TEMPO 4 Population Guide

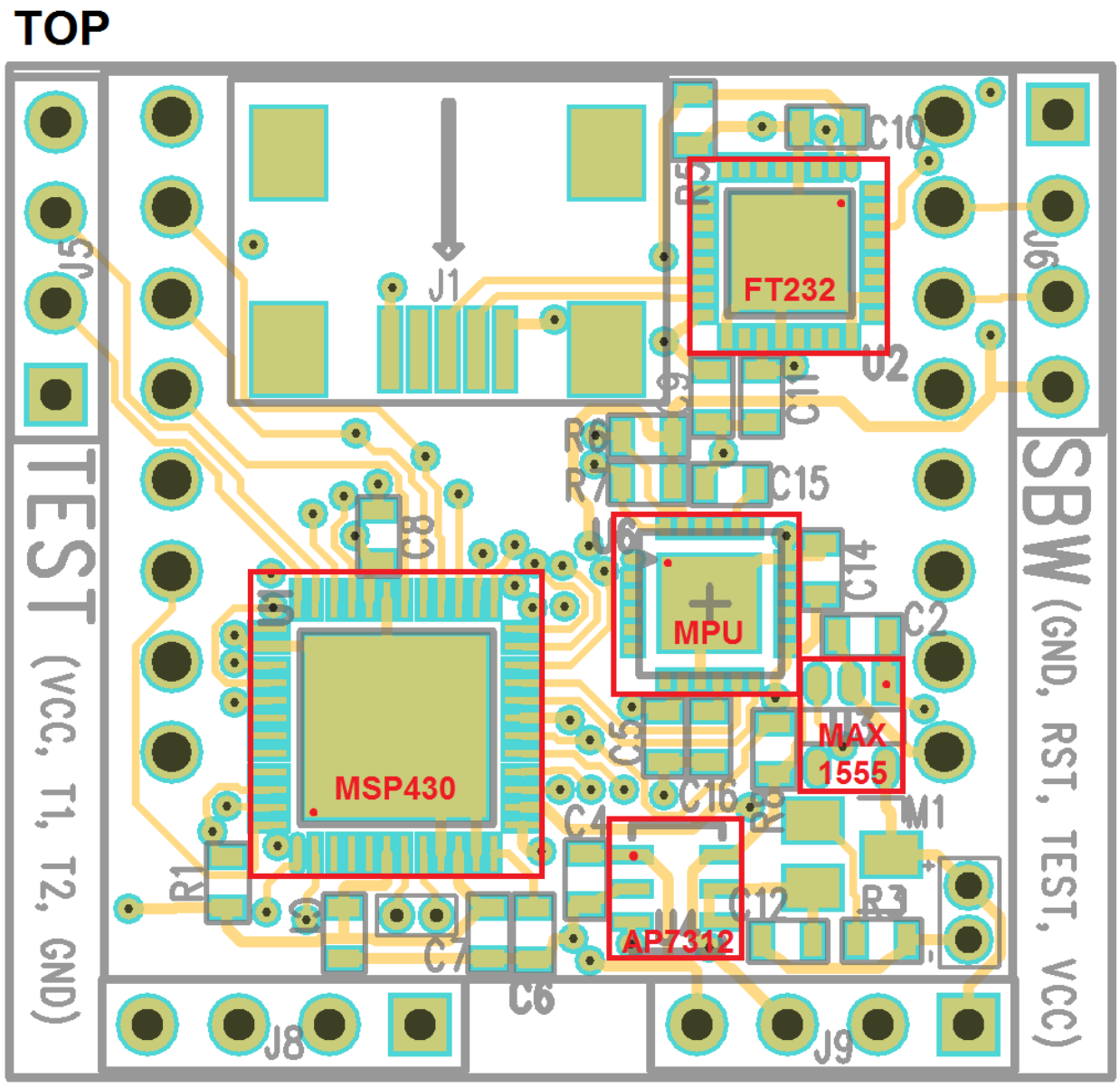
UVa INERTIA Group 2013

Bill of Materials

Reference	Part Name	Qty	DigiKey Part #	Part Number	Description
U4	AP7312	1	AP7312-1218W6-7DITR-ND	AP7312	Dual Channel 3.3V 150mA LDO
C9-10 C13-14 C16	CAP0603, 100nF	5	445-1316-1-ND	C1608X7R1E104K080AA	MILSPEC 603 CAPACITOR
C1 C7-8	CAP0603, 10uF	3	445-4112-1-ND	C1608X5R0J106M080AB	MILSPEC 603 CAPACITOR
C2-5 C12	CAP0603, 1uF	5	1276-1041-1-ND	CL10F105ZP8NNNC	MILSPEC 603 Capacitor
C15	CAP0603, 2.2nF	1	1276-1110-1-ND	CL10B222KB8NNNC	MILSPEC 603 CAPACITOR
C11	CAP0603, 4.7uF	1	587-1785-1-ND	JMK107BJ475KA-T	MILSPEC 603 CAPACITOR
C6	CAP0603, 470nF	1	587-1259-1-ND	TMK107F474ZA-T	MILSPEC 603 CAPACITOR
J1	CON-USB, 5PMINI	1	732-3154-1-ND	651305142821	5 pin Mini USB type AB connector
X1	CRYSTAL, 32.768kHz	1	300-8301-ND	CFS206-32.768KDZB-UB	XTAL 32.768kHz 6pF
U2	FT232RQ	1	768-1008-1-ND	FT232RQ	USB to RS232 Converter IC
D1	LED Green	1	160-1828-1-ND	LTST-C193KGKT-5A	MILSPEC 603 LED
