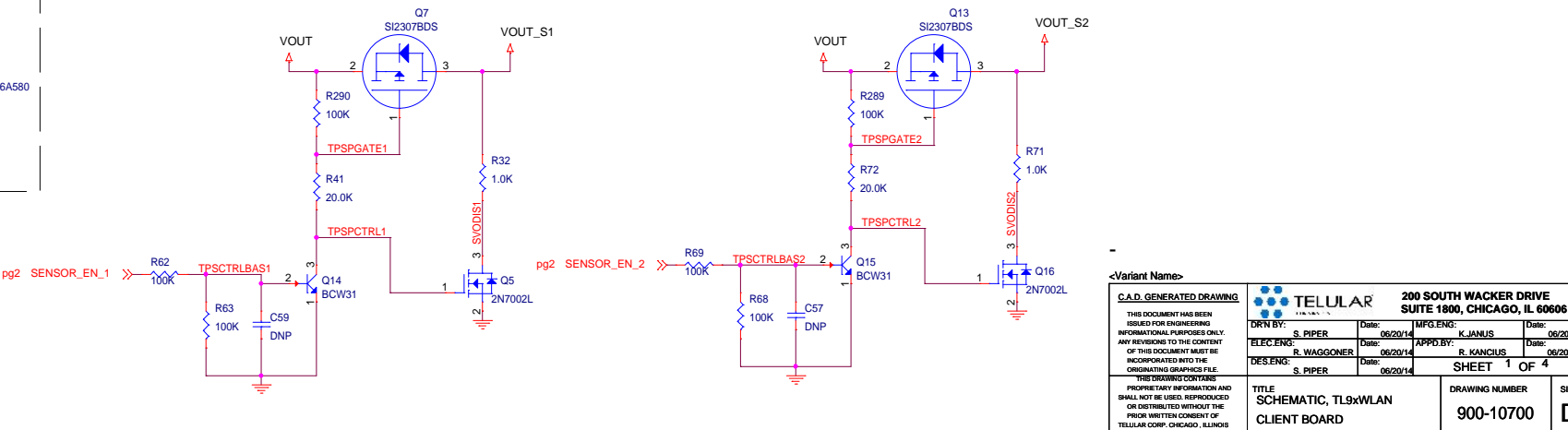
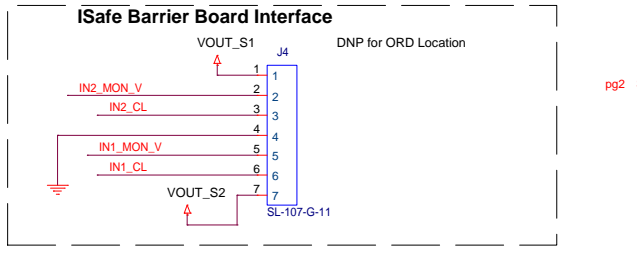
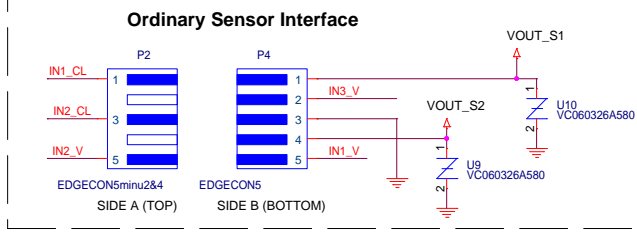
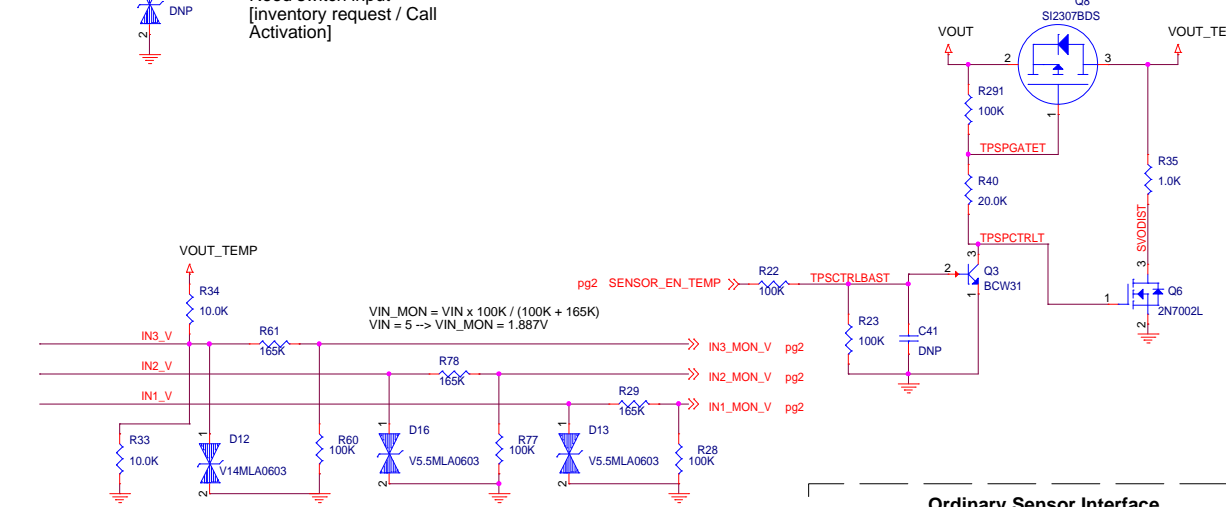
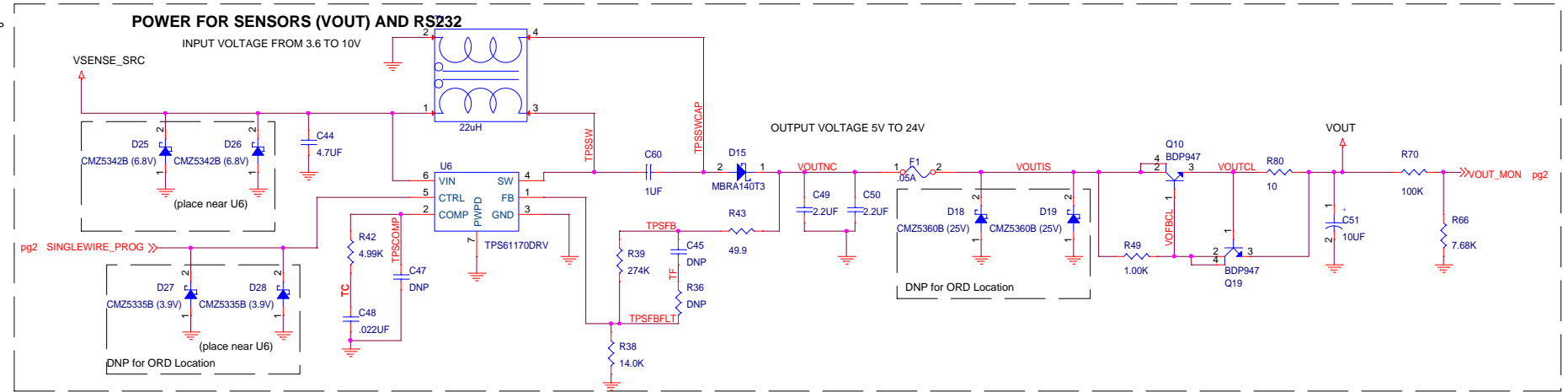
