IDG-300 Dual-Axis Gyroscope Evaluation Board Specification

1. Revision History

Revision Date	Revision	Description
June 29, 2007	1.0	Initial Release

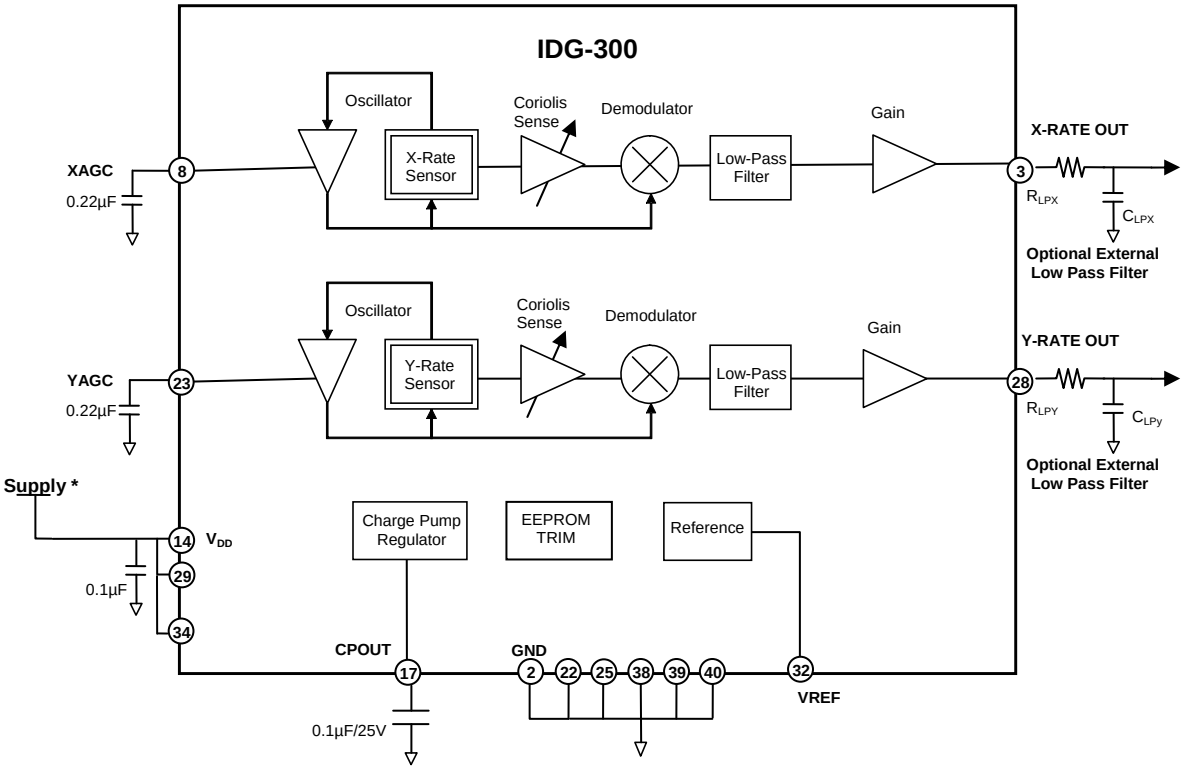
2. Purpose

This document provides the specification for the IDG-300 Dual-Axis Gyroscope Evaluation Board configured per the table below.

3. Evaluation Board Configuration

Sensitivity	Internal LPF	External LPF
2 mV/deg/sec	4.5° @ 10Hz	2kHz

4. Functional Block Diagram

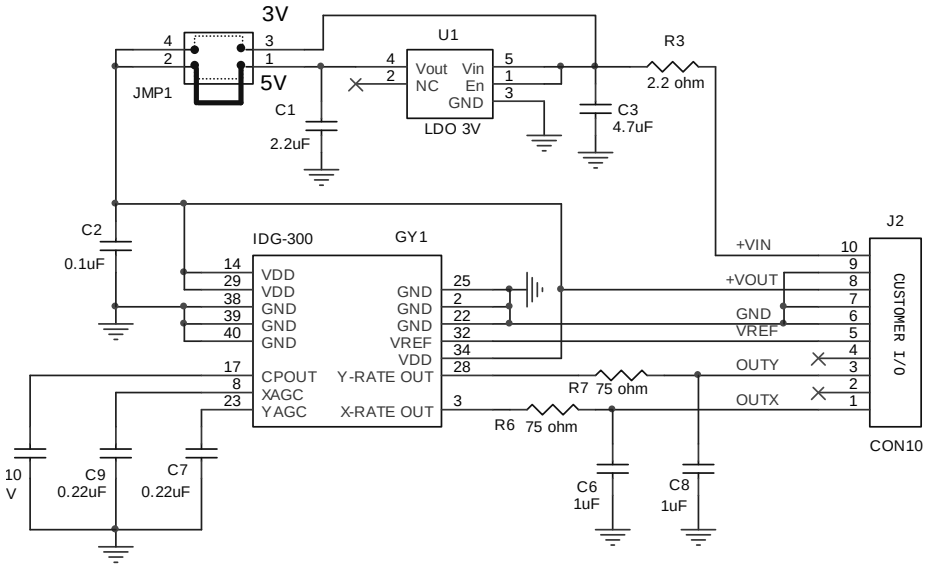


5. IDG-300 Evaluation Board Configuration

5.1 Schematic

The schematic below specifies the components on the IDG-300 Evaluation Board.

