General Description

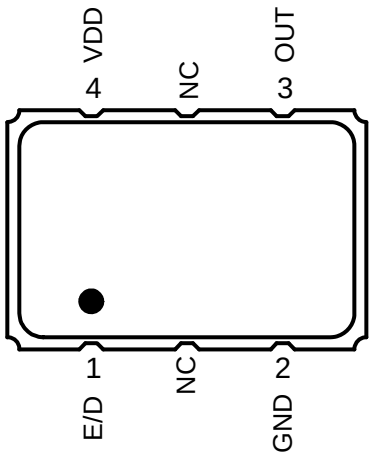
The XLH is an HCMOS Crystal Oscillator with 750fs typical phase jitter over 12kHz to 20 MHz bandwidth. Available in a wide frequency range from 0.750MHz to 250MHz, the IDT XLH Series Crystal Oscillator utilizes a family of proprietary ASICs, with a key focus on noise reduction technologies.

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 ±20ppm 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: ± 20ppm, ± 25ppm, ± 50ppm, or ± 100 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°C or -40°C to +85°C

Pin Assignment



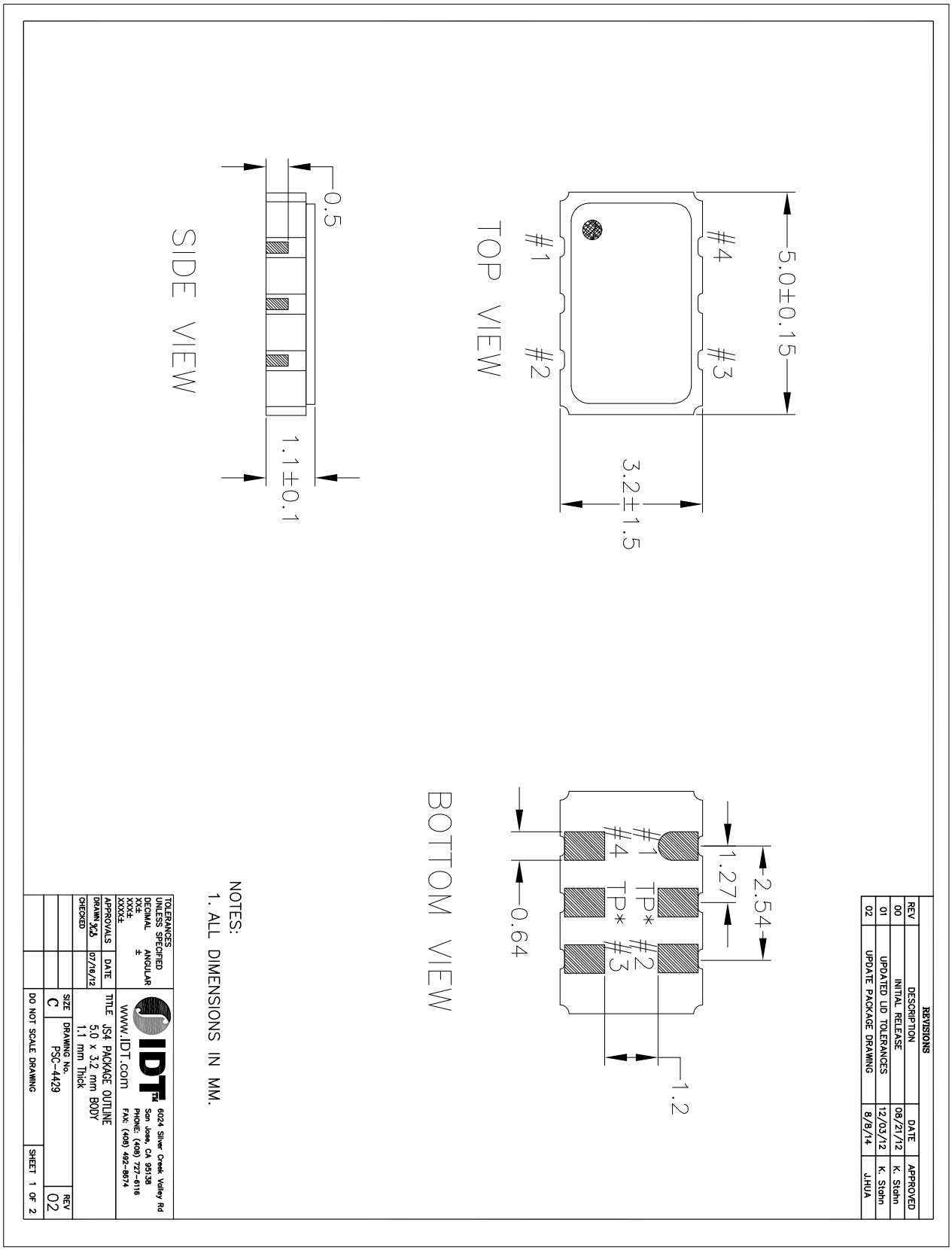
6-pin CLCC

Pin Descriptions

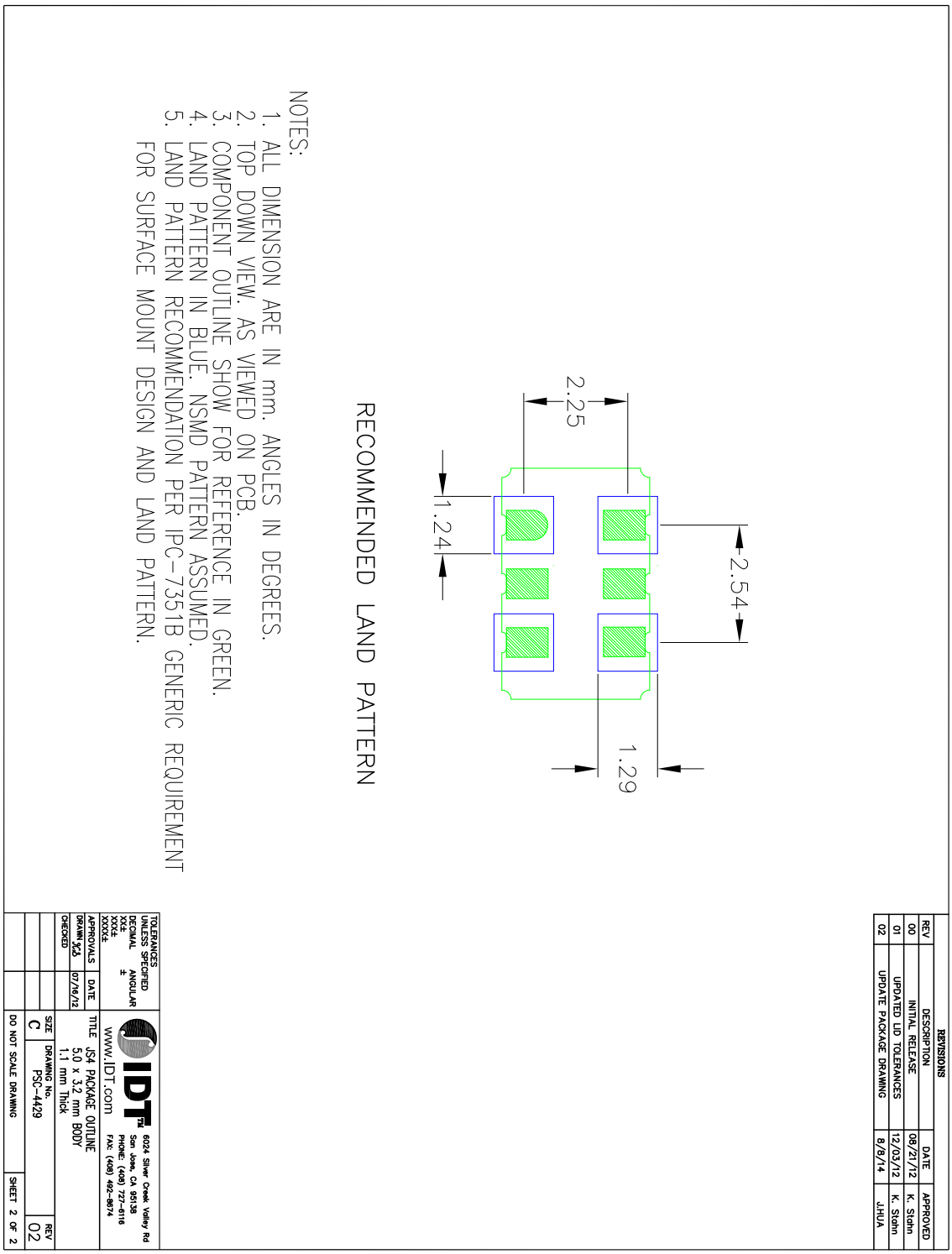
Pin Number	Pin Name	Description
1	E/D	Enable/Disable[1] (0=Output Disabled)
2	GND	Connect to ground
3	OUT	Output
4	VDD	Supply voltage