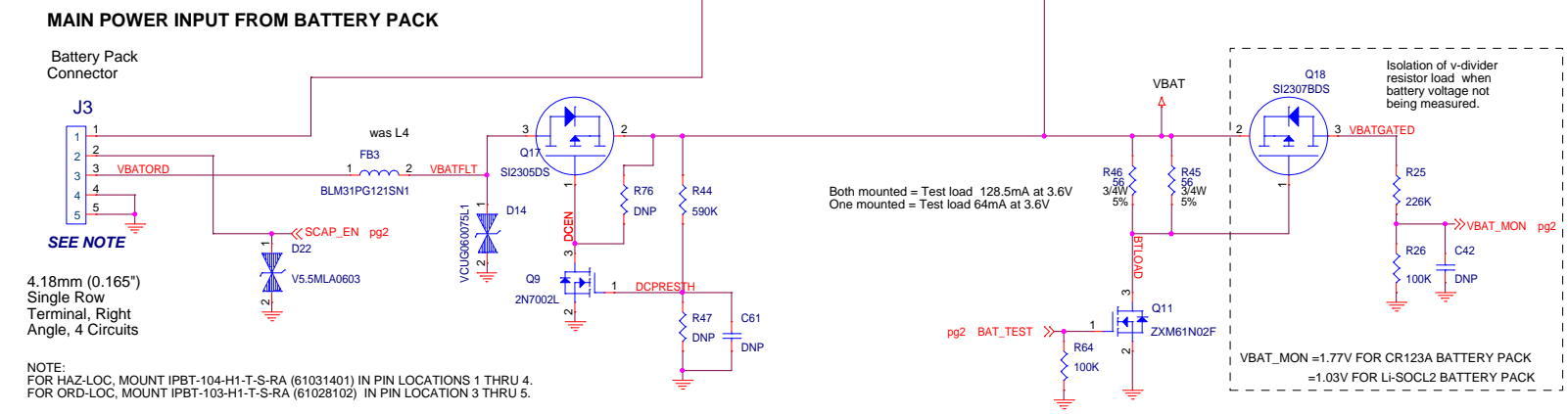
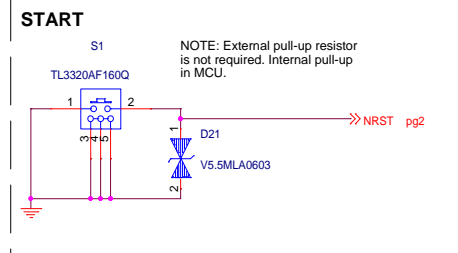
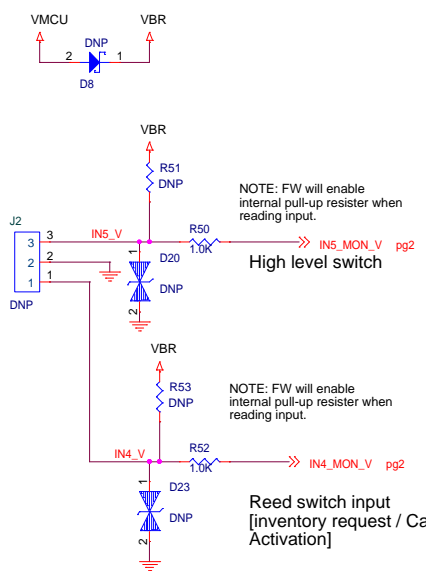
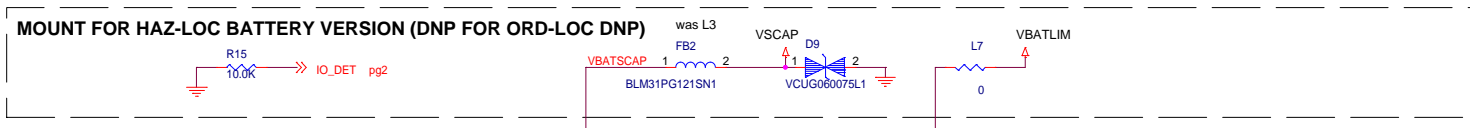
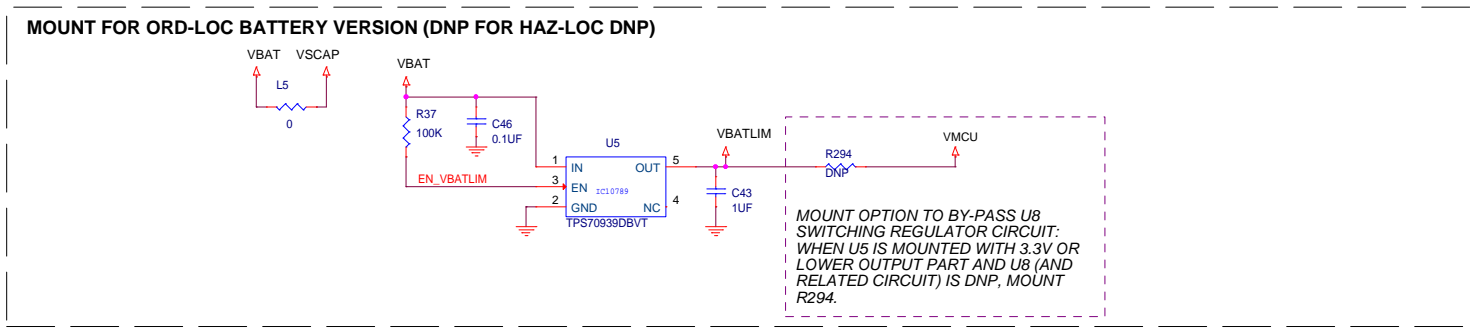


