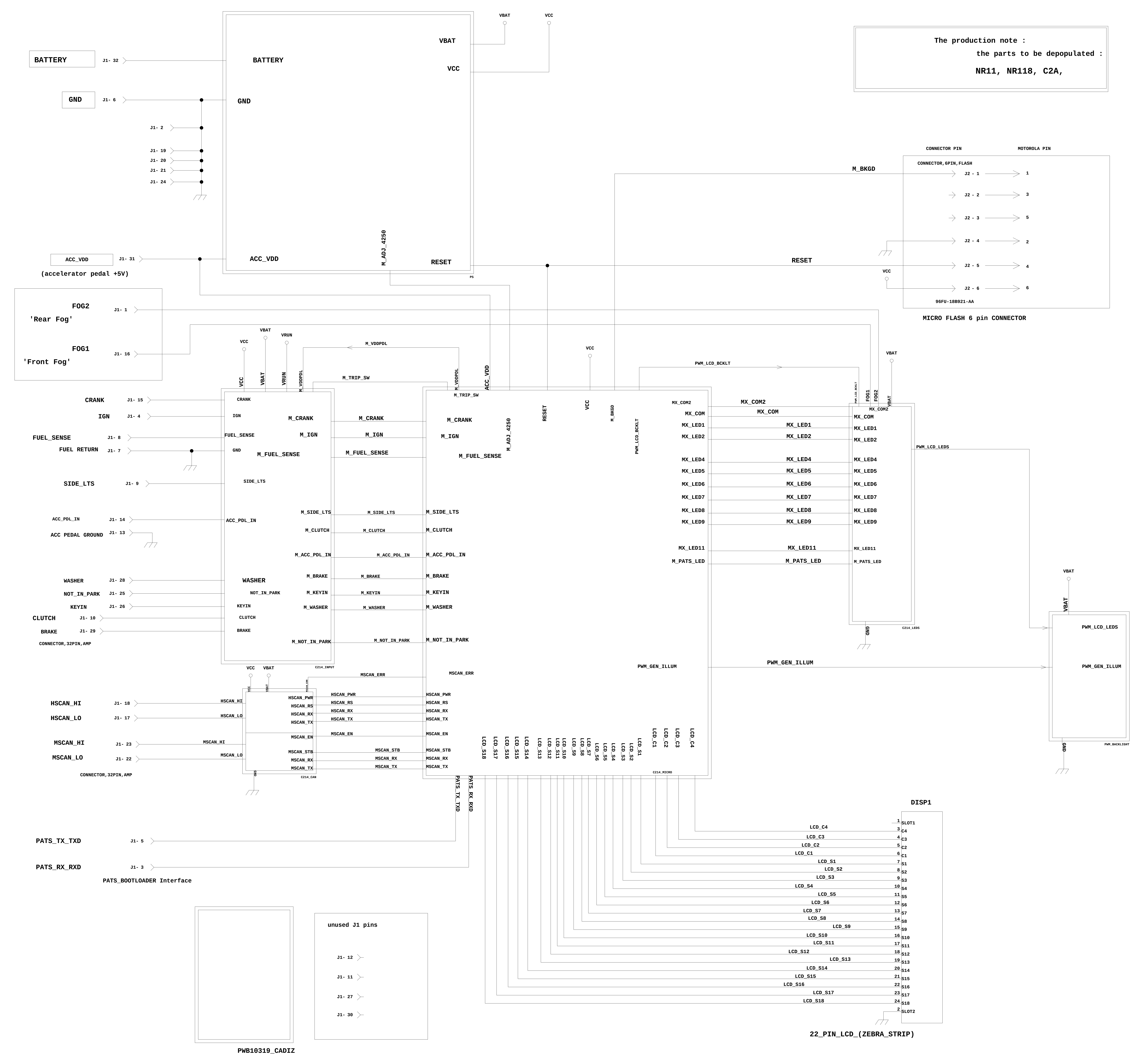


The production note :
the parts to be depopulated :
NR11, NR118, C2A,

NO. MS-XXXX-3458-XX

DATE	LET	REVISIONS	CG	MAN	CK	APP

C214 'C307' LOW (11756)

021126
- the two FOG lamp LEDs added
(J1-1 and J1-16 connector pins)
- RN211,RN212 changed to 390 ohms
-R651,R652,C203,C203A taken off
-R96 changed to 750 ohm
- the pointer illum. ress changed
(R105, R401, R96)

021128
- IGN circuit changed
- the pedal circuit changed
- the fog telltail circuit changed

021209
- IC1, Y1 part num. changed
- R612,RN211,RN212,C201 taken off

021212
- the caps taken off:
C3A,C35A,C53A,C23A,C24A,C62A,C6A
- the caps change to 10n (were 22n):
C3,C53,C23,C24,C62,C6
- C35 changes to 100n (was 220n)

C307 LOW (12145)

030404
- the LCD slots enlarged
- stepper motor TP's deleted (Pg3)
- TP611 deleted (Pg7)
- C602 deleted (Pg4)

030520
*Pg2:
- TPLCD2 and NC39 deleted
- the heatsink TP's deleted
*Pg3,5:
- Q109 (deleted) merged into Q110
* PATS LED LR8 controlled
directly from the micro IC1
*Pg6:
- R88A & R101A deleted,
- R88 & R101 change to 300 ohm
(were of 390 ohm)

030530
* IC1 MAKO p/n changed to
N760119CFLC000 (as per MID)
* the green LEDs p/n=NE11002BF..
changed to p/n=NE21007BF..

