FOR BIFURCATED I2C (SEPARATE TXD AND RXD LINES):
1) U9 is ADuM1201AR
2) U1 is loaded
3) R7 is loaded
4) JMP1 is "NOT" loaded

FOR TRUE I2C (DURA_I2C_RXD line is bi-directional SDA):
1) U9 is ADuM1250ARZ
2) U1 is "NOT" loaded
3) R7 is "NOT" loaded
4) JMP1 is loaded

ISOLATION

J1
1 DURA_PWR
2 DURA_PWR
3 0SVGND
4 0SVGND
5 0REG3.3V
6 0DGND
7 DURA_I2C_TXD (SDA)
8 DURA_I2C_RXD (SDA)
9 DURA_I2C_SCL (SCL)
10 DURA_I2C_INT
11 DURA_ADC_CLK
12 DURA_ADC_DAT
13 0DURA_BAT+
14 0DURA_BAT-

MTLW-114-07-G-S-265

3/8" (0.375") board-to-board height
MTLW-114-07-G-D-265

1/2" (0.5") board-to-board height
ZM-14-08-G-D-208-250

5/8" (0.625") board-to-board height
ZM-14-09-G-D-333-250

U9 ADUM1201AR: REG3.3V, DGND, ISOGND, ISO3.3V; C5 0.1, C2 0.1; R30 10k, R2 2k, R7 2k; DURA_I2C_TXD, DURA_I2C_RXD (SDA)
U10 ADUM1201AR: REG3.3V, DGND, ISOGND, ISO3.3V; C4 0.1, C3 0.1; R31 10k, R1 10k; DURA_I2C_SCL, DURA_I2C_INT (SCL)
U11 ADUM1201AR: REG3.3V, DGND, ISOGND, ISO3.3V; C7 0.1, C6 0.1; DURA_ADC_CLK, DURA_ADC_DAT

JMP1 JMP_SML

U1A PSZB96TD

U4 TCA6424
ISOGND, ISO3.3V; R9 100k; C30 0.1
SDA, SCL, INT, ADD, RST
IO0.0 ADC_A0
IO0.1 ADC_A1
IO0.2 ADC_CONV
IO0.3 ADC_DRDY\
IO0.4 ADC_CS\
IO0.5 ADC_CAL
IO0.6 ADC_POL
IO0.7 ADC_SHDN
IO1.0 ANSW_A0
IO1.1 ANSW_A1
IO1.2 ANSW_EN
IO1.3 IAMP_D0
IO1.4 IAMP_D1
IO1.5 IAMP_D2
IO1.6 IAMP_D3
IO1.7 IAMP_LATCH
IO2.0 A_SUPPLY_RDY
IO2.1 A_SUPPLY_SHDN
IO2.2 IAMP_SHDN
IO2.3 TEMP_BUFF_SHDN
IO2.4 VK_BUFF_SHDN
IO2.5 VBAT_MONITOR
IO2.6 STATUS_LED
IO2.7

U5 DS2482-100
SDA, SCL, CTL, AD0, AD1, VCC, GND, I/O
R43 2k; Q7 BSS84; 1WIRE_IO

ADC_CLK, ADC_DAT, STATUS_LED

U21 LT1121CS8-3.3
VIN, SHDN, VOUT, NC, GND
C48 10uF 16V TANT; TP6 ISO3.3V; TP5 ISOGND
D9 1N914; R57 8k; R56 27k; C56 0.22

U18 LT1761-BYP
VIN, VOUT, BYP, ADJ, GND
C50 0.01; R27 3.16k; R26 1.02k; R25 1.02k; R24 3.16k
C46 10uF 16V TANT; C47 10uF 16V TANT
TP4 B_ANSV+; TP7 AGND; TP8 B_ANSV-
NS2 JMP_SML
C51 0.01

U19 LT1964-BYP

U3 DCP010507DB
DURA_PWR; C39 10uF; 5VGND
+VIN, SYNC, -VIN, +VOUT, COM, NC, -VOUT
FB1 100mH; FB2 100mH
C37 10uF; C38 10uF

RP1 1Mx9
ADC_A0, ADC_A1, ADC_CONV, ADC_DRDY\, ADC_CS\, ADC_CAL, ADC_POL, ADC_CLK, ADC_DAT
ISOGND

RP2 1Mx9
ANSW_A0, ANSW_A1, ANSW_EN, IAMP_D0, IAMP_D1, IAMP_D2, IAMP_D3, IAMP_LATCH
ISOGND

U2 MAX768
VIN, POUT, SETP, V+, GND, V-, SETN, NOUT, SYNC, RDY, PSHDN, NSHDN, C1+, C1-, C2+, C2-
C49 10uF; C44 10uF; C45 10uF
C42 10uF; C43 10uF
R21 NS; R18 0; R19 0; R20 NS
C40 10uF 16V TANT; C41 10uF 16V TANT
NS3 JMP_SML; AGND
D4 BAT54CLT1G; B_ANSV+, ANSV+
D5 BAT54ALT1G; B_ANSV-, ANSV-
D3 MBR120VLSFT1

