POWER JUMPERS
Connected: Circuit Bypased
Disconnected: Circuit Active

J1
12 BPS
11 TPS
10 FP_PWR_IN
9 FP_PWR_OUT
8 TB_PWR_IN
7 TB_PWR_OUT
6
5
4
3
2
1 +5
GND

COMPARATORS
When the input signal surpasses the V- set point the comparators will be pulled LOW
V- should be set to the expected 10% throttle and "hard braking" voltages with the pots

+5
R2
Res3
39K
BPS
C1
Cap Pol3
.1uF
GND

+5
R1
Res3
39K
BPS_STATE
R5
RPot SM
+5
GND
GND

U1
1OUT
1IN-
1IN+
GND
VCC
2OUT
2IN-
2IN+
Comparator LM2903DR

+5
R3
Res3
39K
TPS_STATE
R6
RPot SM
+5
GND
GND

+5
R4
Res3
39K
TPS
C2
Cap Pol3
.1uF
GND

XOR GATE
When both comparators output logic LOW the XOR will output a logic HIGH which will indicate the implausable state

U2
PLAUS_STATE
BPS_STATE
TPS_STATE
1Y
1A
1B
2Y
2A
2B
GND
VCC
4Y
4B
4A
3Y
3B
3A
+5
GND
GND
NOR Gate SN74AHC02DR

Level shifting buffer provides 5V on logic signal at all times when threshold is passed

+5
R7
Res3
39K
PLAUS_STATE_OUT
PLAUS_STATE_DELAY
GND

U3
*1OE
1A
1Y
*2OE
2A
2Y
GND
VCC
*4OE
4A
4Y
*3OE
3A
3Y
+5
GND
GND
Level Shifter SN74AHCT125DR

M1
M3
Mounting Hole
M2
M3
Mounting Hole

POWER MOSFETS
100V 60A Mosfets to control power to the fuel pump and throttle body. Logic signal gate controlled switches.

