

## General Description

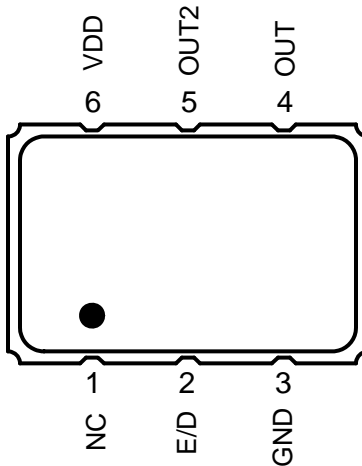
The XUM is an Ultra Precision LVDS Crystal Oscillator with 300 fs typical phase jitter over 12kHz to 20MHz bandwidth. Available in a wide frequency range from 16kHz to 1500MHz, the IDT XUM Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

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 XUM is an excellent choice over the conventional technologies. The XUM 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 1500MHz
- Output Type: LVDS
- 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 (JS6)  
7.0mm x 5.0mm x 1.3mm (JU6)
- Operating Temperatures:  $-20^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  or  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$

## Pin Assignment



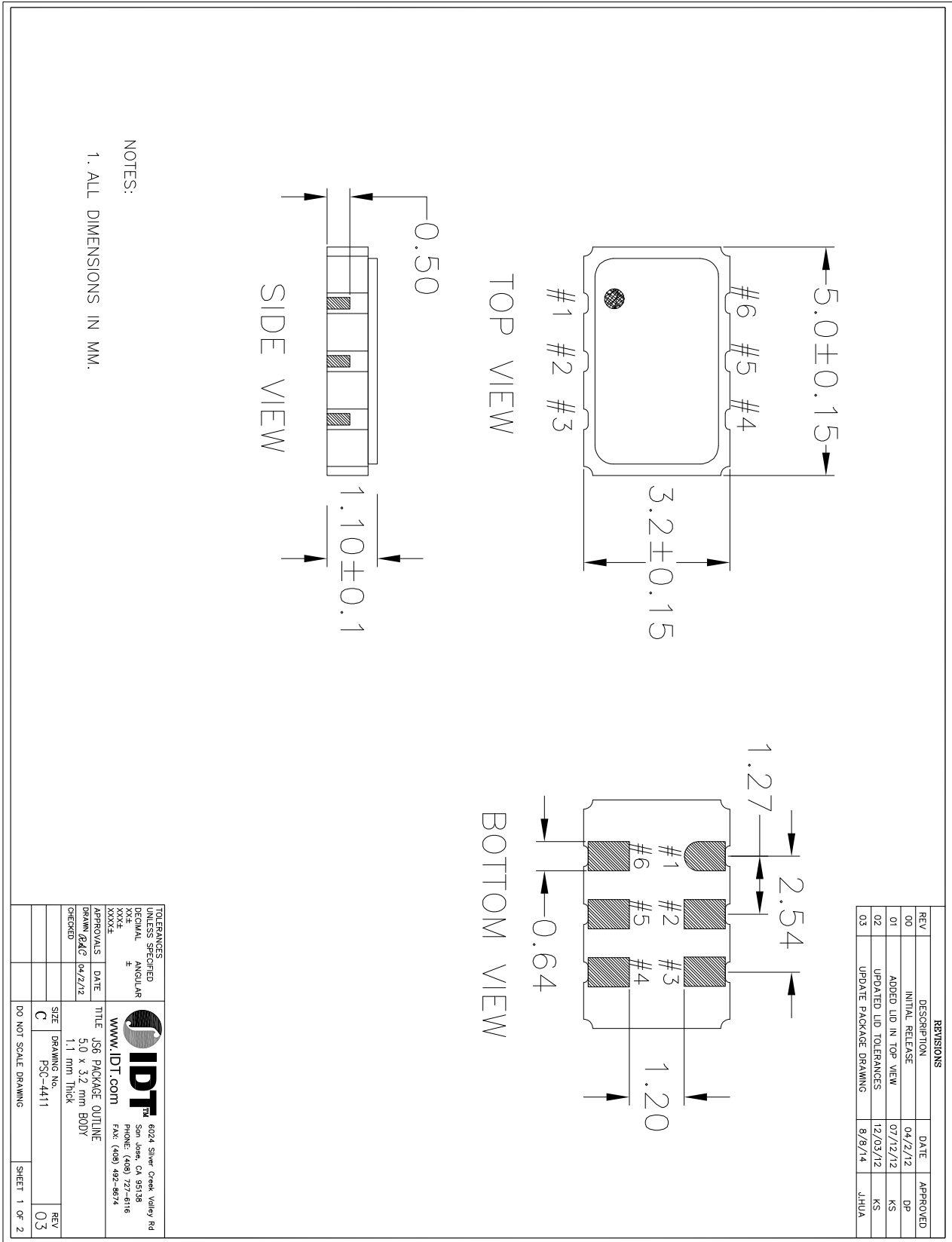
6-pin CLCC

## Pin Descriptions

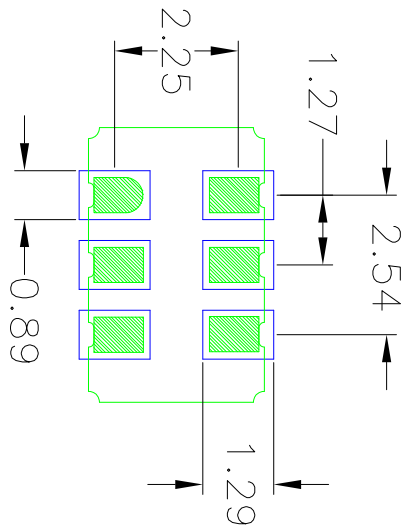
Pin Number	Pin Name	Description
1	NC	No connect
2	E/D	Enable/Disable <sup>1</sup> (0=Output Disabled)
3	GND	Connect to ground
4	OUT	Output
5	OUT2	Complementary output
6	VDD	Supply Voltage

