

General Description

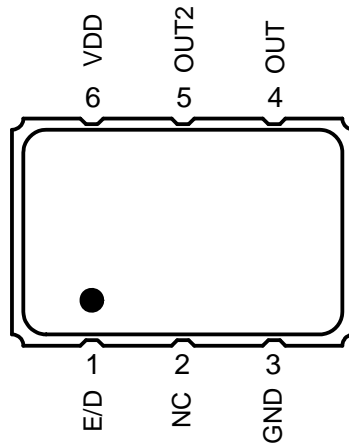
The XLL is an LVDS Crystal Oscillator with 0.89ps typical phase jitter over 12kHz to 20 MHz bandwidth. Available in a wide frequency range from 0.750MHz to 1350MHz, the IDT XLL Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

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

Features

- Frequency range: 0.750MHz to 1350MHz
- Output Type: LVDS
- 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): 0.89ps typical
- Package options: 3.2mm x 2.5mm x 1.0mm (JX6)
5.0mm x 3.2mm x 1.2mm (JS6)
7.0mm x 5.0mm x 1.3mm (JU6)
- Operating Temperatures: -20°C to $+70^{\circ}\text{C}$ or -40°C to $+85^{\circ}\text{C}$

Pin Assignment



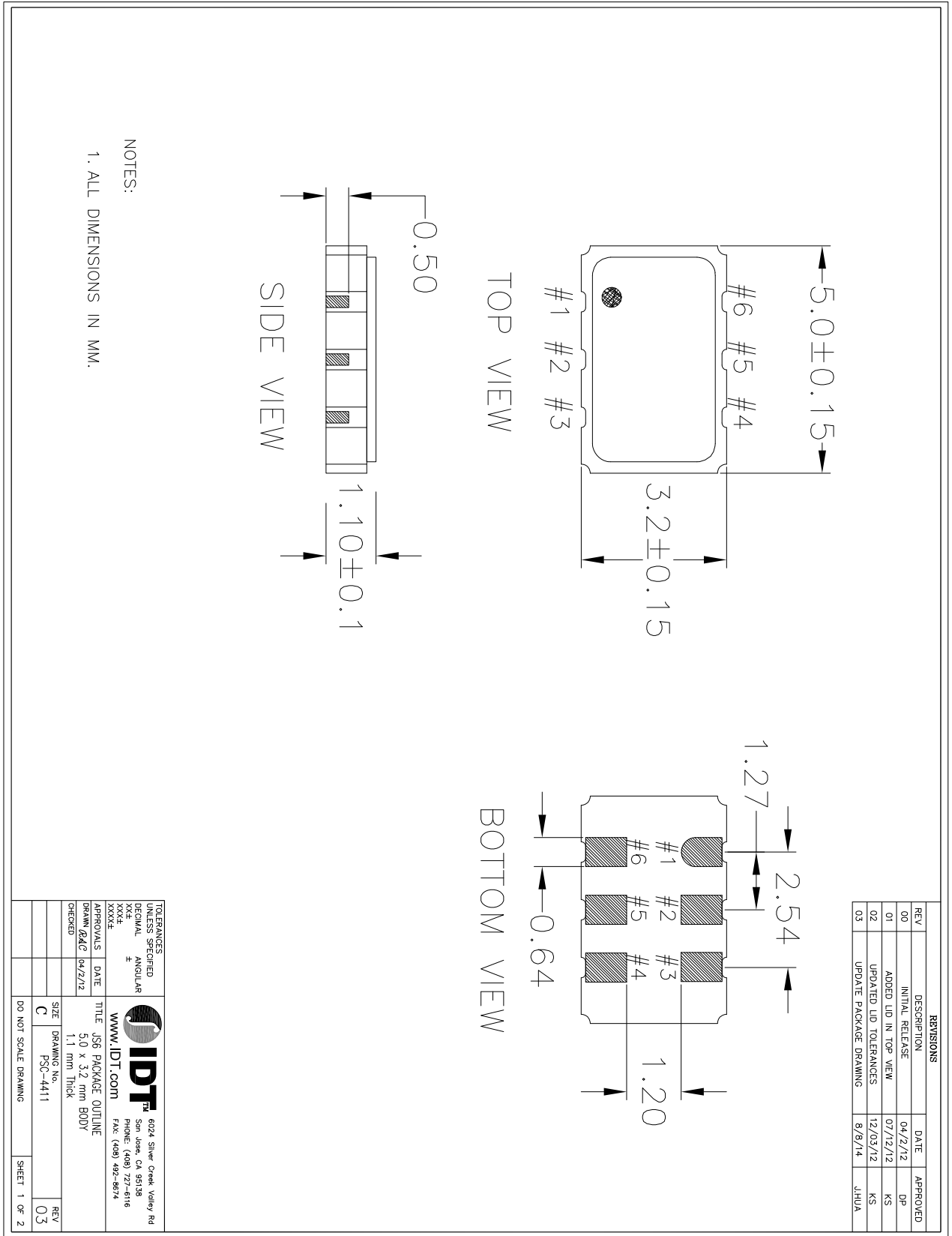
6-pin CLCC

Pin Descriptions

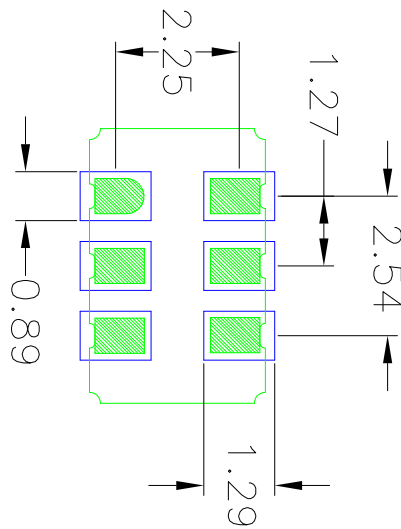
Pin Number	Pin Name	Description
1	E/D	Enable/Disable ¹ (0=Output Disabled)
2	NC	No connect
3	GND	Connect to ground
4	OUT	Output
5	OUT2	Complementary Output
6	VDD	Supply voltage

1. Pulled high internally.

JS6 Package Outline and Dimensions



JS6 Package Outline and Dimensions (cont.)