DURA_BAT+, ISO3.3V; R22 1M; R23 1M; Q5 2N7002; R48 1M; DURA_BAT-

A_SUPPLY_RDY, A_SUPPLY_SHDN, VBAT_MONITOR
Q3 BSS84; R11 1M; R12 10k 0.1%; R13 10k 0.1%; R32 1M; Q4 2N7002; DURA_BAT-, AGND

BYPASS CAPS FOR OP-AMPS (U12, U14-U17)
ANSV+, ANSV-; C12 0.1, C13 0.1, C14 0.1, C15 0.1, C16 0.1, C17 0.1, C18 0.1, C19 0.1, C20 0.1, C21 0.1; AGND

BYPASS CAPS FOR IAMP (U20) BUFFER (U13) AND A/D (U7)
B_ANSV+, B_ANSV-; C26 0.1, C25 0.1, C24 0.1, C23 0.1, C22 0.1; AGND

ISO3.3V; U1B PSZB96TD

U12 LT1494
C31 0.1; ANSV+, ANSV-; R5 100k, R6 100k; AGND
Ik - 250nA FS; R17 1k; D7 1N914; R16 15k
Ib - 250nA FS; R10 15k
R3 5.49k; R42 6.65k 0.1%; D1 LT1389; R4 9.76k; D2 LT1004; C1 1000pF

DURAFET_III CONNECTIONS
CABLE P/N:50001391
REF_ELECTRODE BLACK
SOURCE ORANGE
SUBSTRATE RED
DRAIN BLUE
COUNTER_ELECTRODE WHITE/BLACK
SHIELD_INT_REFERENCE
THERMISTOR_0 RED/BLACK
THERMISTOR_1 WHITE
EEPROM_DATA BLUE/BLACK
EEPROM_GND BLACK/WHITE
SHIELD_CABLE_50001391
J6 TZM-105-01-L-D-SM-WT
EXTERNAL_1WIRE_TEMP_SENSOR
J5 AMPMODU_3
1WIRE_IO

BUFFERED_VREF
B_ANSV+, C53 1000pF; C54 0.1; U13 LTC1152; TP2
C27 0.1, R15 10k 0.1%, R14 10k 0.1%, C28 0.1
Q11 BSS84; R35 2; B_ANSV+
R37 10k; Q10 2N7002; TEMP_BUFF_SHDN; R36 1M

U22 LT1790A
B_ANSV+; C29 0.1; C52 1uF; C32 0.01; R41 1k; R53 1k; C55 0.01
TP1

U23 LTC2050HV
VA_MONITOR; ANSV+, ANSV-

U7 CS5506
B_ANSV-, ISO3.3V; VA+, VD+, REFOUT, VREF+, VREF-, AIN4+, AIN3+, AIN2+, AIN1+, AIN-, BP/UP, M/SLP, SDATA, SCLK, CONV, DRDY\, CS\, A0, A1, CAL, VA, X1, X2, VD
ADC_DAT, ADC_CLK, ADC_CONV, ADC_DRDY\, ADC_CS\, ADC_A0, ADC_A1, ADC_CAL, ADC_POL, ADC_SHDN
R40 499k; R39 590k
Y1 32.768kHz
TP9, TP10, TP11, TP3, TP12

INT_REFERENCE
J2 MINI_BNC; U14 MAX406 ALTERNATE: LMC6041; U18; R47 402, R45 402, R46 402, R44 402; C33 0.01, C34 0.01, C35 0.01, C36 0.01
EXT_REFERENCE
J3 MINI_BNC; U16 MAX406 ALTERNATE: LMC6041; U17 LTC2050HV; TP13, TP14

U6 ADG1609
IA+_MONITOR, IB+_MONITOR, THERMISTOR+, BACKUP_BATT+, IA-_MONITOR, IB-_MONITOR, THERMISTOR-, BACKUP_BATT-
ANSV+, AGND, ANSV-; ANSW_A0, ANSW_A1, ANSW_EN

U20 LTC6915
B_ANSV+, ISOGND, B_ANSV-, AGND
IAMP_LATCH, IAMP_D0, IAMP_D1, IAMP_D2, IAMP_D3

Q12 BSS84; R55 1M; ANSV+; R54 10k; Q13 2N7002; R58 1M; VK_BUFF_SHDN
Q9 BSS84; R33 1M; ANSV+; R38 10k; Q8 2N7002; R34 1M; VRS_BUFF_SHDN
R28 1M; Q6 2N7002; IAMP_SHDN; R49 1M

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Schematic Name: DFETMOD8			
Page Title: 1 0020853_DFETMOD8			Engineer: Luke Colelli
Project Name: DURAFET ISOLATED INTERFACE	Group Name: [illegible]		Designer: Luke Colelli
System: <System>	Subsystem: <Subsystem>		Last Updated By: jmosal
Drawing Number: 1 0020853	Release: E Version: 2	Status: Active	Size: D
Page Modify Date: Tuesday, February 11, 2014	Check in Date: 2/6/2014 3:30:02 PM	Sheet 1 of 1	