1. Pulled high internally.

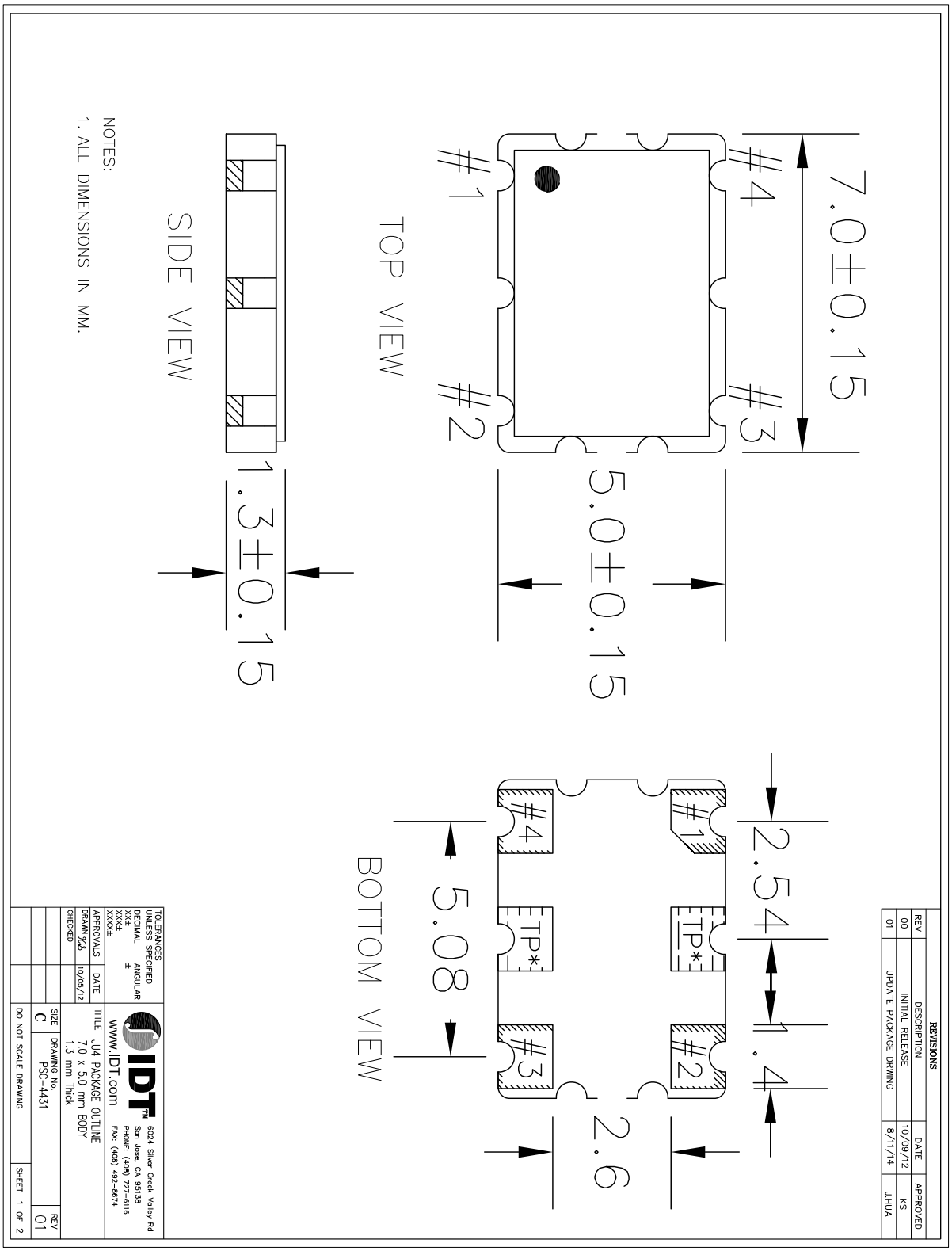
JS4 Package Outline and Dimensions