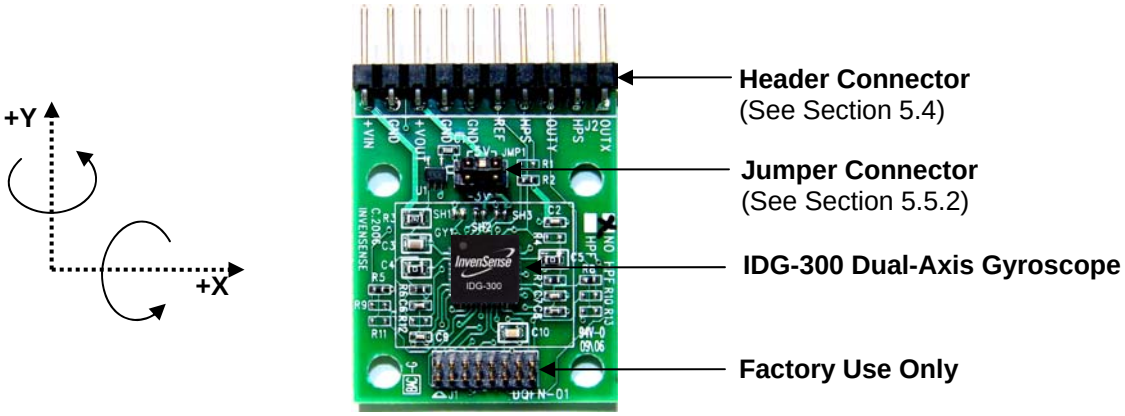
Figure 1



5.2 Bill of Materials

Item	Quantity	Reference	Part
1	1	C1	2.2uF 4.0V X5R 0402 ±20%
2	1	C2	0.1uF/10V X5R 0402 ±20%
3	1	C3	4.7uF/6.3V X5R 0603 ±20%
4	2	C4,C5	0 ohm/0603 jumper
5	2	C6,C8	1uF/6.3V X5R 0402 ±20%
6	2	C7,C9	0.22uF/6.3V X5R 0402 ±10%
7	1	C10	0.1uF/25V/X5R 0603 ±20%
8	1	GY1	IDG-300_D1_QFN40
9	1	JMP1	CON4A/0.050" X 0.1"
9B	1	JMP1	Shunt jumper
10	1	J1	CON16A/0.050 X2
11	1	J2	0.1" RA 10 PIN STRIP
12	3	R2,R5,R8	0 ohm/0402 jumper
13	1	R3	2.2 ohm/MF 5% 0603
14	2	R6,R7	75 ohm/MF 1% 0402
15	1	U1	Voltage Regulator 3.0V SC70

5.3 Evaluation Board Configuration



5.4 Signal Description

Pin	Signal	Description
1	OutX	Output of the X-axis gyro
2	HPS	Do not use
3	OutY	Output of the Y-axis gyro
4	HPS	Do not use
5	V_{REF}	1.2V reference voltage
6	GND	Ground
7	GND	Ground
8	+Vout	Return of the V_{DD} of the gyroscope chip
9	GND	Ground
10	$+V_{IN}$	Input power supply for the evaluation board (+5V / +3V)

5.5 Special Instructions

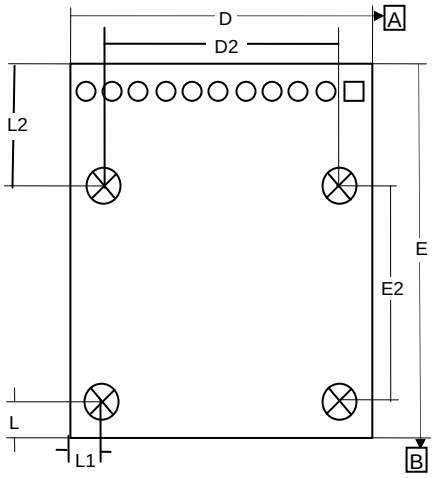
5.5.1 Electrostatic Discharge Sensitivity

The IDG-300 gyro can be permanently damaged by an electrostatic discharge. ESD precautions for handling and storage are recommended.

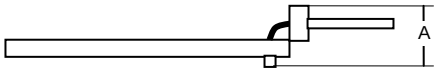
5.5.2 Jumper Connector

The IDG-300 evaluation board is equipped with a jumper connector to control the voltage supplied to the gyro. When the jumper is located in the “up” or standard position as shown in the picture above, the 5 Volts being supplied to the gyro is regulated to 3 Volts using an on-board regulator. When the jumper is located in the “down” position, the on-board regulator is bypassed and the gyro is being directly supplied with the voltage on Pin 10 ($+V_{IN}$).

6. Dimensional Drawing



TOP VIEW



SIDE VIEW

Dimensions (mm)		
A	5.0	±1.0
D	25.7	±0.1
E	31.8	±0.1
L	3.1	±0.1
L1	3.1	±0.1
L2	10.2	±0.1
D2	19.5	±0.1
E2	18.5	±0.1