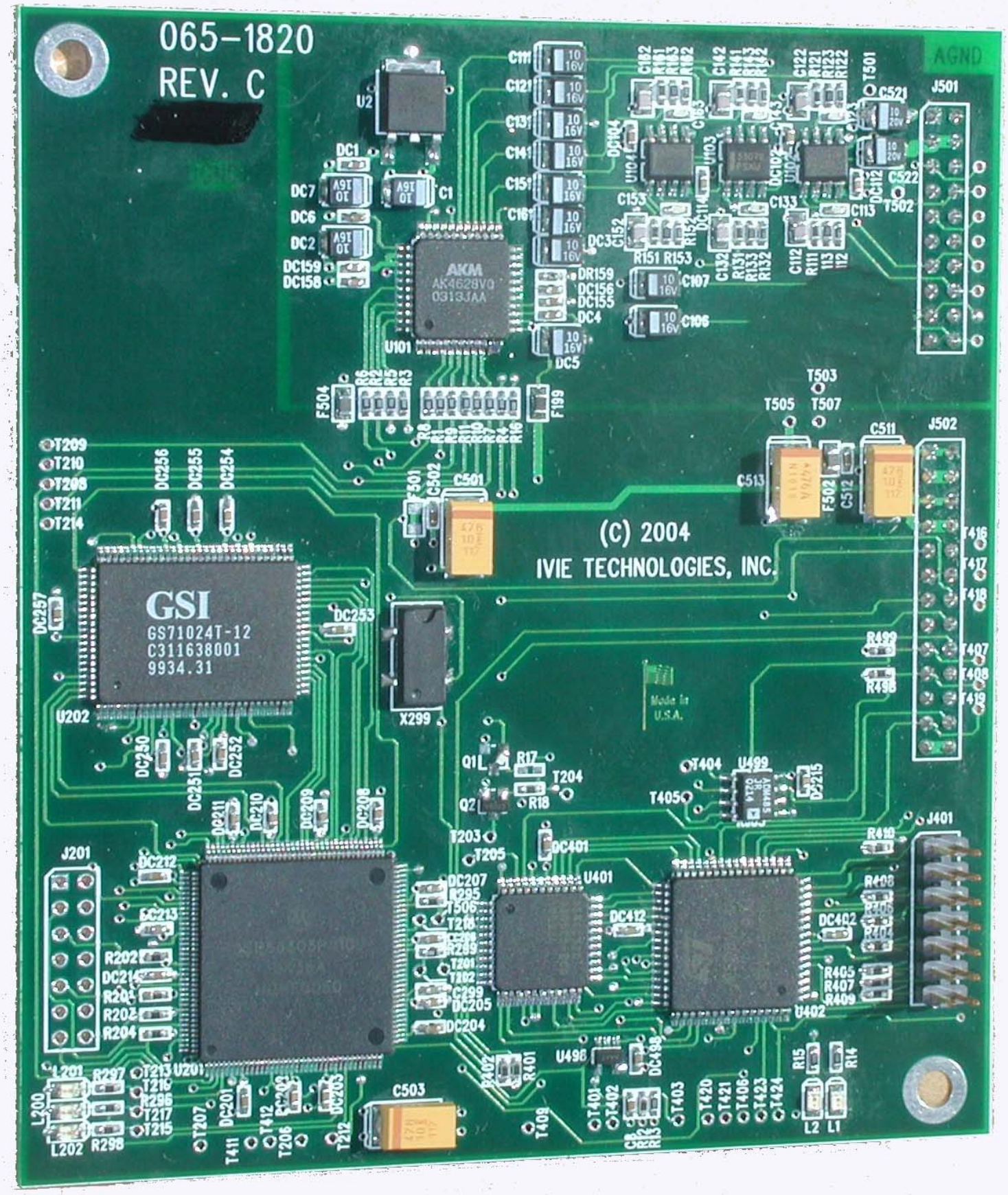