REV	ZONE	ECO	DESCRIPTION	BY	DATE
XA			INITIAL - EPO	LM	06/20/14
XB			See Change History Page	LM	xx/xx/xx
-		SN189	See Change History Page	LM	09/17/14

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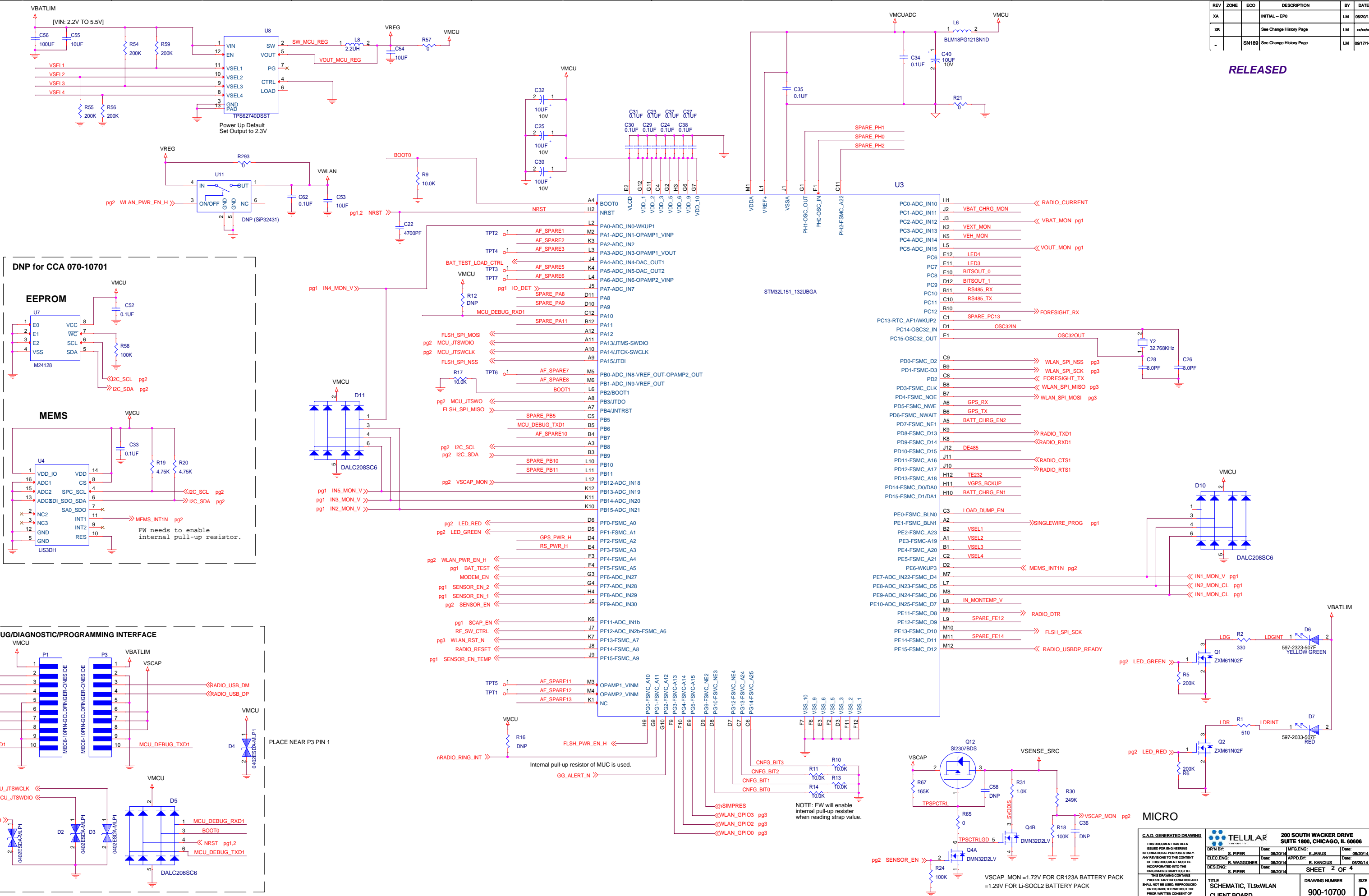


