

General Description

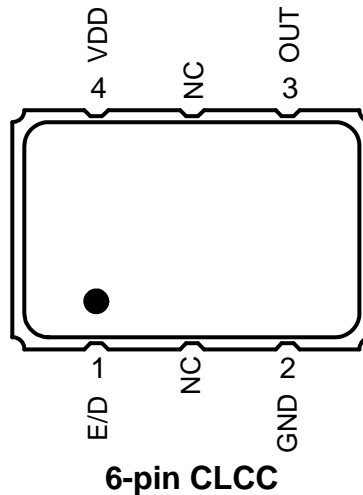
The XLH is an HCMOS Crystal Oscillator with 750fs typical phase jitter over 12kHz to 20 MHz bandwidth. Available in a wide frequency range from 0.750MHz to 250MHz, the IDT XLH Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

The 3rd 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 XLH is an excellent choice over the conventional technologies. The XLH has stabilities as tight as $\pm 20\text{ppm}$ with extremely quick delivery for both standard and custom frequencies

Features

- Frequency range: 0.750 to 250 MHz
- Output Type: HCMOS/LVCMOS Compatible
- Frequency Stability: $\pm 20\text{ppm}$, $\pm 25\text{ppm}$, $\pm 50\text{ppm}$, or $\pm 100\text{ppm}$
- Supply Voltage: 2.5V or 3.3V
- Phase Jitter (1.875MHz to 20MHz): 225fs typical
- Phase Jitter (12kHz to 20MHz): 750fs typical
- Package options: 3.2mm x 2.5mm x 1.0mm (JX4)
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