030617
* TP153 and TP802 deleted on Pg3
* all NCxx cells / parts deleted
* DISP1 cell changed (XF-29513)

030707
- C801 added at IC1-PT0 (Pg 4)

PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

Visteon

PRODUCT ENGINEERING

☒ COMPUTER ☐ MANUAL "E" SIZE

CG COLUMN = GRAPHIC DATA LEVEL ORIGINAL WHEN RED

ENGLISH 1 2 3 4 5 6
METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DO NOT SCALE ABOVE SCALE FOR REFERENCE ONLY

REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030707		NONE	V. POLEKSIC

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP C307 LOW
DATE 030707

NAME SKETCH - WIRING DIAGRAM
PWB12145

NO. MS-XXXX-3458-XX

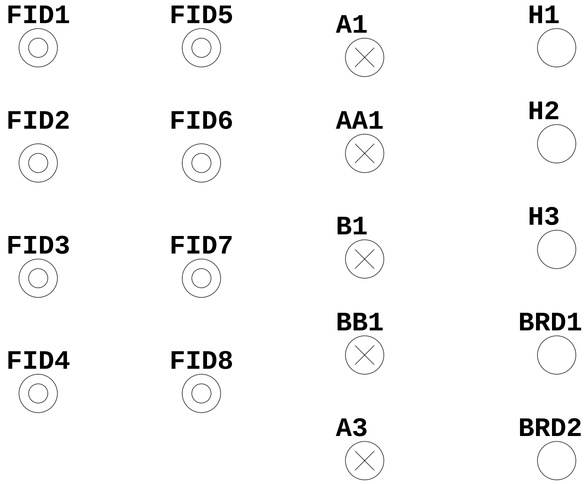
POWERVIEW

12145 PLANT CODE: CADIZ

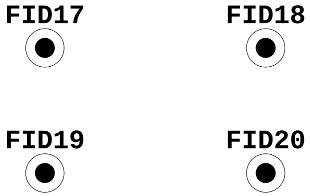
CADIZ MECHANICAL DETAIL

THIS SHEET IS NOT TO BE CHANGED

MOTHERPANEL DETAIL



DAUGHTER BOARD DETAIL



TOOLING HOLES(2.5mm/HL-098)
(test/routing)

GLOBAL FIDUCIALS(top)

ED1

EDGE
MARK

ED2

EDGE
MARK

H4 CHANGED FROM PTH
TO NPTH MCL 010402

H6, H7 , H13, H14 removed.