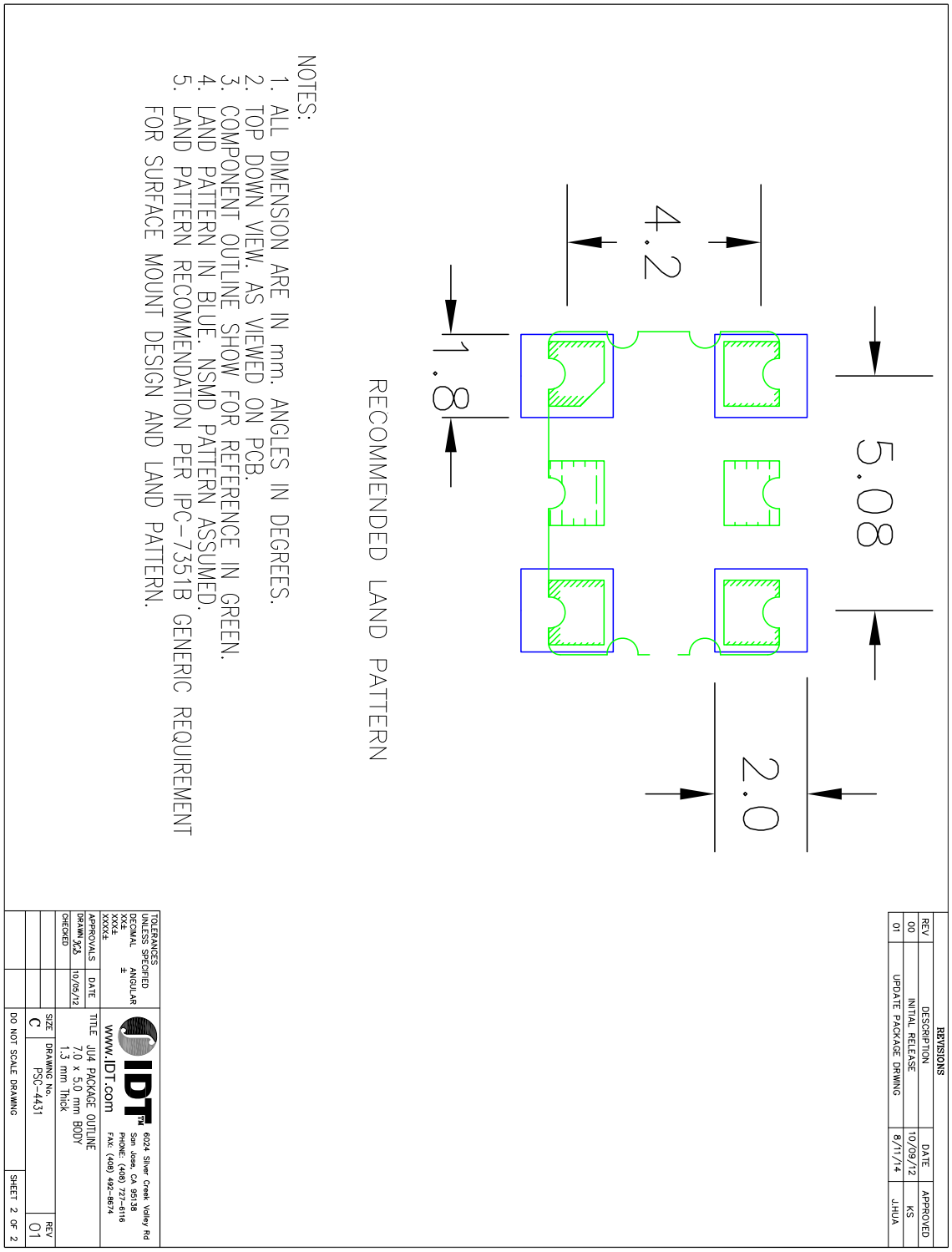
JS4 Package Outline and Dimensions (cont.)