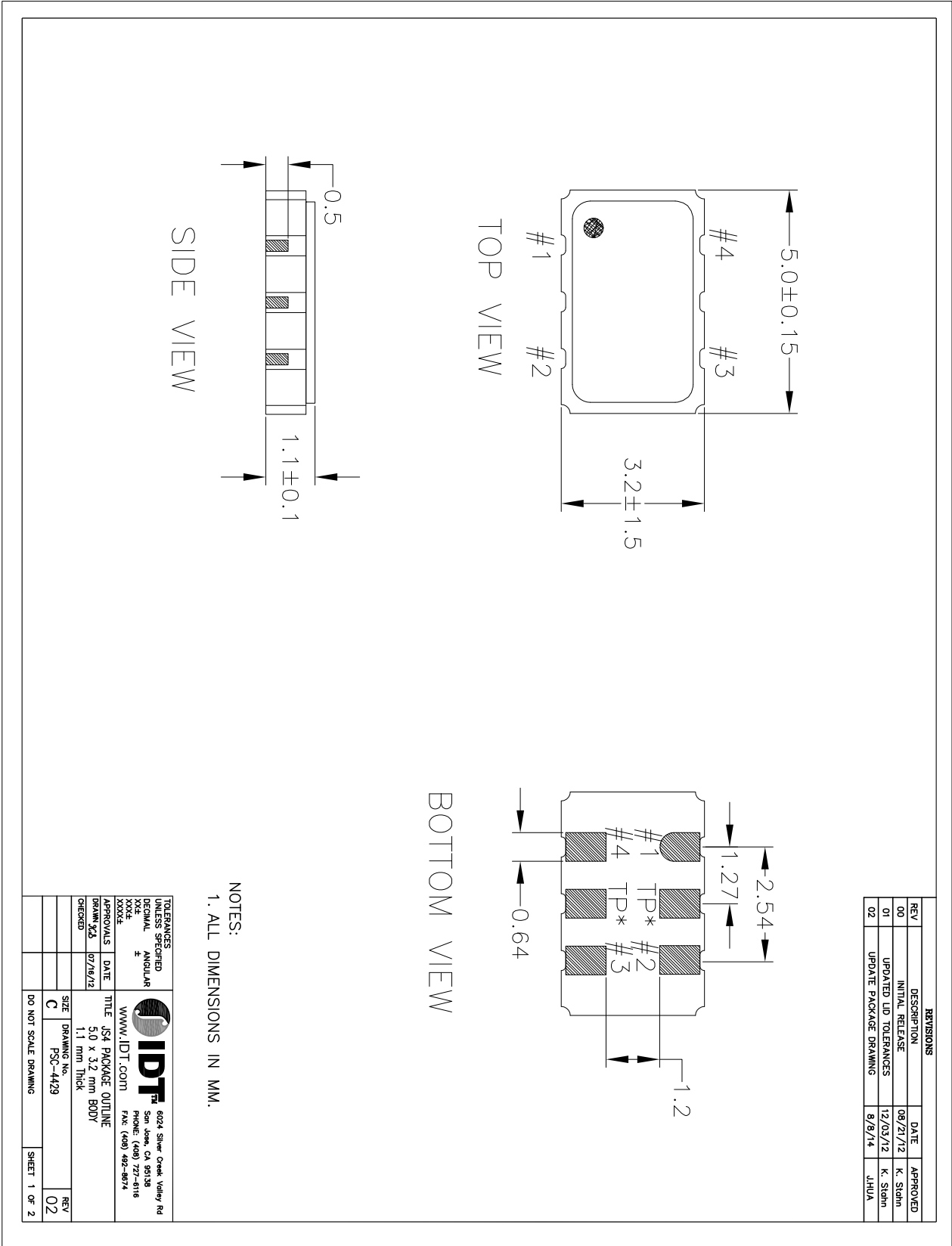


Pin Descriptions

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

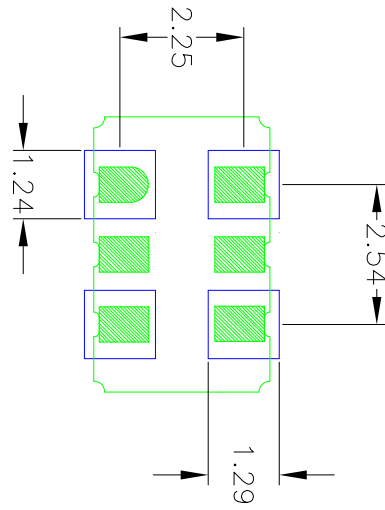


REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	08/21/12	K. Stohm
01	UPDATED LID TOLERANCES	12/03/12	K. Stohm
02	UPDATE PACKAGE DRAWING	8/8/14	JHUA

NOTES:
1. ALL DIMENSIONS IN MM.

TOLERANCES UNLESS SPECIFIED DECIMAL ANGULAR XXXX ±		6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 482-8674 WWW.IDT.COM	
APPROVALS	DATE	TITLE	REV
DRAWN X2	07/18/12	JS4 PACKAGE OUTLINE	02
CHECKED		5.0 X 3.2 mm BODY 1.1 mm THICK	
SIZE	DRAWING No.	FSC-4429	
DO NOT SCALE DRAWING			SHEET 1 OF 2

JS4 Package Outline and Dimensions (cont.)