CM1

CROP
EDGE
MARK

CM2

CROP
EDGE
MARK

CM3

CROP
EDGE
MARK

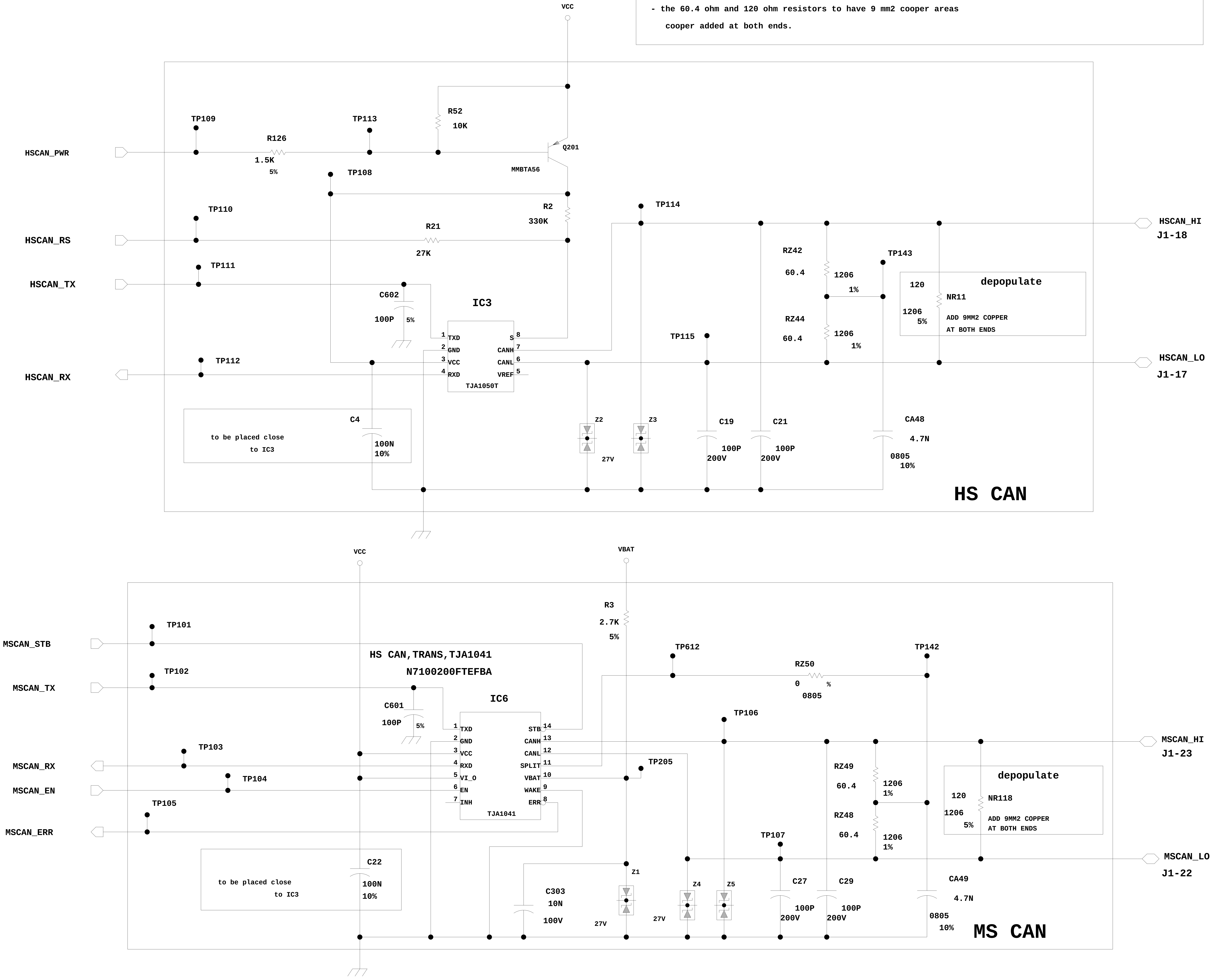
CM4

CROP
EDGE
MARK

NO. MS-XXXX-3458-XX

DATE	LET	REVISIONS	CG	MAN	CK	APP
		PWB11251 (C214 LOW 1PP):				
020524		- R126 changed to 1k5 (was 1k)				
		PWB11410 (C214 LOW 1PP):				
020725		- no changes made.				
		C214 'C307' LOW (11756)				
021126		- NR601 (2k7) taken off at WAKE pin - C601, C602 changed to 100p				
		C307 LOW (12145)				
030404		- TP611 deleted (IC6-9)				

- CAN output lines xxx_HI and xxx_LO to be screened.
- the 60.4 ohm and 120 ohm resistors to have 9 mm2 cooper areas
  cooper added at both ends.



PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

Visteon

PRODUCT ENGINEERING

☒ COMPUTER ☐ MANUAL "D" SIZE

CG COLUMN = GRAPHIC DATA LEVEL ORIGINAL WHEN RED

ENGLISH 1 2 3 4 5 6
METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DO NOT SCALE ABOVE SCALE FOR REFERENCE ONLY

REF \C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030404		NONE	C307 LOW 030404

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-

3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP

DATE

NAME SKETCH - WIRING DIAGRAM
C214_CAN

NO. MS-4M5F-3458-AJ

POWERVIEW

12145

PLANT CODE:

SHEET OF

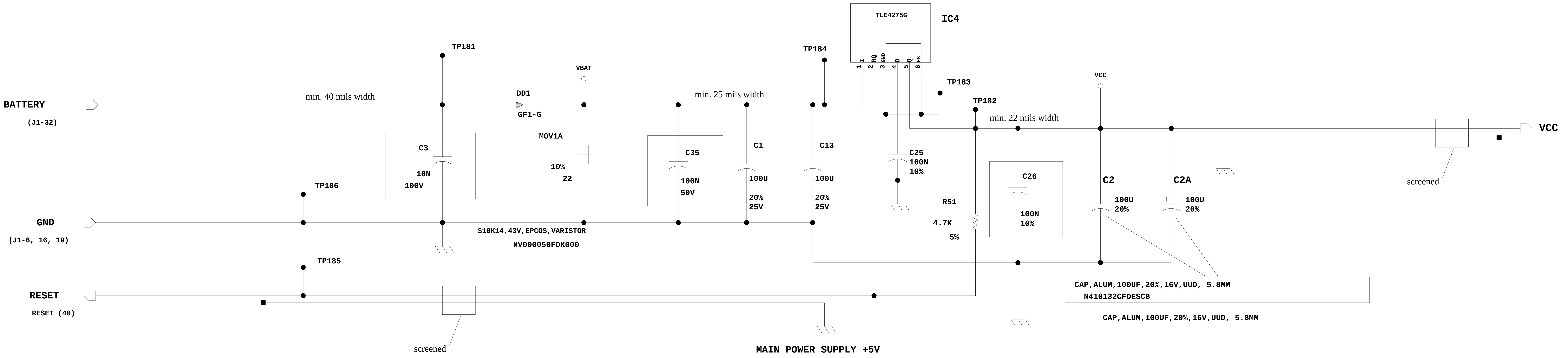
NO. MS-XXXX-3458-XX

* min 2 vias on each layer
flip, from DD1 (VBAT) towards:
C53, C3, C35 and C26 .