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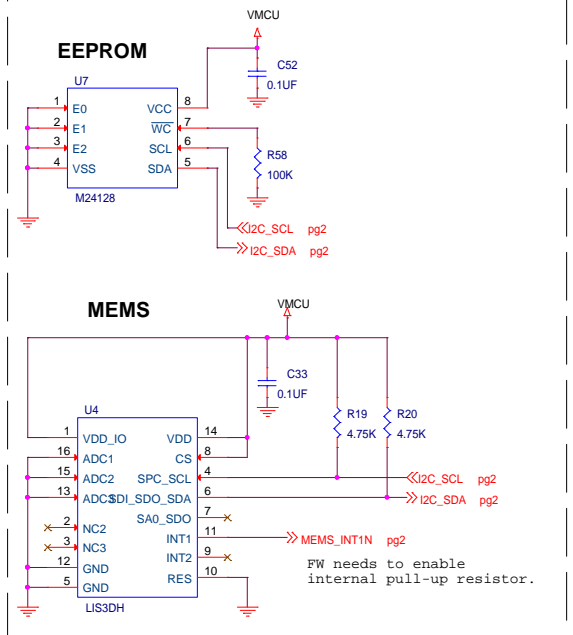
C.A.D. GENERATED DRAWING		TELULAR		200 SOUTH WACKER DRIVE SUITE 1800, CHICAGO, IL 60606	
DESIGNED BY: S. PIPER	Date: 06/20/14	APP'D BY: R. KANCIUS	Date: 06/20/14	DATE: 06/20/14	DATE: 06/20/14
DESIGNED BY: R. WAGGONER	Date: 06/20/14	APP'D BY: S. PIPER	Date: 06/20/14	SHEET 1 OF 4	
TITLE: SCHEMATIC, TL9xWLAN			DRAWING NUMBER: 900-10700		SIZE: D