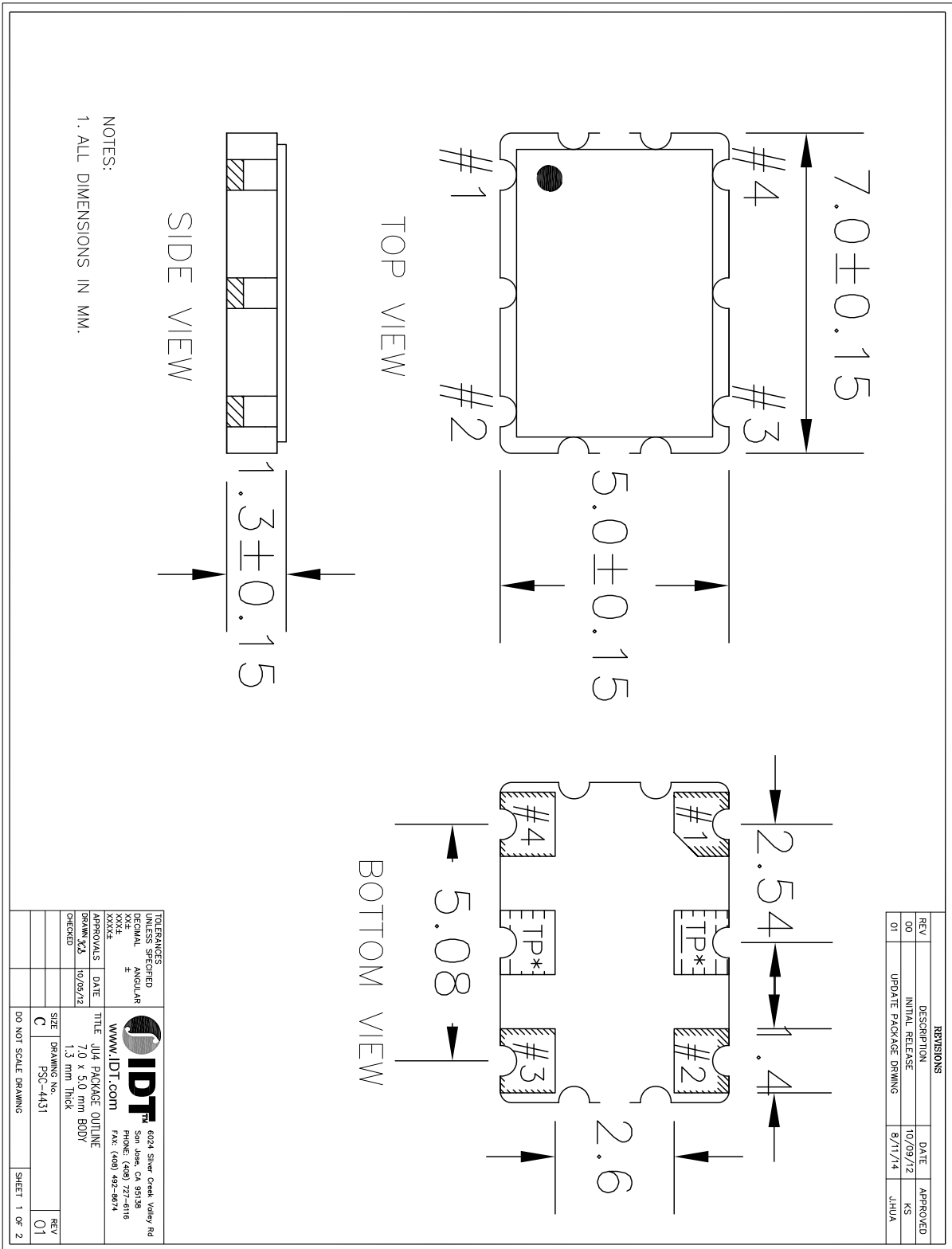
RECOMMENDED LAND PATTERN

- 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.

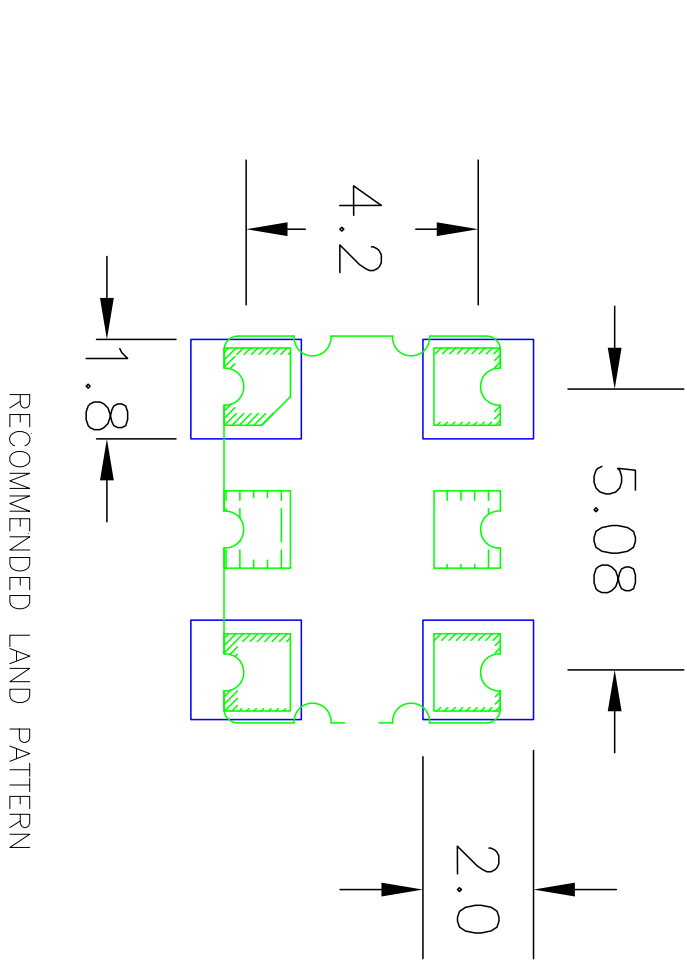
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	09/27/12	K. Stahn
01	UPDATED LID TOLERANCES	12/03/12	K. Stahn
02	UPDATE PACKAGE DRAWING	8/9/14	JHUA