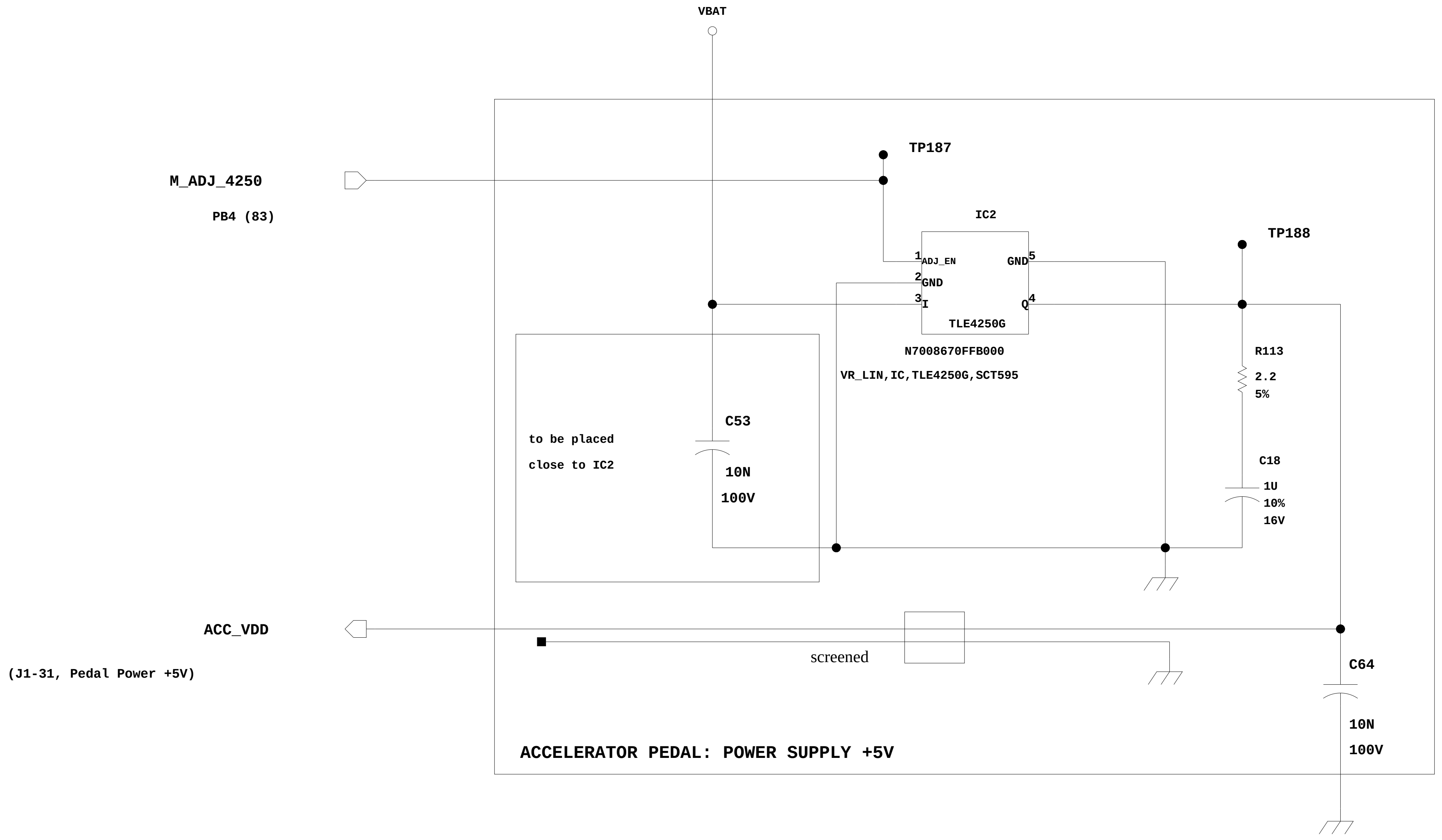
for DD1 : create 25 mm2 copper
plane, at both ends

C1, C13, C35, C35A, C25 and C26 to be
placed close to IC4.

Note: Create min. 950 mm2 of copper plane
around tab of IC4, with NO thermal breaks



MAIN POWER SUPPLY +5V



ACCELERATOR PEDAL: POWER SUPPLY +5V

TEST POINTS 'TP-080' PLACED AROUND IC4. SOLDER NOT NEEDED ON THEM.

DATE	LET	REVISIONS	CG	MAN	CK	APP

011107
- test points HSPxx added (32).

011212
- nine test points added (TP32, TP38, TP41,..).

020211 - C2A, C2B option : ceramics 22uF/10V

020306 - HSPxx test points updated

C214 1PP LOW (11251)

020520
- C2B taken off
- C2 & C2B replaced by '100uF, UUD, 5.8mm' cap

020703 - the test points HSP55 - HSP63 added

PWB11410 (C214 LOW 1PP):

020725 - no changes made.

C214 'C307' LOW (11756)

021212
- C3A, C35A, C53A taken off
- C3,C53 change to 10n (were 22n)
- C35 changes to 100n (was 220n)

C307 LOW (12145)

030519
- TPLCD2 and NC39 deleted
- the heatsink TP's deleted

PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

Visteon

PRODUCT ENGINEERING

☒ COMPUTER ☐ MANUAL "E" SIZE

CG COLUMN = GRAPHIC DATA LEVEL ORIGINAL WHEN RED

ENGLISH 1 2 3 4 5 6
METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DO NOT SCALE ABOVE SCALE FOR REFERENCE ONLY

REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030404		NONE	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP C307 LOW

DATE 030404

NAME SKETCH - WIRING DIAGRAM
PS.1

NO. MS-4M5F-3458-AJ

POWERVIEW

12145

PLANT CODE:

NO. MS-XXXX-3458-XX

DATE	LET	REVISIONS	CG	MAN	CK	APP

PWB11410 (C214 LOW 1PP):

020725 - no changes made.

C214 C307 LOW (11756)

021127

- the res R96 changed to 750 ohm
  (was 560 ohm)
- the res R105,R401 changed to 1k1
  (were 680 ohm)

C307 LOW (12145)