REV	ZONE	ECO	DESCRIPTION	BY	DATE
XA			INITIAL - EPO	LM	06/20/14
XB			See Change History Page	LM	xx/xx/xx
-			SN189 See Change History Page	LM	09/17/14

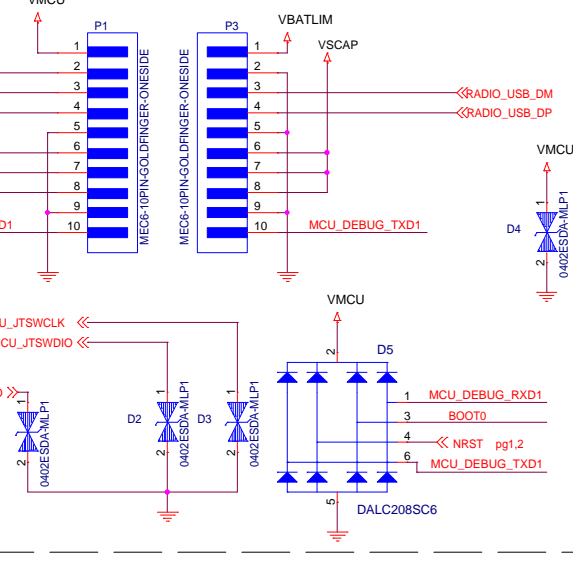
RELEASED



DNP for CCA 070-10701



DEBUG/DIAGNOSTIC/PROGRAMMING INTERFACE



**C.A.D. GENERATED DRAWING**

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**TELULAR**  
200 SOUTH WACKER DRIVE  
SUITE 1800, CHICAGO, IL 60606