TOLERANCES UNLESS SPECIFIED		8004 Silver Creek Valley Rd San Jose, CA 95138 Phone: (408) 772-8116 Fax: (408) 482-8774 www.IDT.com
XX.XX	±	
APPROVALS	DATE	TITLE
[Signature] [Signature]	07/19/12	JS4 PACKAGE OUTLINE
[Signature] [Signature]		5.0 x 3.2 mm B001
CREATED		1.1 mm THICK
SIZE	DRAWING No.	REV
C	F5C-4429	02
DO NOT SCALE DRAWING		SHEET 2 OF 2

JU4 Package Outline and Dimensions



JU4 Package Outline and Dimensions (cont.)

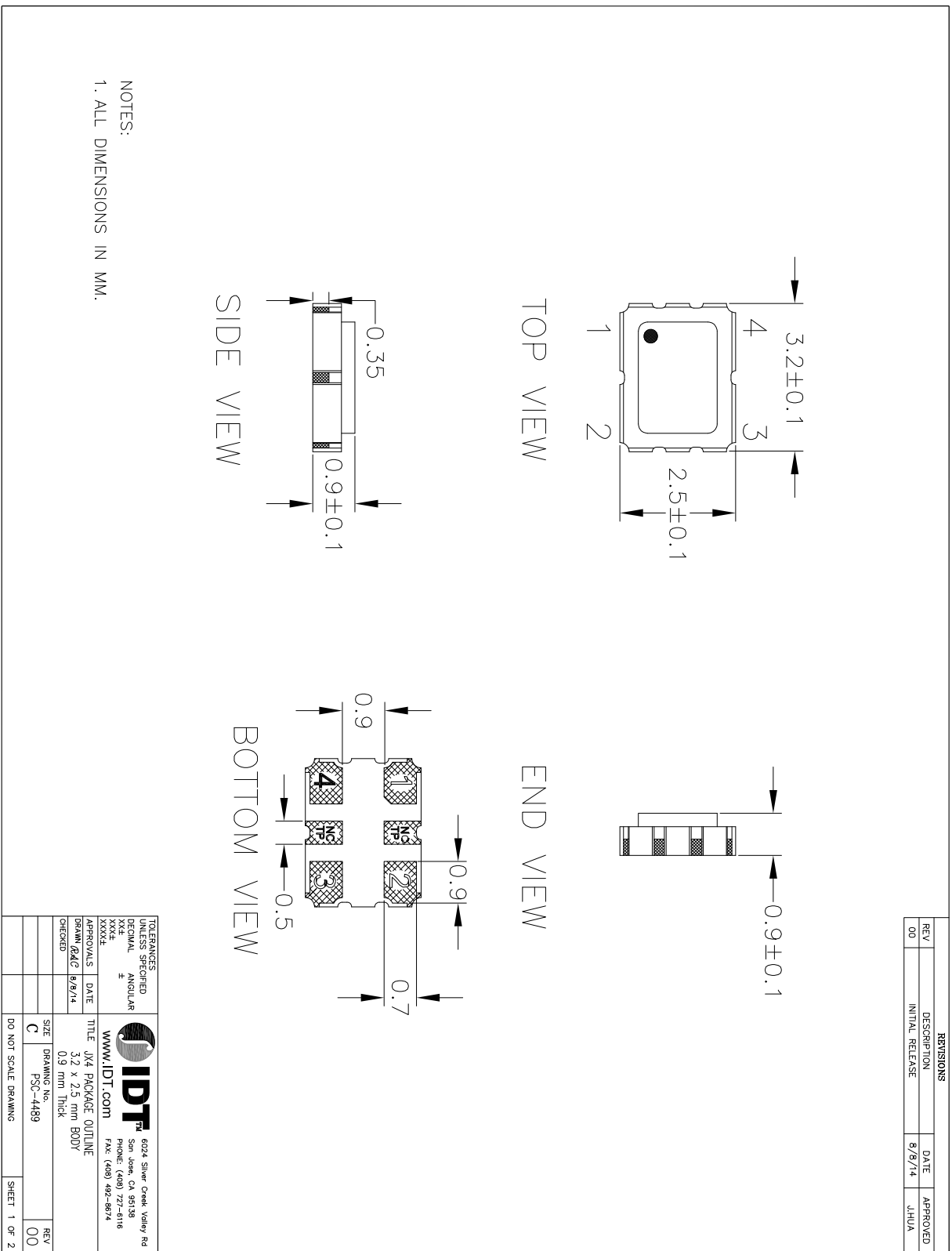


- NOTES:
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 4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
 5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	10/09/12	KS
01	UPDATE PACKAGE DRWING	8/11/14	JHUA

TOLERANCES UNLESS SPECIFIED	8024 Silver Creek Valley Rd San Jose, CA 95128 Phone: (408) 486-1616 Fax: (408) 482-8674 WWW.IDT.COM			
CENTRAL				
ANGULAR				
XXX.X				
APPROVALS	DATE	TITLE	SIZE	REV
DRWING XYS	10/09/12	JU4 PACKAGE OUTLINE	7.0 x 5.0 mm BODY	01
CHECKED			1.3 mm Thick	
			DRAWING No. PSC-4431	
			DO NOT SCALE DRAWING	SHEET 2 OF 2

