1.1 mm THICK</p>
		<p>DRAWING No. FSC-4429</p>
		<p>DO NOT SCALE DRAWING</p>
		<p>SHEET 1 OF 2</p>



JS4 Package Outline and Dimensions (cont.)



RECOMMENDED LAND PATTERN

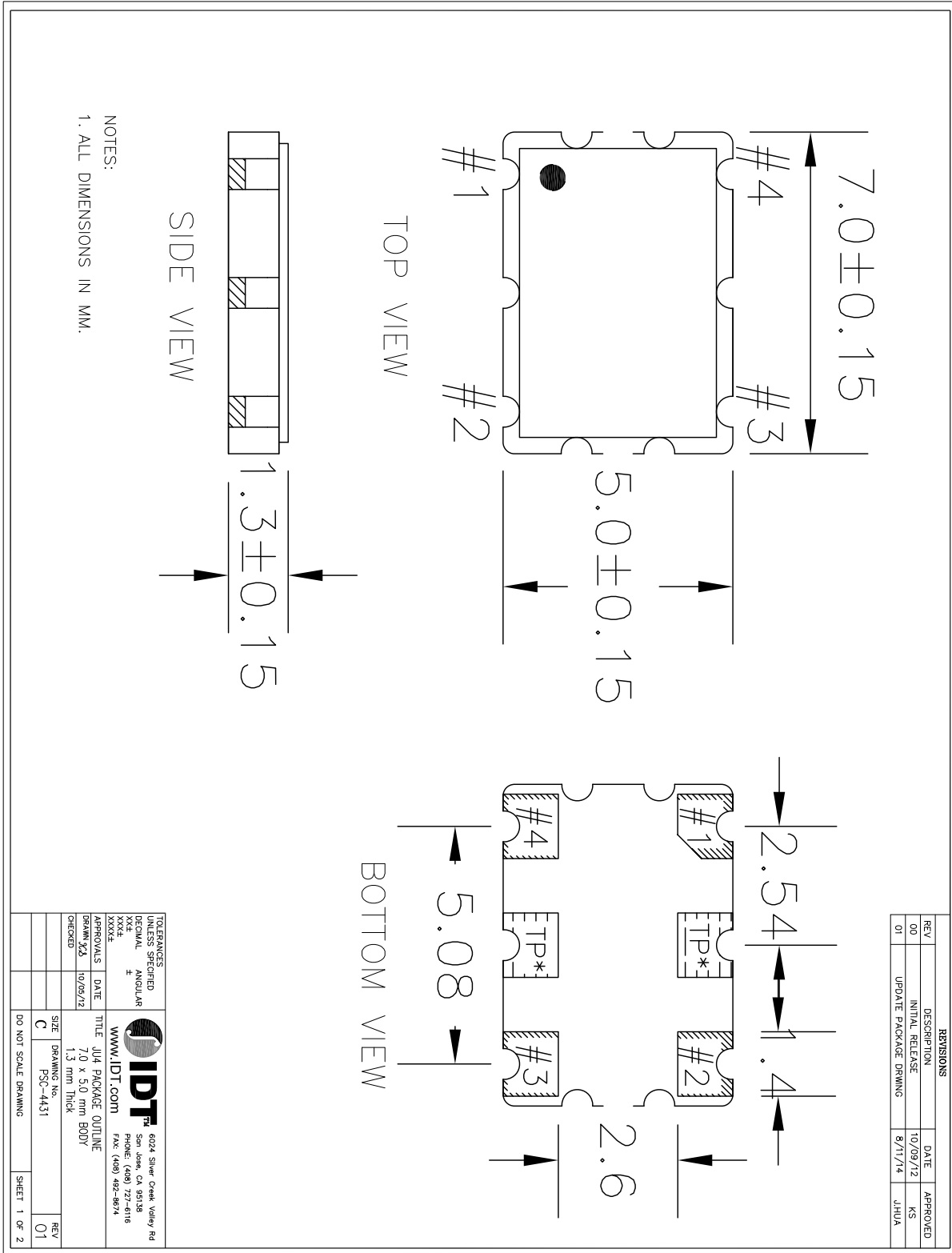
- NOTES:
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
 2. TOP DOWN VIEW: AS VIEWED ON PCB.
 3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
 4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
 5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

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

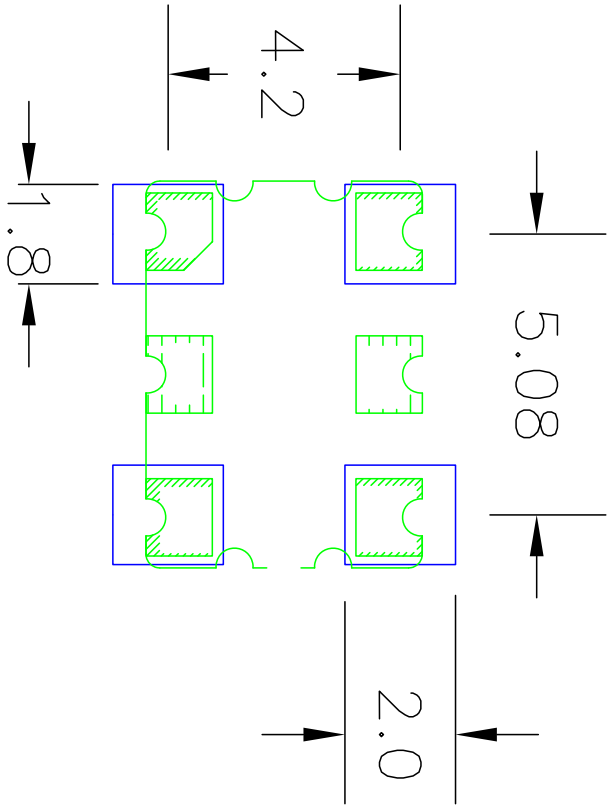
TOLERANCES UNLESS SPECIFIED	
DECIMAL	ANGULAR
±	°
8024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 777-6116 FAX: (408) 482-8974 WWW.IDT.COM	
APPROVALS	DATE
DESIGNED BY	07/16/12
TITLE JS4 PACKAGE OUTLINE 5.0 x 3.2 mm BODY 1.1 mm Thick	
SIZE	BRNNG: NSC-4429
C	REV: 02
DO NOT SCALE DRAWING	
SHEET 2 OF 2	



JU4 Package Outline and Dimensions



JU4 Package Outline and Dimensions (cont.)



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.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	10/09/12	KS
01	UPDATE PACKAGE DRAWING	8/17/14	JHUA

TOLERANCES UNLESS SPECIFIED			6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-8118 FAX: (408) 992-8974
DECIMAL	ANGULAR		
XXXX	±	www.idt.com	
APPROVALS	DATE	TITLE	SIZE
XXXXX	10/09/12	JU4 PACKAGE OUTLINE	C
DRAWN BY	DATE	7.0 x 5.0 mm BODY	PSC-4431
CHECKED		1.3 mm Thick	
			DO NOT SCALE DRAWINGS
			SHEET 2 OF 2
			REV 01