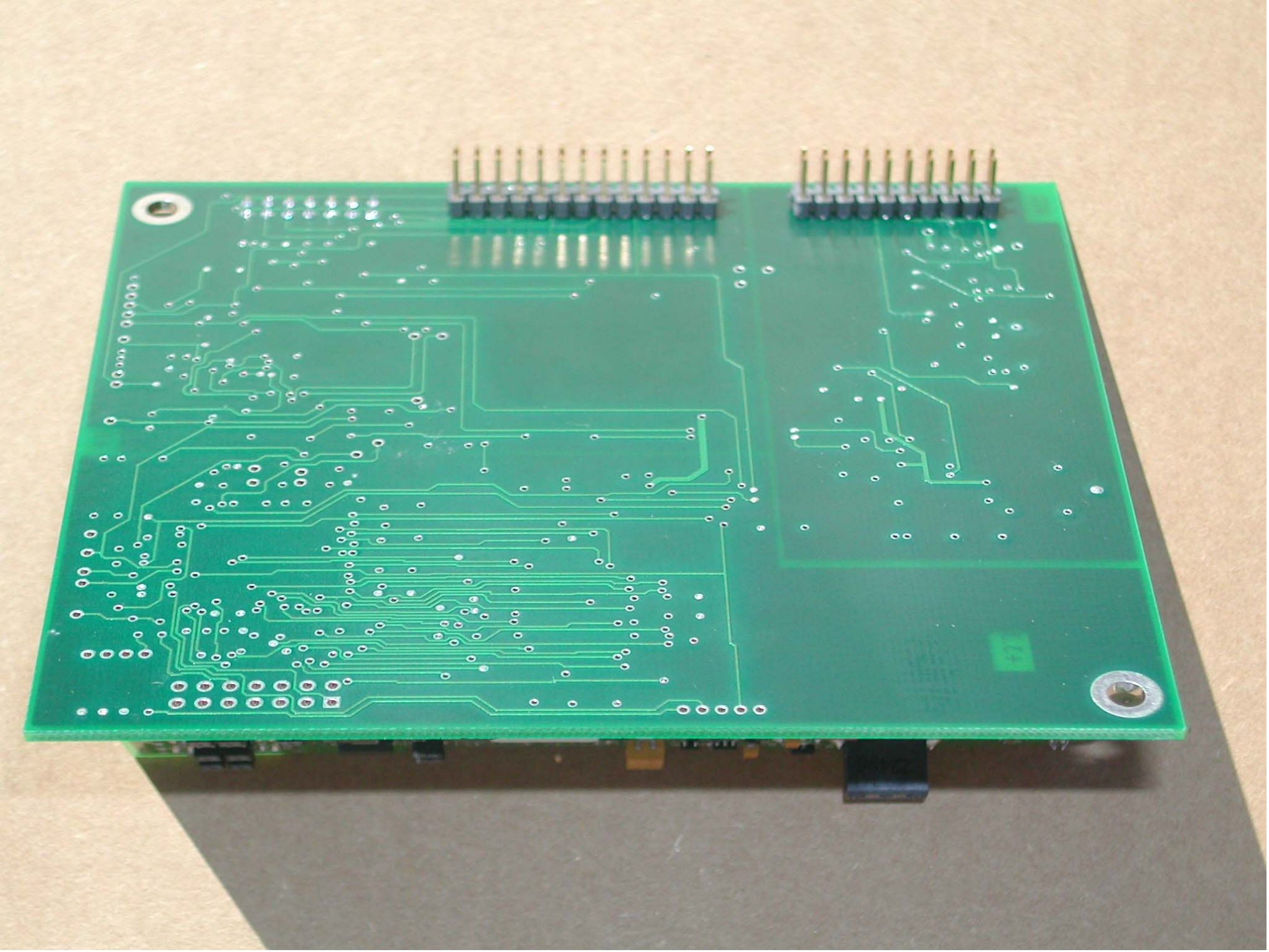
Ivie Technologies