DRN BY: S. PIPER Date: 06/20/14  
DESIGN: R. WAGGONER Date: 06/20/14  
APP'D BY: R. KANCIUS Date: 06/20/14

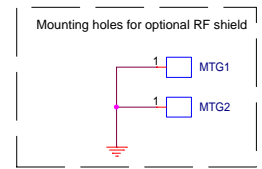
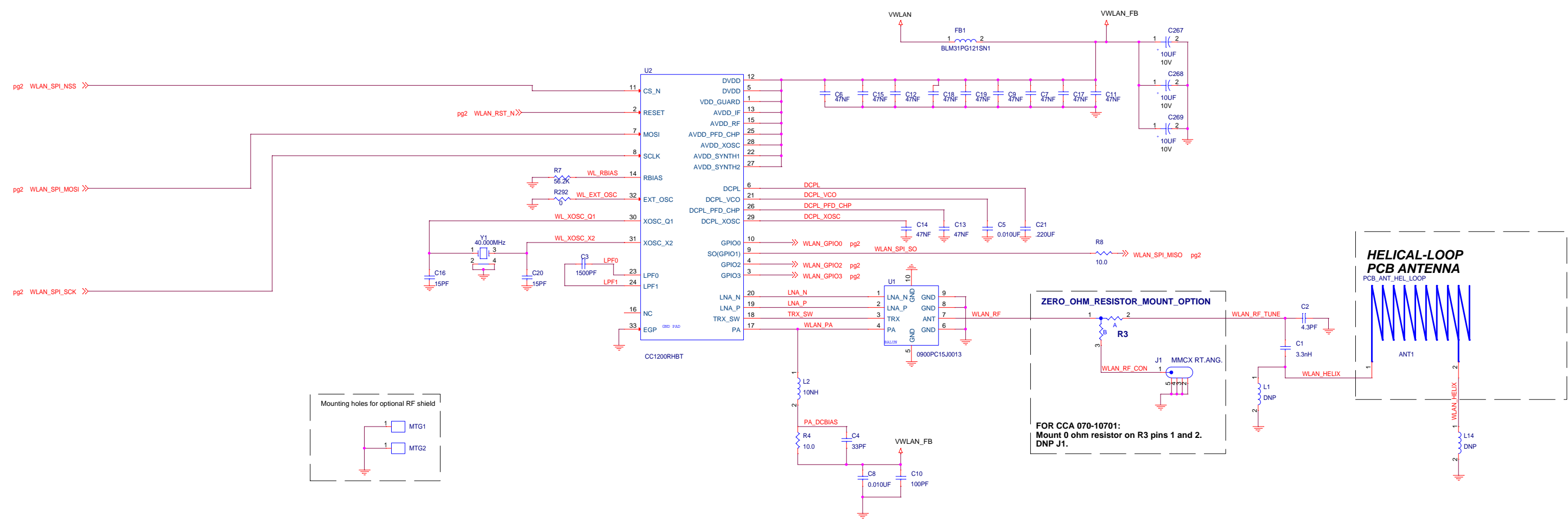
TITLE: SCHEMATIC, TL9xWLAN  
CLIENT BOARD

DRAWING NUMBER: 900-10700  
SIZE: D

SHEET 2 OF 4

REV	ZONE	ECO	DESCRIPTION	BY	DATE
XA			INITIAL - EPO	LM	06/20/14
XB			See Change History Page	LM	xx/xx/xx
-		SN189	See Change History Page	LM	09/17/14

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CHANGE HISTORY

C.A.D. GENERATED DRAWING		TELULAR		200 SOUTH WACKER DRIVE SUITE 1800, CHICAGO, IL 60606	
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DRN BY:	S. PIPER	Date:	06/20/14	MFG ENG:	K. JANUS
DESIGN:	R. WAGGONER	Date:	06/20/14	APP'D BY:	R. KANCUS
DESIGN:	S. PIPER	Date:	06/20/14	SHEET 3 OF 4	
TITLE SCHEMATIC, TL9xWLAN CLIENT BOARD				DRAWING NUMBER 900-10700	SIZE D