TB_PWR_IN
PLAUS_STATE_OUT
Q1
MOSFET-N
TB_PWR_OUT

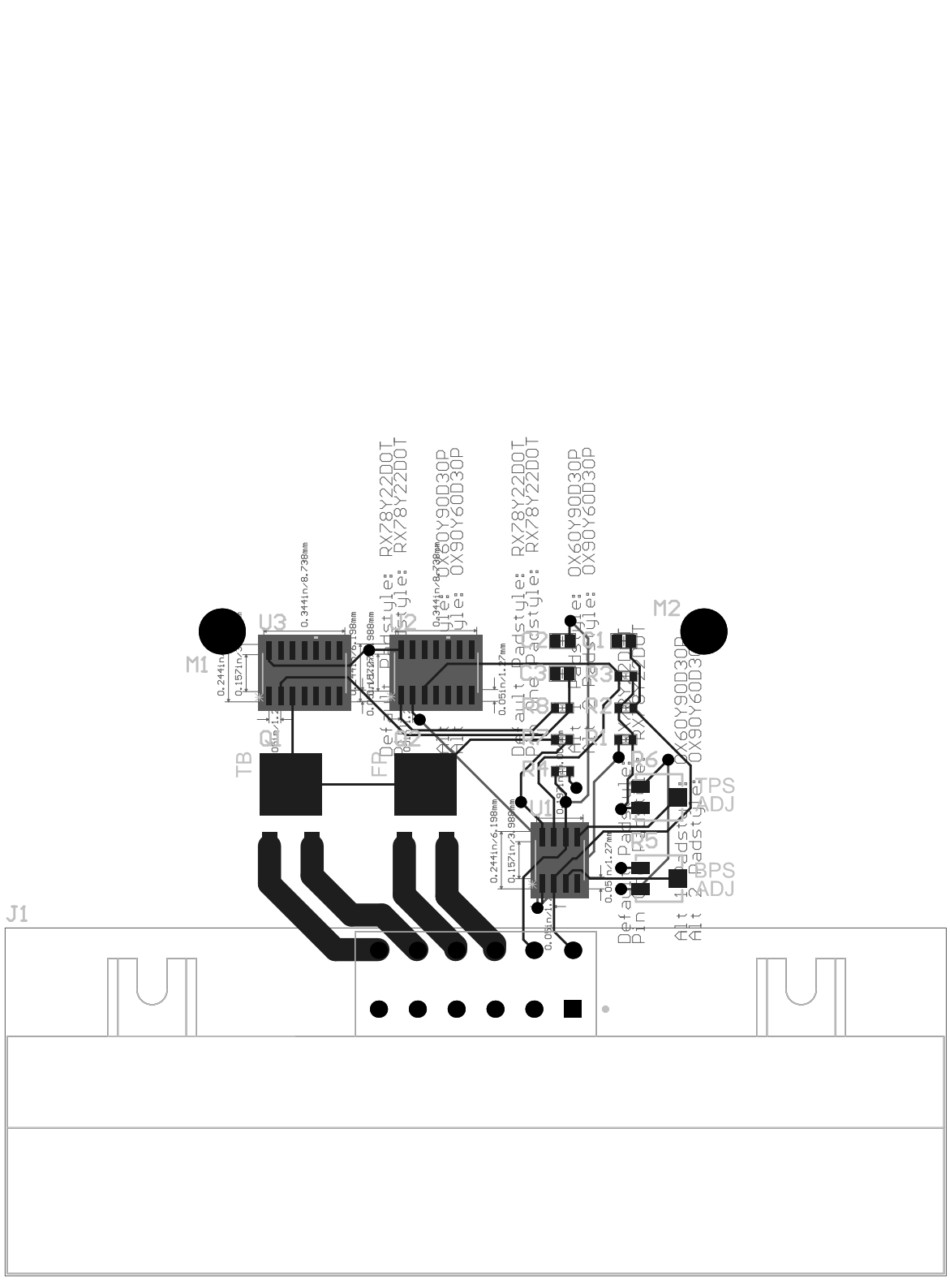
FP_PWR_IN
PLAUS_STATE_OUT
Q2
MOSFET-N
FP_PWR_OUT

RC CIRCUIT FOR DELAY
tau = RC = 5.1k*100u = 500ms
Should be edited for 1sec per

PLAUS_STATE
R8
Res3
1K
PLAUS_STATE_DELAY
C3
Cap Pol3
100pF
GND

U4
EEC-325X4B-E016
EEC-325X4B-E016

Title		
Size A4	Number	Revision
Date: 2019-02-11		Sheet of
File: C:\Users\..\BrakePlaus2019.SchDoc		Drawn By:


U4
Front End Connector Area
J1
M1
M2
U3
U2
U1
TB
FR
RX78Y22D0T
OX60Y90D30P
OX90Y60D30P
TPS
ADJ

Comment	Description	Designator	Footprint	LibRef	Quantity
Cap Pol3	Polarized Capacitor (Surface Mount)	C1, C2, C3	C0805	Cap Pol3	3
DTM13-12PA-R008	DTM Series, 4.19mm Pitch 12 Way 2 Row Right Angle PCB Header, Solder Termination	J1	*TE_DTM13-12PA-R008	DTM13-12PA-R008	1
Mounting Hole		M1, M2	M3 Mounting Hole	M3 Mounting Hole	2
MOSFET-N	N-Channel MOSFET	Q1, Q2	DPAK	MOSFET-N	2
Res3	Resistor	R1, R2, R3, R4, R7, R8	J1-0603	Res3	6
RPot SM	Square Trimming Potentiometer	R5, R6	POT4MM-2	RPot SM	2
Comparator LM2903DR	Comparator	U1	D8	LM2903DR	1
NOR Gate SN74AHC02DR	Quad 2 Input NOR Gate	U2	D14	NOR Gate	1
Level Shifter SN74AHCT125DR	Buffer (Level Shifter)	U3	D14	SN74AHCT125DR	1
EEC-325X4B-E016		U4	*TE_EEC-325X4B-E016	EEC-325X4B-E016	1