030404

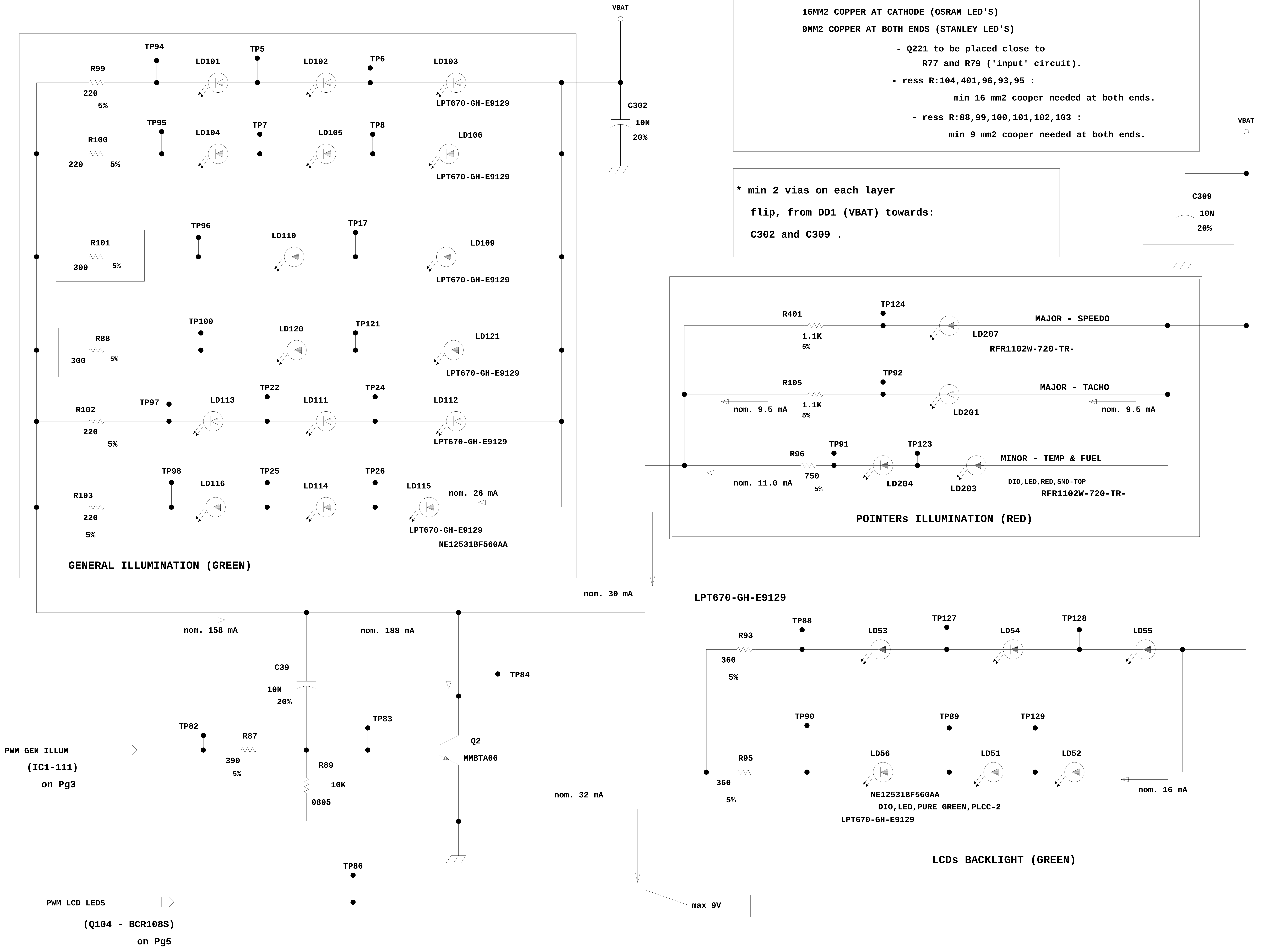
- C302A and C309A deleted.
- C302 and C309 replaced by 10 nF.

030520

- R88A & R101A deleted,
- R88 & R101 change to 300 ohm
  (were of 390 ohm)

030530

* the green LEDs p/n=NE11002BF..
  changed to p/n=NE21007BF..



NOTE: LEDS TO USE ALTERNATE WITH EITHER
16MM2 COPPER AT CATHODE (OSRAM LED'S)
9MM2 COPPER AT BOTH ENDS (STANLEY LED'S)

- Q221 to be placed close to
  R77 and R79 ('input' circuit).
- ress R:104,401,96,93,95 :
  min 16 mm2 cooper needed at both ends.
- ress R:88,99,100,101,102,103 :
  min 9 mm2 cooper needed at both ends.

* min 2 vias on each layer
  flip, from DD1 (VBAT) towards:
  C302 and C309 .

PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

Visteon

PRODUCT ENGINEERING

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CG COLUMN = GRAPHIC DATA LEVEL ORIGINAL WHEN RED

ENGLISH 1 2 3 4 5 6
METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

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REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030520		NONE	030520