### CHANGE HISTORY

Rev.	Description
XA	Initial version of .....
XB	<p>VOUT_S1, VOUT_S2, and VOUT_TEMP output control circuit. Corrected load fets not turning off when VOUT is greater than 10V.</p> <ol style="list-style-type: none"> <li>Change R22, R62, and R69 changed from 165K ohm to 100K ohm.</li> <li>Added 100K resistors, R289, R290, and R291, with 20K resistors to create voltage divider.</li> </ol> <p>CC1200 EXT_OSC pin floating -- Added zero ohm R292 pull down to ground.</p> <p>VSCAP_GATED output control circuit. Corrected load fet not turning ON when VSCAP is less than 4.5V.</p> <ol style="list-style-type: none"> <li>Changed R67 from 20K ohm to 165K ohm</li> <li>Changed R65 from 10K ohm to 0 ohm</li> <li>Added 0.1uF capacitor, C62.</li> </ol> <p>Addition of intrinsically safe (IS) circuit to signals VSENSE_SRC and SINGLEWIRE_PROG</p> <ol style="list-style-type: none"> <li>Added two 6.8V 5W zener diode, D25 and D26, between VSENSE_SRC and GND.</li> <li>Added two 4.7V 5V zener diodes, D27 and D28, between SINGLEWIRE_PROG and GND.</li> </ol> <p>Change to use separate load switch for WLAN control.</p> <ol style="list-style-type: none"> <li>Added mounting option for load switch IC, U11. Do Not Mount.</li> <li>Added zero ohm by-pass resistor, R293, as mounting option. Mount.</li> </ol> <p>To move center frequency of wlan antenna lower and to be ease tuning.</p> <ol style="list-style-type: none"> <li>ANT1, PCB antenna changing to loop antenna.</li> <li>Shunt inductor, L14, added to connect pin 2 of antenna to ground.</li> </ol>
-	<p>TUNING OF HELICAL ANTENNA</p> <ol style="list-style-type: none"> <li>Change L1 from 12nH to DNP</li> <li>Change C1 from 1pF to 3.3nH</li> <li>Changed C2 from DNP to 4.3pF</li> </ol> <p>ADD BULK DECOUPLING WLAN_FB</p> <p>Add C267, C268, and C269 (10uF capacitor)</p> <p>REDUCE INPUT REGULATOR OUTPUT to address increase in current consumption when VBAT is below 5V.</p> <p>Changed U5 from 5V output to 3.9V output part.</p> <p>Increase the power down rate of VSENSE_SRC.</p> <p>Change C58 to DNP.</p> <p>Changed J1 from U.FL connector to MMCX connector. Is DNP for 070-10701</p>

REV	ZONE	ECO	DESCRIPTION	BY	DATE
XA			INITIAL -- EPO	LM	06/20/14
XB			See Change History Page	LM	xx/xx/xx
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### CHANGE HISTORY

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<small>DRN BY:</small> S. PIPER	<small>Date:</small> 06/20/14	<small>MFG ENG:</small> K. JANUS	<small>Date:</small> 06/20/14
<small>DELEG:</small> R. WAGGONER	<small>Date:</small> 06/20/14	<small>APPD BY:</small> R. KANCUS	<small>Date:</small> 06/20/14
<small>DES ENG:</small> S. PIPER	<small>Date:</small> 06/20/14	SHEET 4 OF 4	
<small>THIS DRAWING CONTAINS PROPRIETARY INFORMATION AND SHALL NOT BE USED, REPRODUCED OR DISTRIBUTED WITHOUT THE PRIOR WRITTEN CONSENT OF TELULAR CORP. CHICAGO, ILLINOIS</small>		<small>TITLE</small> SCHEMATIC, TL9xWLAN	<small>DRAWING NUMBER</small> 900-10700
			<small>SIZE</small> D