D2	LED Red	1	160-1830-1-ND	LTST-C193KRKT-5A	MILSPEC 603 LED
U3	MAX1555EZK-T	1	MAX1555EZK+TCT-ND	MAX1555EZK+T	LiPo Battery Charger IC
J3	MICROSD, PUSH-PUSH	1	HR1964CT-ND	DM3AT-SF-PEJM5	CONN MICRO SD R/A PUSH-PUSH SMD
U6	MPU6050	1	N/A	MPU6050	6-Axis I2C Interfaced IMU
U1	MSP430F5342	1	296-29957-1-ND	MSP430F5342	5xxx Series MSP430 Microcontroller
M1	NDS332P	1	NDS332PCT-ND	NDS332P	SOT-23 P-CH MOSFET
R6-7	RES0603, 10k	2	P10KGCT-ND	ERJ-3GEYJ103V	MILSPEC 603 RESISTOR
R1 R3 R8	RES0603, 100k	3	P100KGCT-ND	ERJ-3GEYJ104V	MILSPEC 603 RESISTOR
R5	RES0603, 1M	1	P1.0MGCT-ND	ERJ-3GEYJ103V	MILSPEC 603 RESISTOR
R2 R4	RES0603, 330	2	P330GCT-ND	ERJ-3GEYJ331V	MILSPEC 603 RESISTOR
SW1-2	SW_PUSHBUTTON	2	P13597SCT-ND	EVQ-PNF04M	Mom. Pushbutton

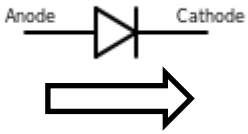
Board Top Layout and Pin 1 Locations

This image is intended to provide a top-level road map for component location and polarity. All passives have their silkscreen documentation included and ICs have their pin1 locations indicated with a red dot.