JX4 Package Outline and Dimensions

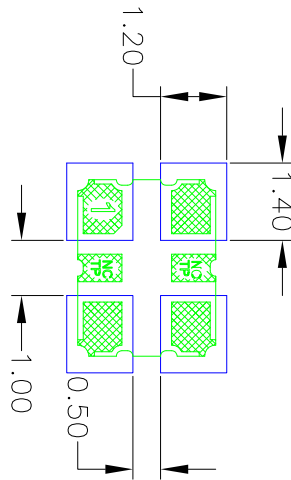


NOTES:
1. ALL DIMENSIONS IN MM.

REVISIONS		
REV	DESCRIPTION	DATE
00	INITIAL RELEASE	8/8/14
		APPROVED JHUA

ITERATIONS	UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 492-8674
DECIMAL	ANGULAR		
XXXE	±	www.IDT.com	
APPROVALS	DATE	TITLE	SIZE
DRAWN QMG	8/8/14	JX4 PACKAGE OUTLINE	C
CHECKED		3.2 x 2.5 mm BODY 0.9 mm Thick	REV
		PSC-4489	00
DO NOT SCALE DRAWING			SHEET 1 OF 2

JX4 Package Outline and Dimensions (cont.)



RECOMMENDED LAND PATTERN

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 2. TOP DOWN VIEW. AS VIEWED ON PCB.
 3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	8/8/14	J.HUA

TOLERANCES UNLESS SPECIFIED			
DECIMAL	ANGULAR	6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 462-8874	
XX.X	±	WWW.IDT.COM TITLE: JX4 PACKAGE OUTLINE	
XXX.X		SIZE: 3.2 x 2.5 mm BODY 0.9 mm Thick	
XXXX.X		APPROVALS: DATE: 8/8/14 DRAWN: GDC CHECKED:	
		SIZE: C	DRAWING No.: PSC-4489
		DO NOT SCALE DRAWING	
		SHEET: 2	OF: 2