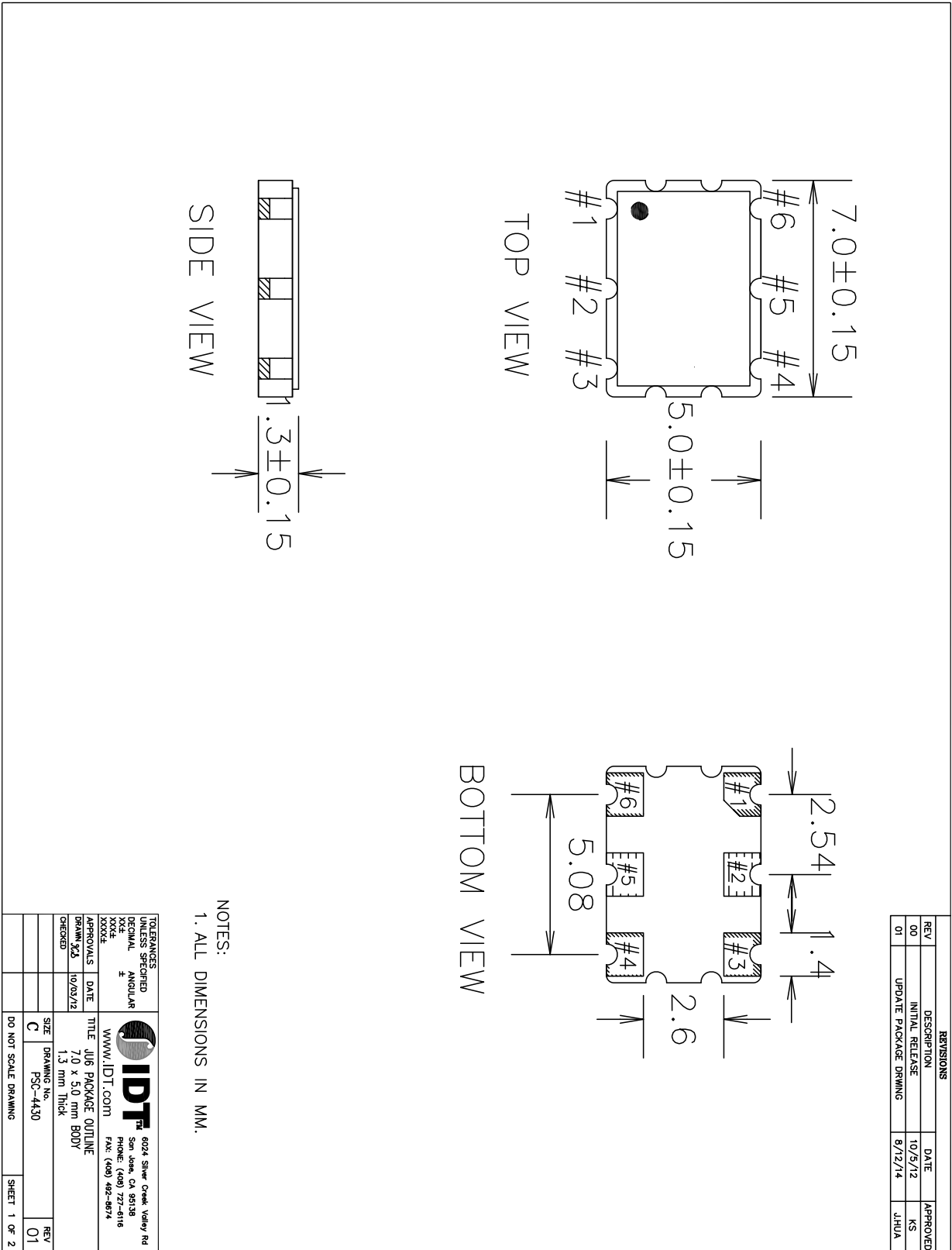
RECOMMENDED LAND PATTERN

- 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.

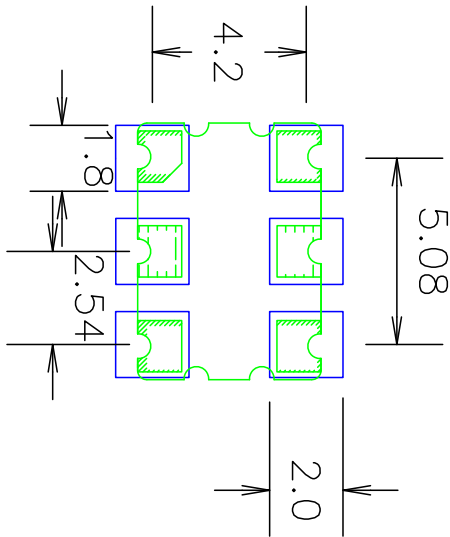
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	04/27/12	DP
01	ADDED LID IN TOP VIEW	07/12/12	KS
02	UPDATED LID TOLERANCES	12/03/12	KS
03	UPDATE PACKAGE DRAWING	8/8/14	J.HUA

TOLERANCES UNLESS SPECIFIED		8024 Silver Creek Valley Rd	
DECIMAL	ANGULAR	San Jose, CA 95138	
XX.X	F	PHONE: (408) 773-6116	
XX.XX	F	FAX: (408) 492-9674	
XX.XXX	F	WWW.IDT.COM	
APPROVALS	DATE	TITLE JS6 PACKAGE OUTLINE	
DRW/ALG	04/27/12	5.0 X 3.2 mm B00T	
CHK/BD		1.1 mm THICK	
QTY		SIZE	REV
		C	03
		DO NOT SCALE DRAWING	
		SHEET 2 OF 2	

JU6 Package Outline and Dimensions



JU6 Package Outline and Dimensions (cont.)