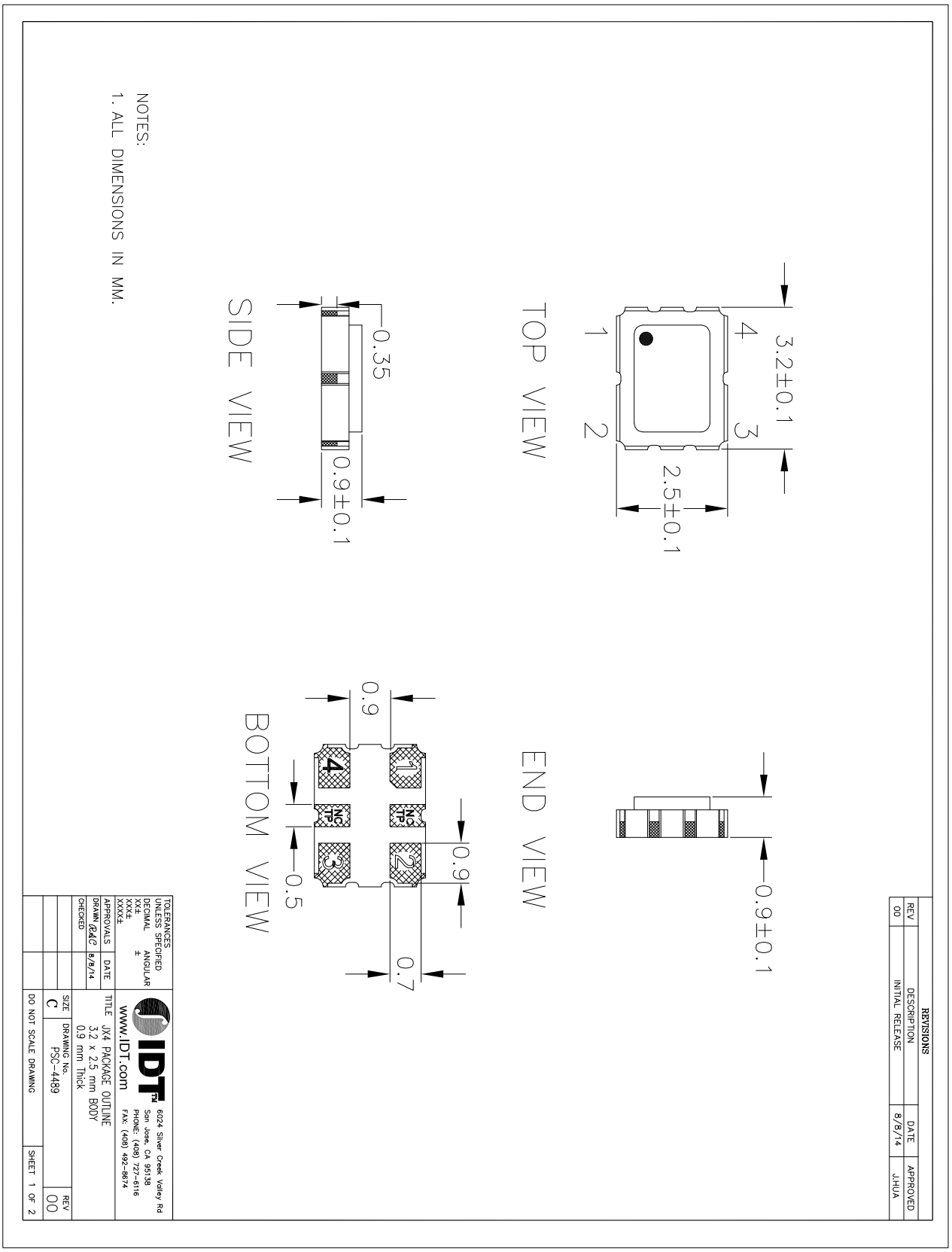
JU4 Package Outline and Dimensions



JU4 Package Outline and Dimensions (cont.)

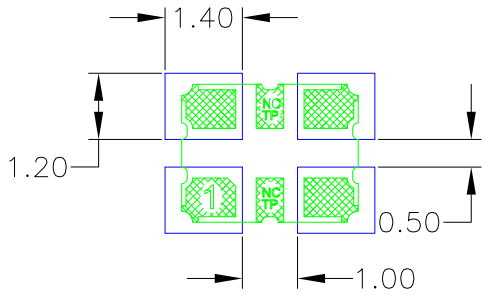


JX4 Package Outline and Dimensions



JX4 Package Outline and Dimensions (cont.)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
00	INITIAL RELEASE	8/8/14	J.HUA



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.

TOLERANCES UNLESS SPECIFIED DECIMAL ANGULAR XX± ± XXX± XXXX±		IDT™ www.IDT.com	6024 Silver Creek Valley Rd San Jose, CA 95138 PHONE: (408) 727-6116 FAX: (408) 492-8674
APPROVALS	DATE	TITLE	JX4 PACKAGE OUTLINE 3.2 x 2.5 mm BODY 0.9 mm Thick
DRAWN RAC	8/8/14		
CHECKED			
		SIZE C	DRAWING No. PSC-4489 REV 00
		DO NOT SCALE DRAWING	SHEET 2 OF 2