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

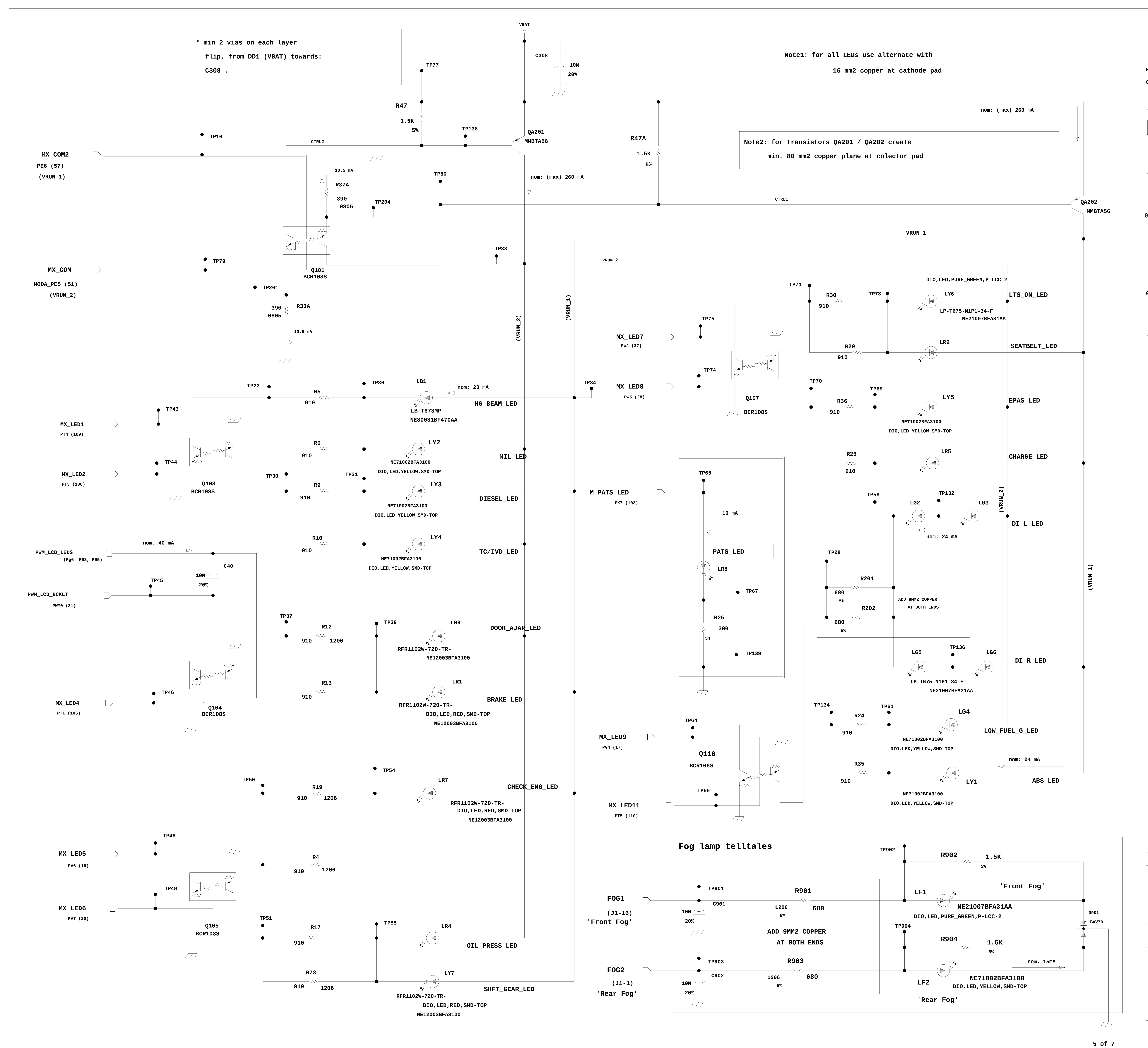
APP C214 C307 LOW
DATE 030520

NAME SKETCH - WIRING DIAGRAM
PWM_BACKLIGHT.1

NO. MS-4M5F-3458-AJ

POWERVIEW

12145 PLANT CODE:



* min 2 vias on each layer
flip, from DD1 (VBAT) towards:
C308 .

Note1: for all LEDs use alternate with
16 mm2 copper at cathode pad

Note2: for transistors QA201 / QA202 create
min. 80 mm2 copper plane at colector pad

NO. **MS-XXXX-3458-XX**

DATE	LET	REVISIONS	CG	MAN	CK	APP

C214 1PP LOW (11251)

020520 - R25 changed to 680 ohms.

020610
- C203 & C203A changed to 100p (were 1n).
- R651 & R652 (10k) added.

PWB11410 (C214 LOW 1PP):

020725
- Q110, pins 3,5 connected to GND.

C214 C307 LOW (11756)

021126
- the fog telltales added
  (LF1,LF2,R901,R903,..)
- the four components taken off :
  (R651, R652, C203, C203A)
  (the MX_COM outputs)
- the ress R47,R47A changed to 1k5,

021128
- the caps C901,C902 added
- the diode D901 added
- the LF1 led p/number changed

C307 LOW (12145)

030404
- C308A deleted
- C308 replaced by 10 nF

030520
- Q109 (deleted) merged into Q110
  * PATS LED LR8 controlled
  directly from the micro IC1

030530
* the green LEDs p/n=NE11002BF..
changed to p/n=NE21007BF..

PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT

Visteon

PRODUCT ENGINEERING

☒ COMPUTER ☐ MANUAL "E" SIZE

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ENGLISH 1 2 3 4 5 6
METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

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REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030520	V POLEKSIC	NONE	

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP C307 LOW
DATE 030520

NAME SKETCH - WIRING DIAGRAM
C214_LEDS

NO. **MS-4M5F-3458-AJ**

12145 PLANT CODE:

POWERVIEW

NO. **MS-XXXX-3458-XX**

DATE	LET	REVISIONS	CG	MAN	CK	APP

C214 1PP LOW (11251)

020520

- D5 diode added btw. R117 and VRUN.
- R117, R77, R79, R107, R301,...
  changed to 1k1 (were 1k3)
- R211 & R212 taken off
- TP29 taken off
- Q221 = BCR10PN

PWB11410 (C214 LOW 1PP):

020725 - PATS TX circuit changed
(M_PATS_TXxx nets removed)
- PLL filter values changed

021212

- the caps taken off :
  C23A,C24A,C62A,C6A
- the caps change to 10n (were 22n) :
  C23,C24,C62,C6

C214 'C307' LOW (11756)

021126 - no changes made

021128 - IGN input res. changed
(16k5 + 33k)
- the pedal caps changed
to 100nF (were 10nF)