005-1820 Rev D
PEQ DSP Board
Schematic, BOM, and Loading Diagrams

05/06/2004

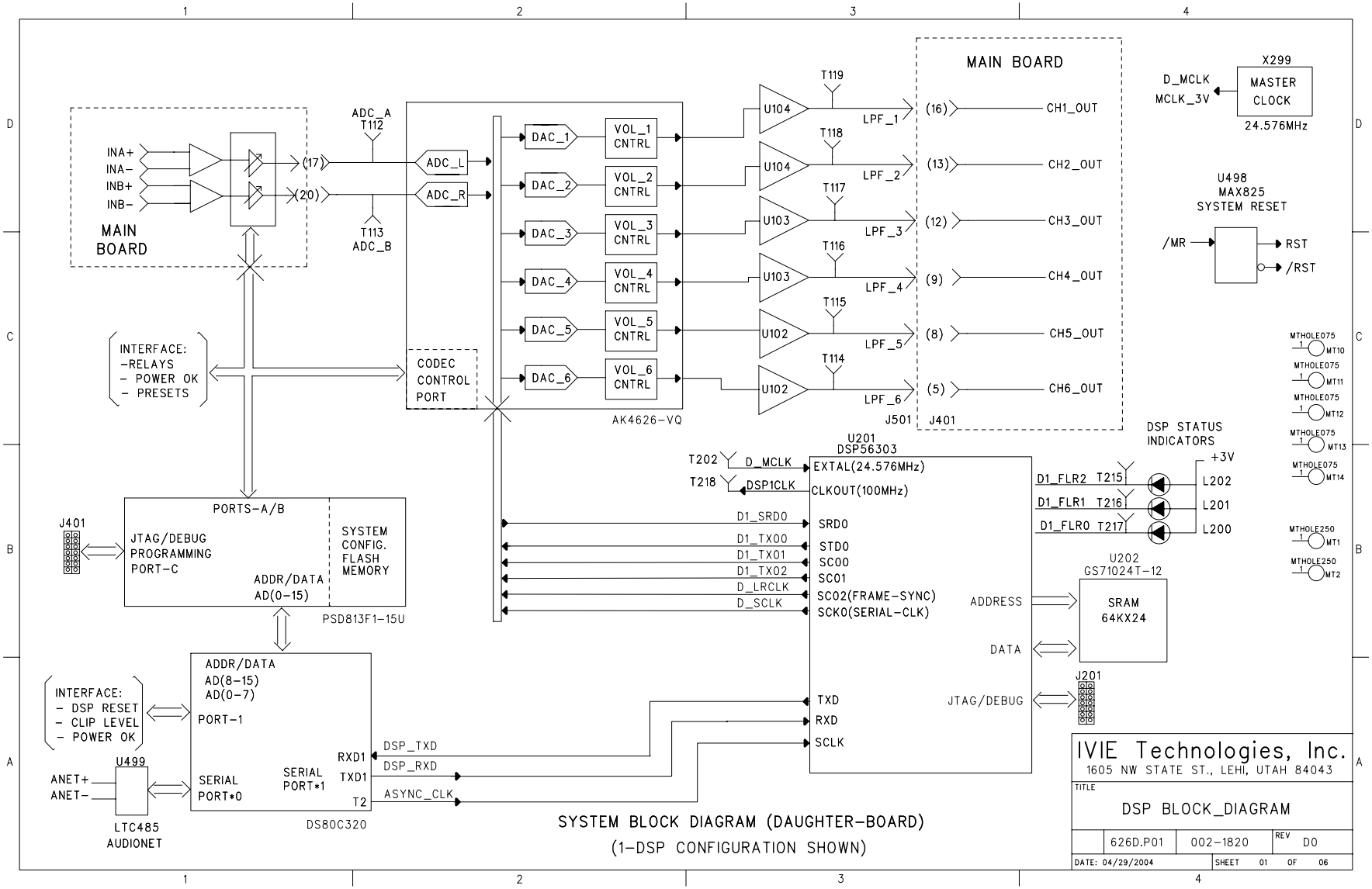

065-1820
REV. C
AGND
AKM
AK4628VQ
0313JAA
U101
GSI
GS71024T-12
C311638001
9934.31
U202
(C) 2004
IVIE TECHNOLOGIES, INC.
Made in
U.S.A.
J501
J502
J401
J201
U401
U402
U201
U496
U499
X299
C501
C503
C511
C513
F504
F199
F501
F502
U2
U104
U103
U102