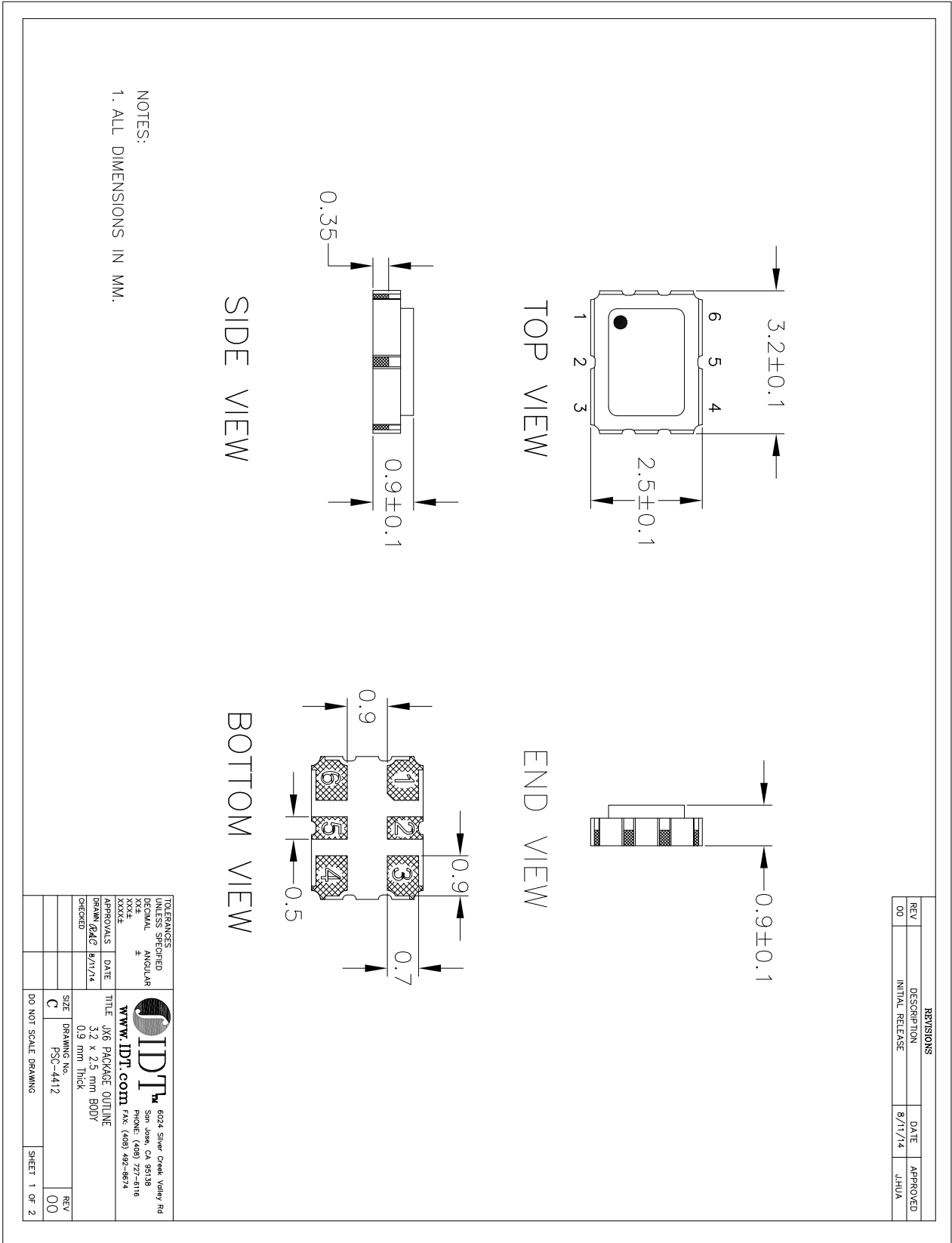
RECOMMENDED LAND PATTERN

- 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	10/5/12	KS
01	UPDATE PACKAGE DRAWING	8/12/14	JHUA

TOLERANCES UNLESS SPECIFIED		8024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-8118 FAX: (408) 486-8976	
DECIMAL	ANGULAR		
XXXX	±		
XXXXX			
APPROVALS	DATE	TITLE	WWW.IDT.COM
DRAWN BY	10/09/12	JU6 PACKAGE OUTLINE	
DESIGNED		7.0 x 5.0 mm BODY	
		1.3 mm Thick	
SIZE	C	DRAWING No. PSC-4430	REV
			01
DO NOT SCALE DRAWING			SHEET 2 OF 2

JX6 Package Outline and Dimensions



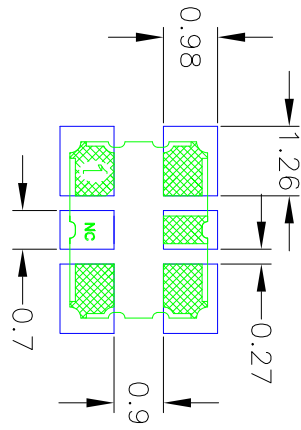
NOTES:
1. ALL DIMENSIONS IN MM.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	8/11/14	JHUA

TOLERANCES UNLESS SPECIFIED		<p>6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 486-8674</p>
DECIMAL	ANGULAR	
XXXX	±	
XXXX		
APPROVALS	DATE	TITLE
DRAWN/AGC	8/11/14	JX6 PACKAGE OUTLINE
CHECKED		3.2 x 2.5 mm BODY
		0.9 mm Thick
SIZE	DRAWING No.	REV
C	PSC-4412	00
DO NOT SCALE DRAWING		SHEET 1 OF 2



JX6 Package Outline and Dimensions (cont.)



1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.

NOTES:

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5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

REVISIONS			DATE	APPROVED
REV	DESCRIPTION	INITIAL	RELEASE	JJHUA
00			5/11/14	

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd	
DECIMAL	±	San Jose, CA 95138	
XX.X		PHONE: (408) 277-6116	
XX.XX		WWW.IDT.COM FAX: (408) 492-8674	
XX.XXX			
APPROVALS	DATE	TITLE	
XXXX	8/11/14	JX6 PACKAGE OUTLINE	
XXXX		3.2 X 2.3 mm BODY	
XXXX		0.3 mm THICK	
DESIGNED		SIZE	REV
		C	00
		DRAWING No.	F3C-4412
		DO NOT SCALE DRAWING	SHEET 2 OF 2