1. Pulled high internally.

# JS6 Package Outline and Dimensions



# JS6 Package Outline and Dimensions (cont.)



RECOMMENDED LAND PATTERN

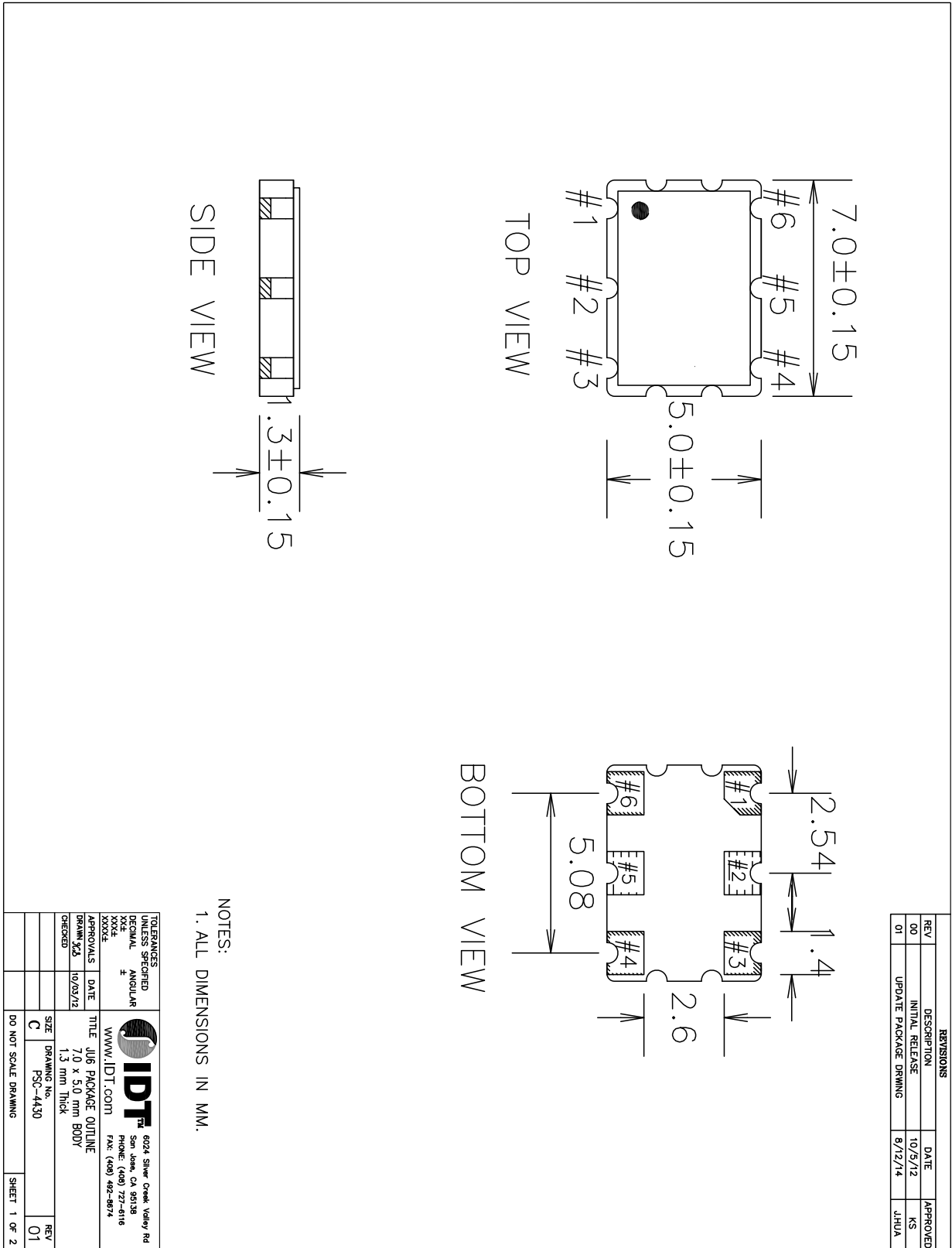
- NOTES:
1. ALL DIMENSION ARE IN mm. ANGLES IN DEGREES.
  2. TOP DOWN VIEW. AS VIEWED ON PCB.
  3. COMPONENT OUTLINE SHOW FOR REFERENCE IN GREEN.
  4. LAND PATTERN IN BLUE. NSMD PATTERN ASSUMED.
  5. LAND PATTERN RECOMMENDATION PER IPC-7351B GENERIC REQUIREMENT FOR SURFACE MOUNT DESIGN AND LAND PATTERN.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	04/12/12	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	JHUA

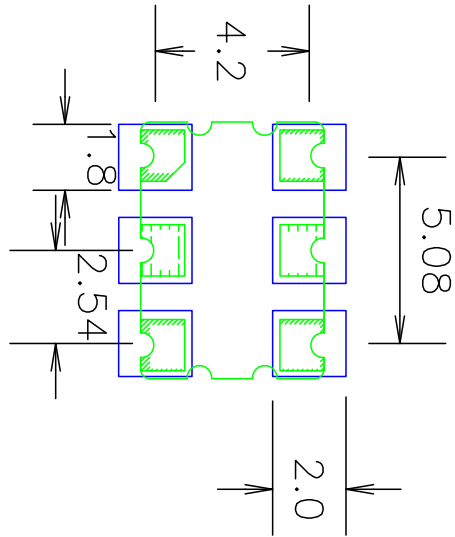
TOLERANCES UNLESS SPECIFIED			6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 227-6116 FAX: (408) 492-8674	
XXX±	±		WWW.IDT.COM	
XXX±	±			
REVISIONS	DATE	TITLE	SIZE	REV
02/07/12	04/27/12	JS6 PACKAGE OUTLINE	3.0 x 3.2 mm BODY	03
01/27/12	04/27/12	1.1 mm THICK		
00/00/00				
DO NOT SCALE DRAWING			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	10/9/12	KS
01	UPDATE PACKAGE DRAWING	8/12/14	JH/A

TOLERANCES UNLESS SPECIFIED		6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 277-8118 FAX: (408) 482-8874	
DATE	10/09/12	TITLE	JU6 PACKAGE OUTLINE
REV	00	SIZE	7.0 x 5.0 mm BODY 1.3 mm THICK
ORDERED		DRWING No.	F3C-4430
DO NOT SCALE DRAWING		REV	01
		SHEET	2 OF 2