Ivie Technologies

005-1820 Rev D0
PEQ DSP Board
Schematic

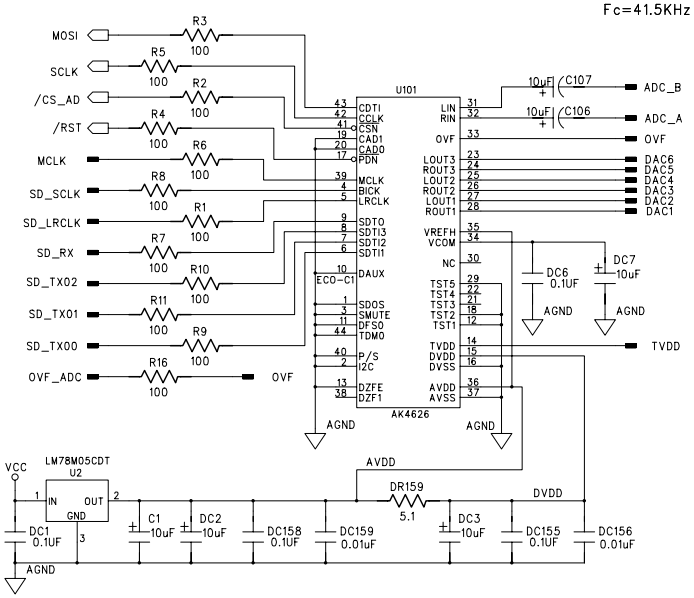
05/06/2004


MAIN BOARD
INA+
INA-
INB+
INB-
(17)
(20)
ADC_A
T112
T113
ADC_B
ADC_L
ADC_R
CODEC CONTROL PORT
AK4626-VQ
DAC_1
DAC_2
DAC_3
DAC_4
DAC_5
DAC_6
VOL_1 CNTRL
VOL_2 CNTRL
VOL_3 CNTRL
VOL_4 CNTRL
VOL_5 CNTRL
VOL_6 CNTRL
U104
U103
U102
T119
T118
T117
T116
T115
T114
LPF_1
LPF_2
LPF_3
LPF_4
LPF_5
LPF_6
J501
J401
(16)
(13)
(12)
(9)
(8)
(5)
CH1_OUT
CH2_OUT
CH3_OUT
CH4_OUT
CH5_OUT
CH6_OUT
X299
D_MCLK
MCLK_3V
MASTER CLOCK
24.576MHz
U498
MAX825
SYSTEM RESET
/MR
RST
/RST
INTERFACE:
-RELAYS
- POWER OK
- PRESETS
PORTS-A/B
J401
JTAG/DEBUG PROGRAMMING PORT-C
ADDR/DATA AD(0-15)
SYSTEM CONFIG. FLASH MEMORY
PSD813F1-15U
U201
DSP56303
T202
T218
D_MCLK
DSP1CLK
EXTAL(24.576MHz)
CLKOUT(100MHz)
D1_SRD0
D1_TX00
D1_TX01
D1_TX02
D_LRCLK
D_SCLK
SRD0
STD0
SC00
SC01
SC02(FRAME-SYNC)
SCK0(SERIAL-CLK)
TXD
RXD
SCLK
ADDRESS
DATA
JTAG/DEBUG
U202
GS71024T-12
SRAM 64KX24
J201
DSP STATUS INDICATORS
+3V
D1_FLR2 T215
D1_FLR1 T216
D1_FLR0 T217
L202
L201
L200
MTHOLE075
MT10
MT11
MT12
MT13
MT14
MTHOLE250
MT1
MT2
INTERFACE:
- DSP RESET
- CLIP LEVEL
- POWER OK
ADDR/DATA
AD(8-15)
AD(0-7)
PORT-1
SERIAL PORT*0
SERIAL PORT*1
RXD1
TXD1
T2
DSP_TXD
DSP_RXD
ASYNC_CLK
U499
ANET+
ANET-
LTC485
AUDIONET
DS80C320
SYSTEM BLOCK DIAGRAM (DAUGHTER-BOARD)
(1-DSP CONFIGURATION SHOWN)
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043
TITLE
DSP BLOCK_DIAGRAM
626D.P01
002-1820
REV D0
DATE: 04/29/2004
SHEET 01 OF 06