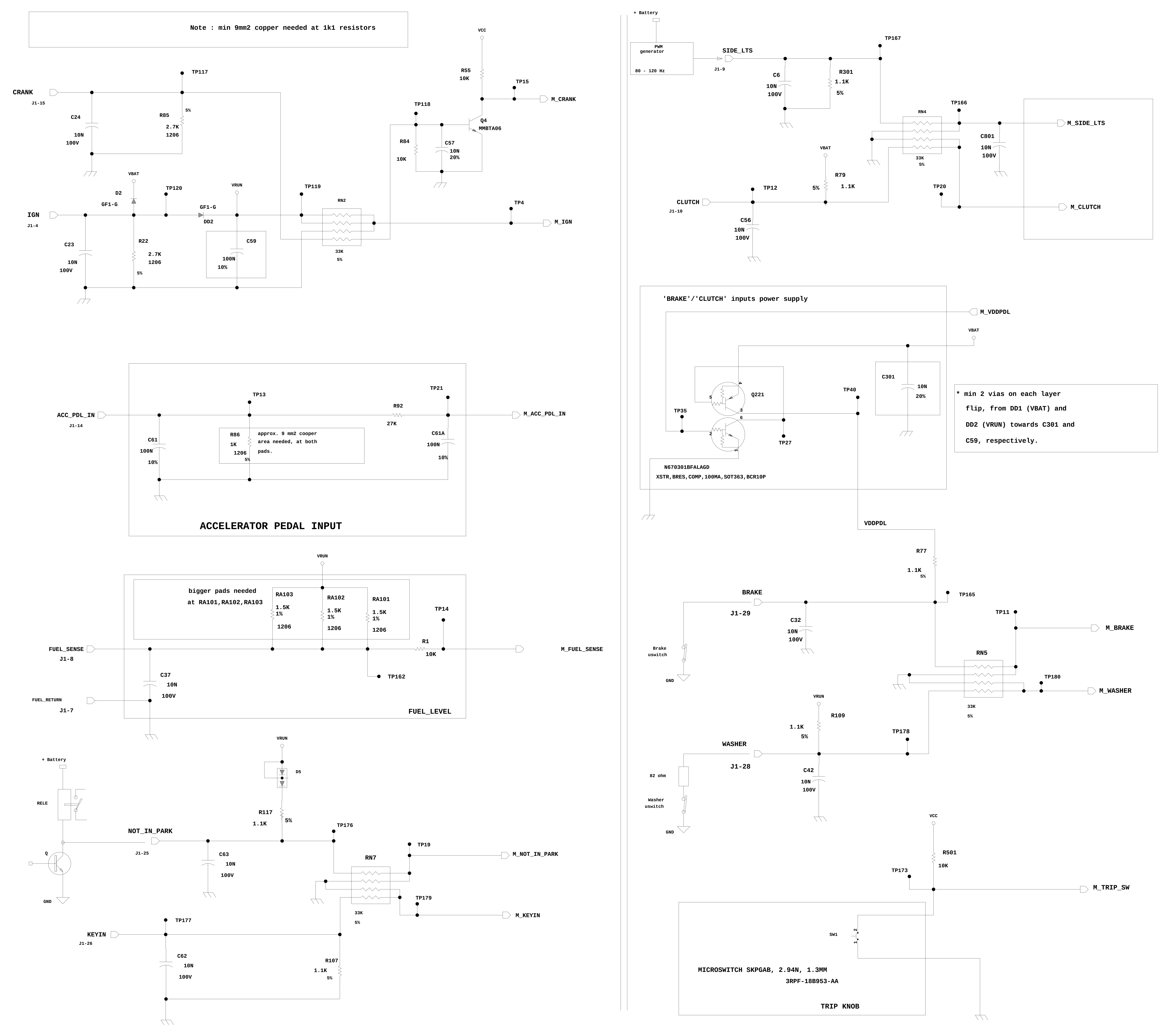
C307 LOW (12145)

030404

- C602 deleted (Q221)
- C59A and C301A deleted (VBAT)
- C59 replaced by 100 nF
- C301 replaced by 10 nF

030707

- C801 added at Side_Lts (IC1-PT0)



PART MUST COMPLY WITH SPECIFICATION WSS-M99P9999-A1
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Visteon **PRODUCT ENGINEERING**

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REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030707		NONE	V. POLEKSIC

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☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP C307 12145