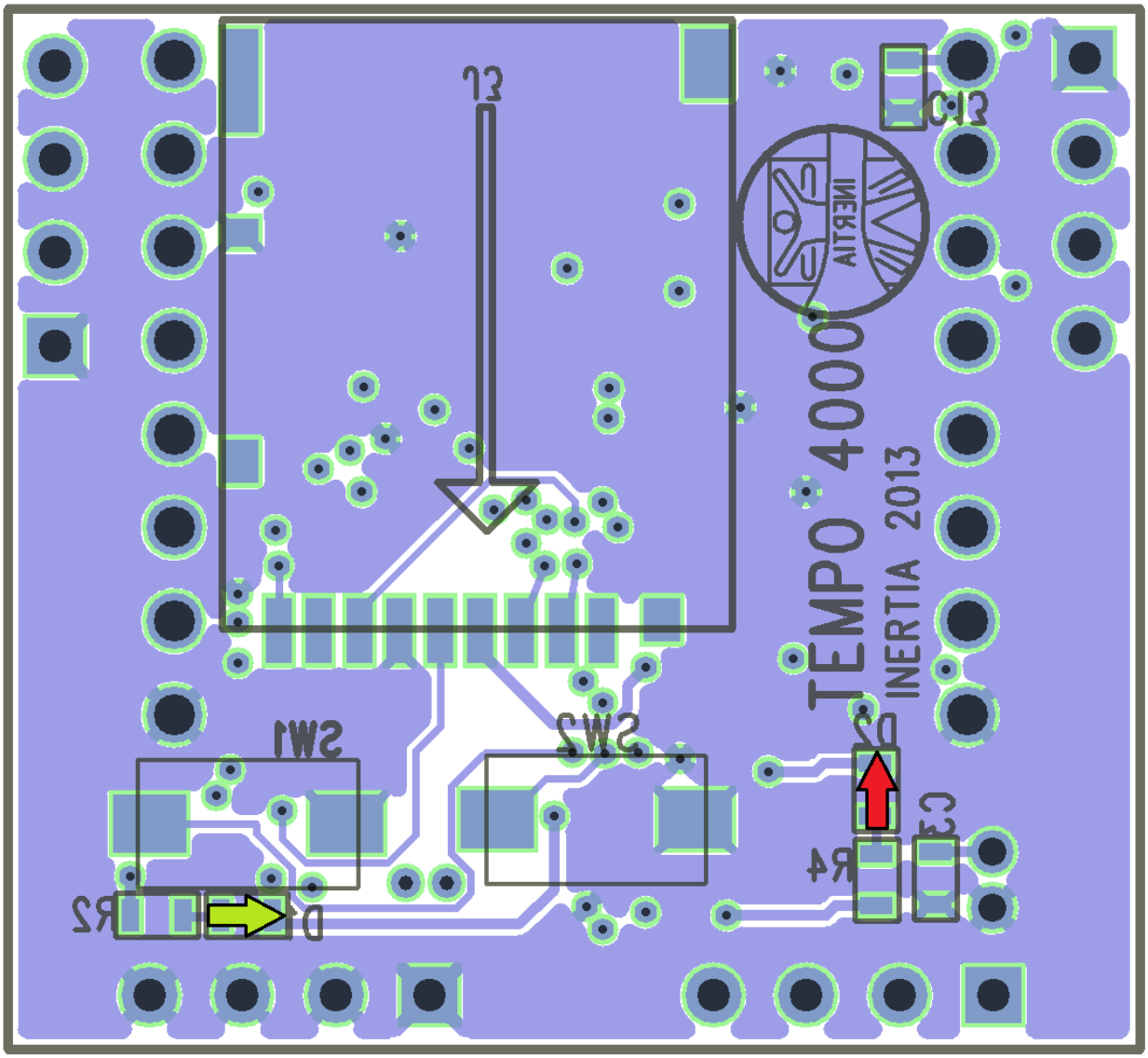
Board Bottom Layout and Diode Polarity

This image is intended to provide a top-level roadmap for component location and polarity. All passives have their silkscreen documentation included and LEDs have their polarity indicated with an arrow (anode to cathode)

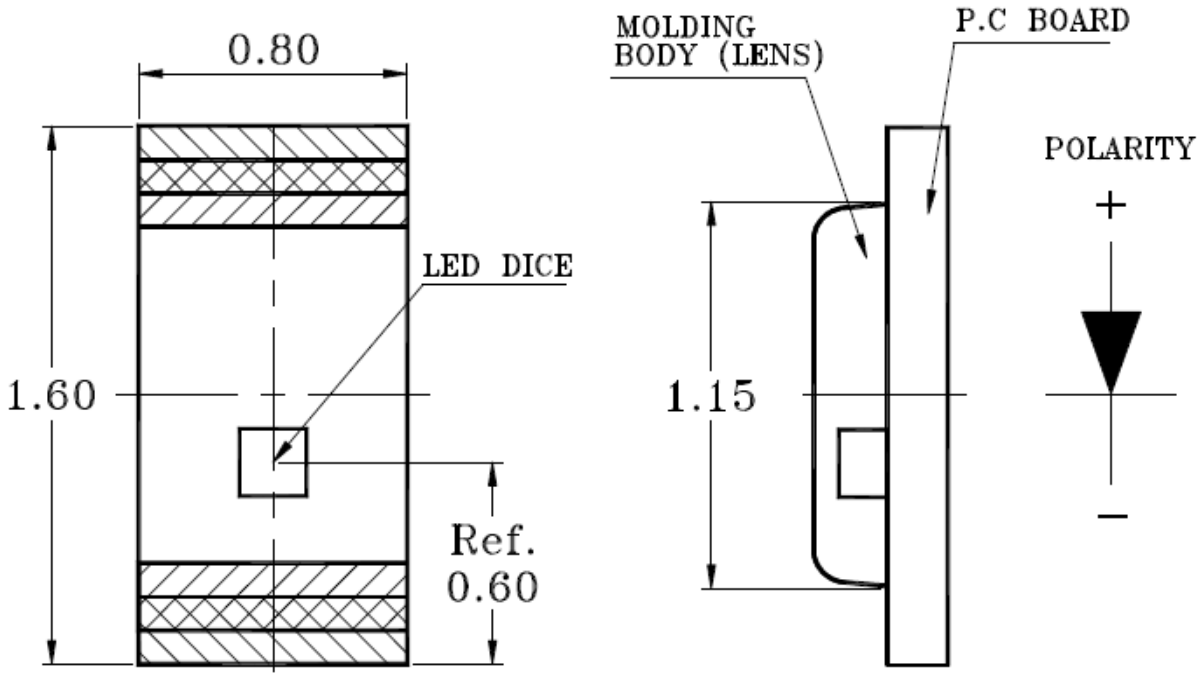


See LED Polarity Reference Based on Die Placement for more information on LED polarity

Bottom



LED Polarity Reference Based on Die Placement (seen from the top)



Questions/Comments/Concerns

Please email any questions, comments, or concerns to Ben Boudaoud (bb3jd@virignia.edu) or call any time of day at 540-419-0219.

In addition I am more than happy to correct any issues/validate population by hand, on-site provided I am given ample notice of when the job will be done.