NOTE:
*1- SIGNAL RANGE = +/-3.75VpK

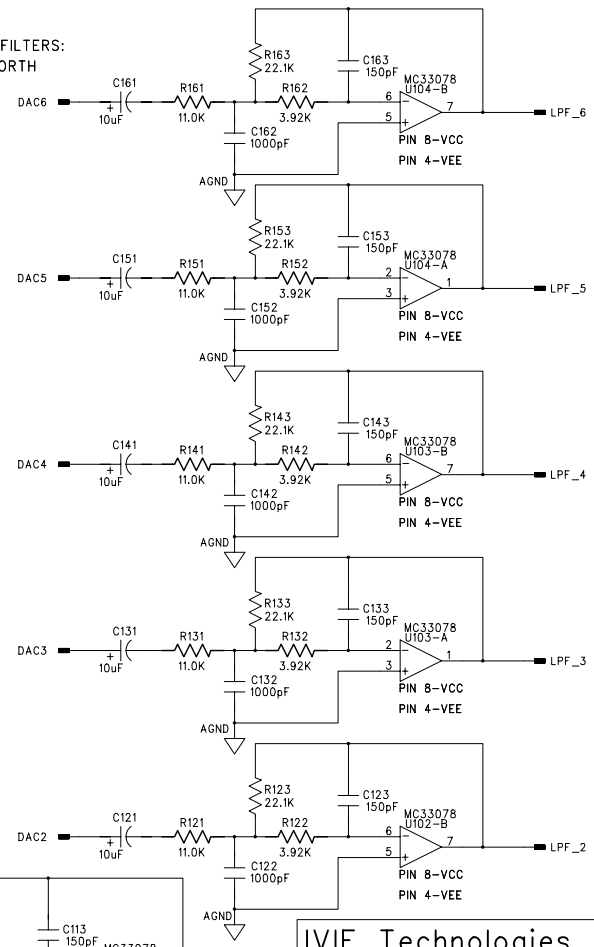
NOTE:
- CODEC SMPLING RATE
IS 48KHz (C_LRCLK).

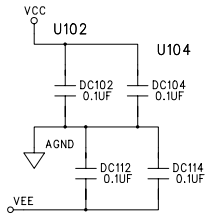
NOTE:
- OUTPUT LOWPASS FILTERS:
2ND ORDER BUTTERWORTH
AV=2.0 (+6.0dB)
Fc=41.5KHz

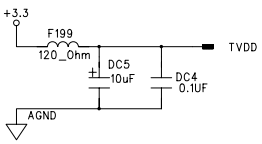


ECO C1 - 3/25/2004
Ground U101 Pin 10 (DAUX)

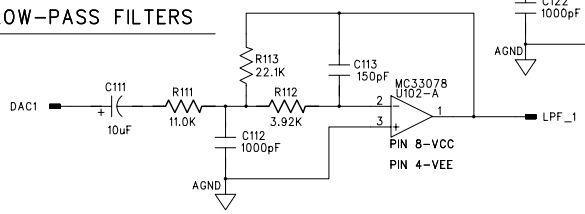
NOTE:
- CONNECT VA+/VD+ AS SHOWN ABOVE, WITH SMALLEST
VALUE DCs CLOSEST TO PINS AND LARGEST DCs FARTHEST.
- PLACE DR159 TO PIN*19, RUN TRACE BETWEEN