DATE 030707

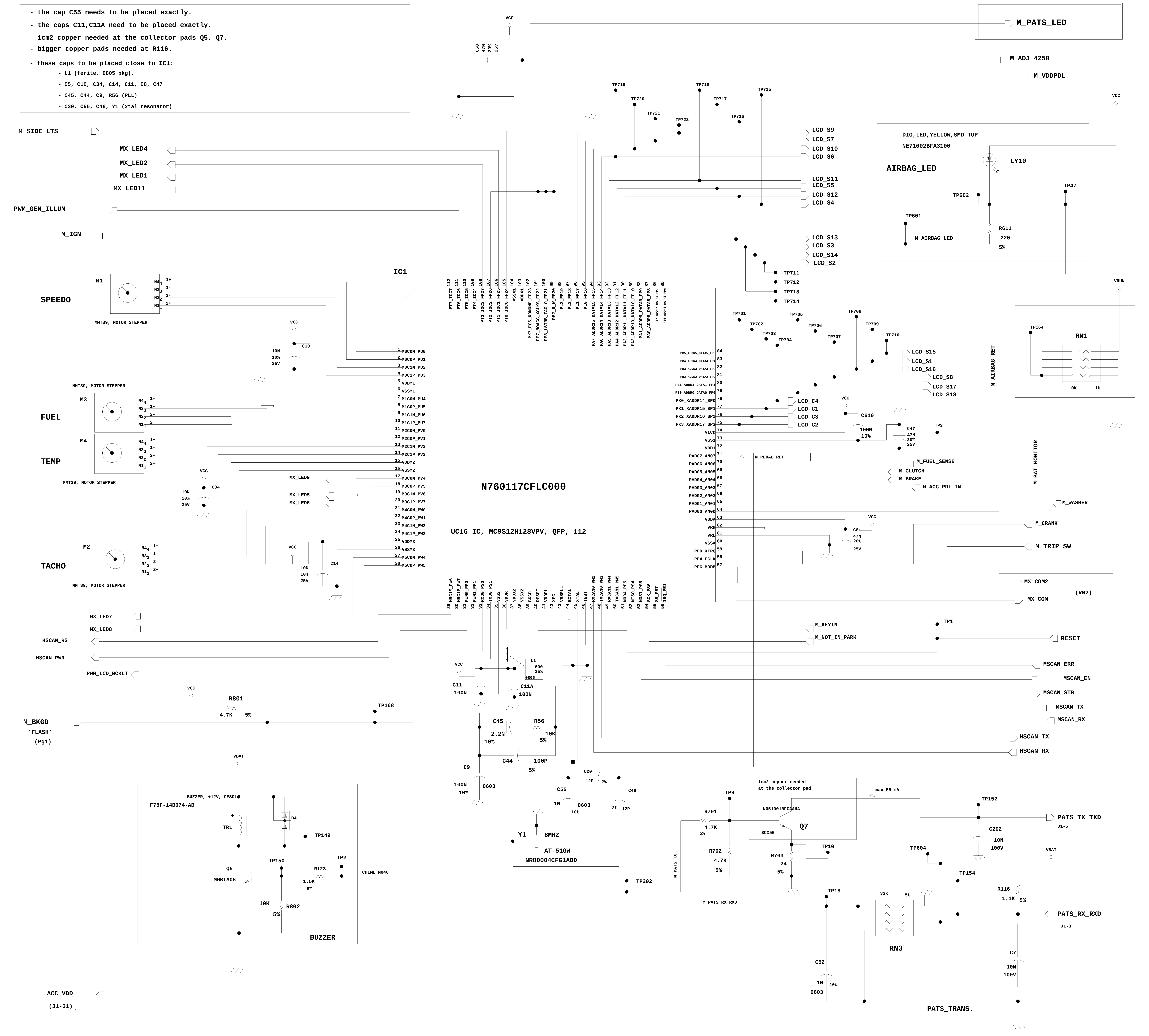
NAME SKETCH - WIRING DIAGRAM
C214_INPUT.1

NO. **MS-4M5F-3458-AJ**

POWERVIEW

12145 PLANT CODE: CADIZ

- the cap C55 needs to be placed exactly.
- the caps C11,C11A need to be placed exactly.
- 1cm2 copper needed at the collector pads Q5, Q7.
- bigger copper pads needed at R116.
- these caps to be placed close to IC1:
  - L1 (ferite, 0805 pkg),
  - C5, C10, C34, C14, C11, C8, C47
  - C45, C44, C9, R56 (PLL)
  - C20, C55, C46, Y1 (xtal resonator)



SHEET OF

NO. MS-XXXX-3458-XX

DATE	LET	REVISIONS	CG	MAN	CK	APP

C214 1PP LOW (11251)

020510
- Y1 crystal changed to 8.00MHz NX8045GB
- PLL : C45=470 nF, C44=47 nF
  R56=470 ohms
- M_TRIP_SW relocated to PE4 (IC1-58)
- IC1-100 connected to GND.
- L2 (ferrite) taken off
- R123 changed to 1k5 (was 1k)

020605 - Y1 (crystal 8.00 MHz) updated

020610 - RN1 changed to 10k, 1% (was 33k)

PWB11410 (C214 LOW 1PP):

020725
- R56, C44, C45 changed (PLL filter)
- the PATS TX circuit changed:
  (Q7,R701,R702,R703 added)
- TP9, TP10 added

C214 'C307' LOW (11756)

021126
- R801 pull up added (BKGD)
- RN211,RN212 added (BKGD,RESET)
- the opt. resonator added (YN555)
- PLL values (C44,C45,R56) changed
- TP802 test point added

021127
- R802 (10k) added at Chime circuit

021127
- R802 (10k) added at Chime circuit

021209
- IC1 part number changed
- Y1 part number changed (AT-51GW)
  (AT-51GW, 8.00 MHz)
- YN555 taken off
- RN211,RN212,R612 taken off
- C201 taken off

C307 LOW (12145)

030404
- stepper motor TP's deleted

030520
* M_PATS_LED micro output drives
  directly the PATS LED LR8

050720
* C10,C14,C34 changed to 10nF 10%
* C8,C47,C50 changed t0 47nF
* C5 Depopulated

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Visteon

PRODUCT ENGINEERING

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METRIC 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

DO NOT SCALE
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REF ..\C307_PSW_LOW

DRAWN BY	DATE	CHECKED	SCALE	APPROVED
V. POLEKSIC	030520		NONE	V. POLEKSIC

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN
☐ INCHES ☐ MILLIMETERS
MACHINED DIM. +/-
ANGULAR DIM. +/-
3RD ANGLE PROJECTION
STAMPED DIM. +/-

MATERIAL

APP C307 LOW
DATE 030520

NAME SKETCH - WIRING DIAGRAM
C214_MICRO.1

NO. MS-4M5F-3458-AJ

POWERVIEW

12145 PLANT CODE: CADIZ