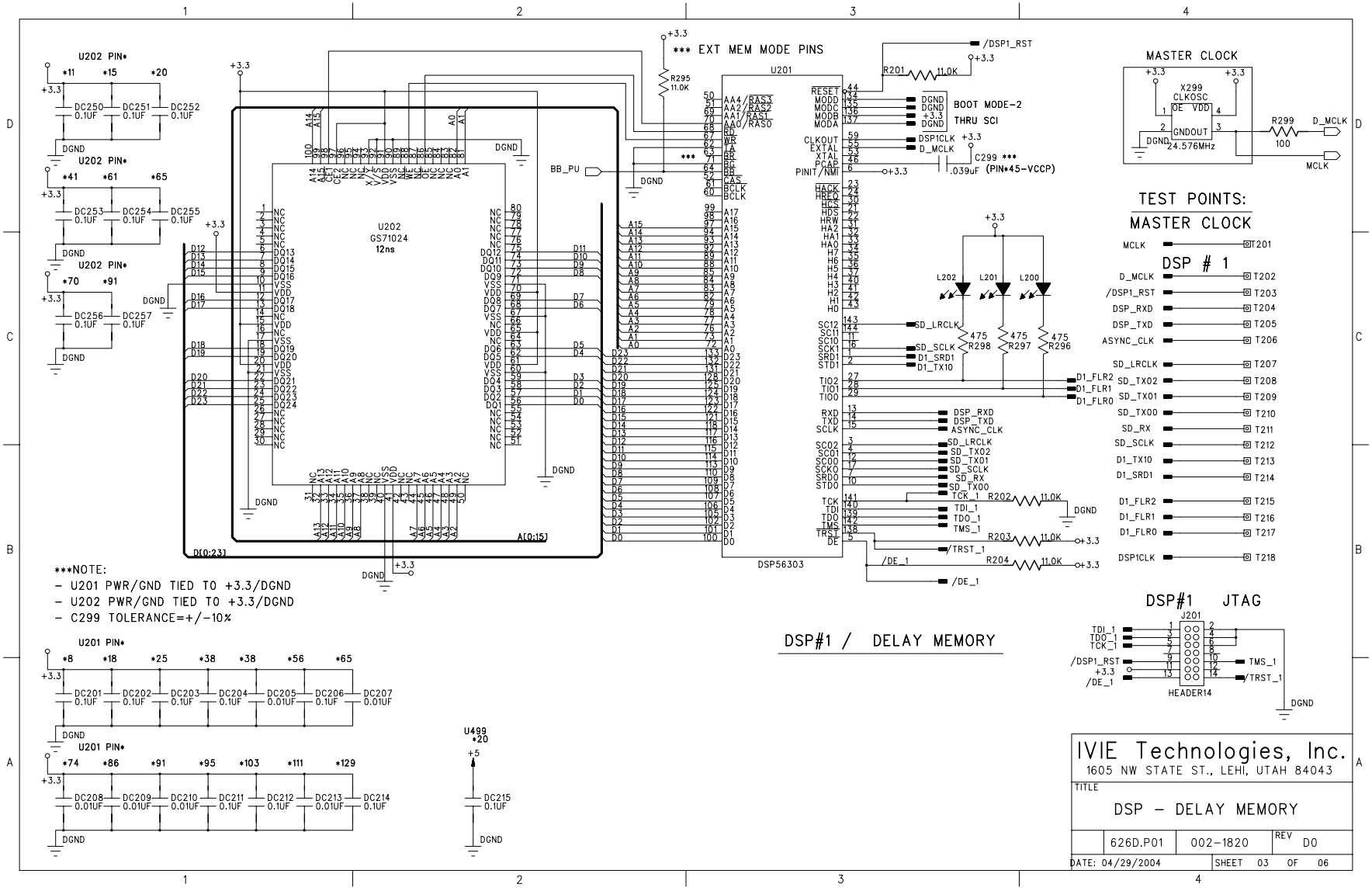
AUDIO CODEC / CH.S 1-6 LOW-PASS FILTERS

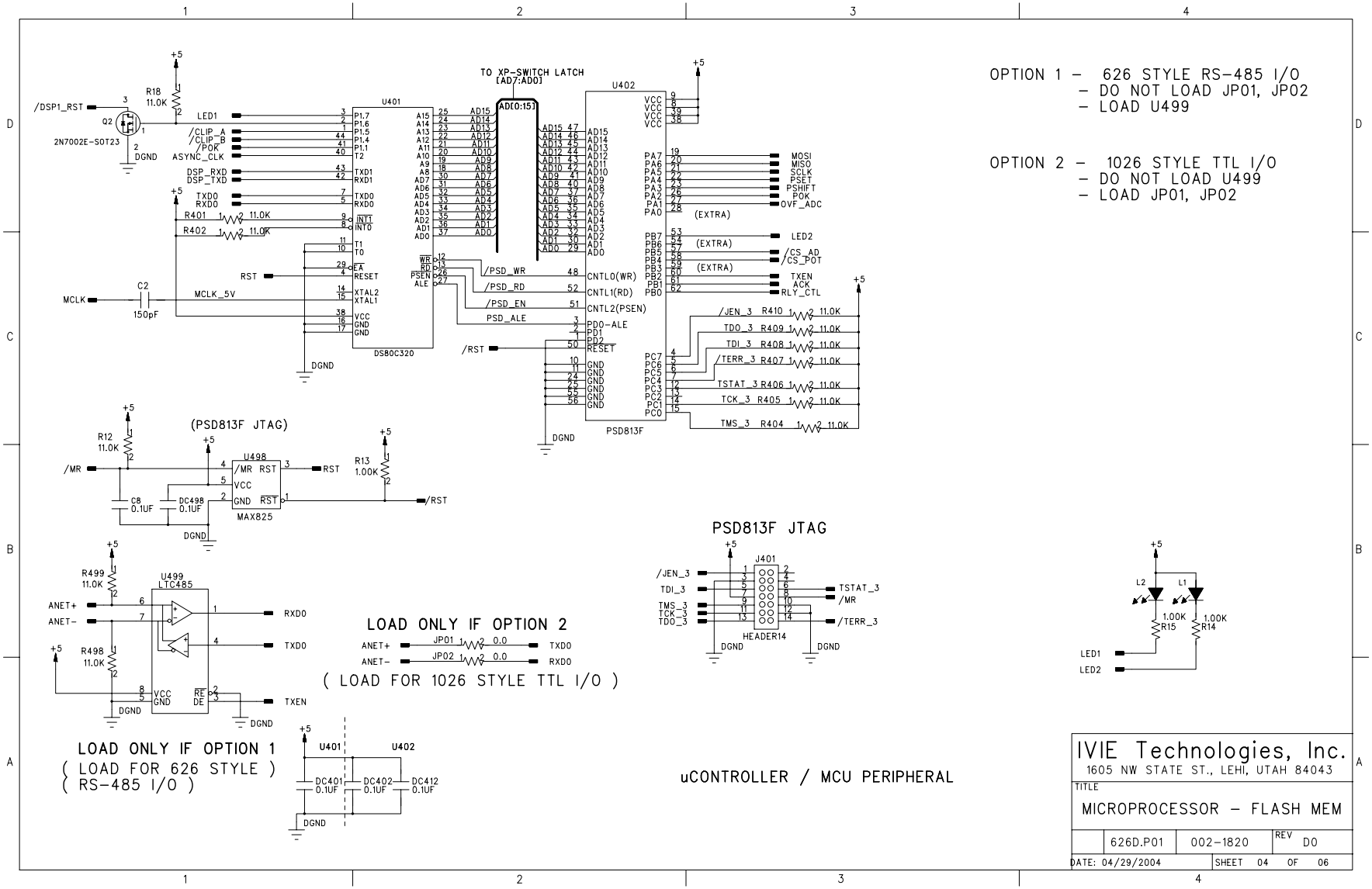


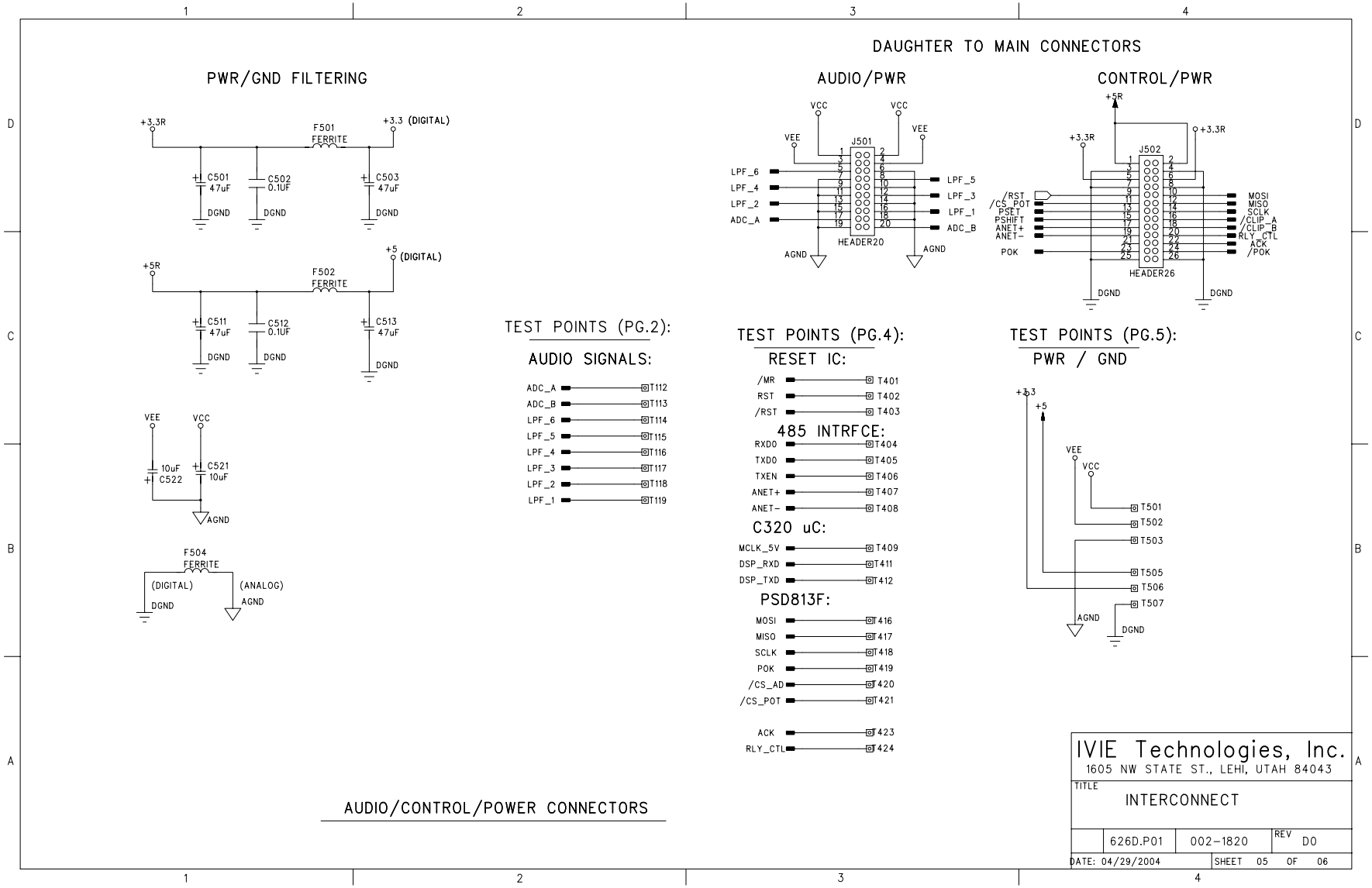
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043

TITLE
CODEC - OUTPUT FILTER

626D.P01	002-1820	REV D0
DATE: 04/29/2004	SHEET 02 OF 06	


*** EXT MEM MODE PINS
U201
DSP56303
U202
GS71024
12ns
BB_PU
R295
11.0K
R201
11.0K
/DSP1_RST
BOOT MODE-2
THRU SCI
C299 ***
.039uF (PIN*45-VCCP)
MASTER CLOCK
X299
CLKOSC
24.576MHz
R299
100
D_MCLK
MCLK
TEST POINTS:
MASTER CLOCK
DSP # 1
L202
L201
L200
475
R298
R297
R296
R202
R203
R204
DSP#1 JTAG
J201
HEADER14
DSP#1 / DELAY MEMORY
U202 PIN*
U201 PIN*
U499
*20
DC215
0.1UF
***NOTE:
- U201 PWR/GND TIED TO +3.3/DGND
- U202 PWR/GND TIED TO +3.3/DGND
- C299 TOLERANCE=+/-10%
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043
TITLE
DSP - DELAY MEMORY
626D.P01
002-1820
REV D0
DATE: 04/29/2004
SHEET 03 OF 06


OPTION 1 - 626 STYLE RS-485 I/O
- DO NOT LOAD JP01, JP02
- LOAD U499
OPTION 2 - 1026 STYLE TTL I/O
- DO NOT LOAD U499
- LOAD JP01, JP02
TO XP-SWITCH LATCH [AD7:AD0]
U401
DS80C320
U402
PSD813F
(PSD813F JTAG)
U498
MAX825
U499
LTC485
LOAD ONLY IF OPTION 2
(LOAD FOR 1026 STYLE TTL I/O)
LOAD ONLY IF OPTION 1
(LOAD FOR 626 STYLE)
(RS-485 I/O)
PSD813F JTAG
J401
HEADER14
uCONTROLLER / MCU PERIPHERAL
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043
TITLE
MICROPROCESSOR - FLASH MEM
626D.P01
002-1820
REV D0
DATE: 04/29/2004
SHEET 04 OF 06

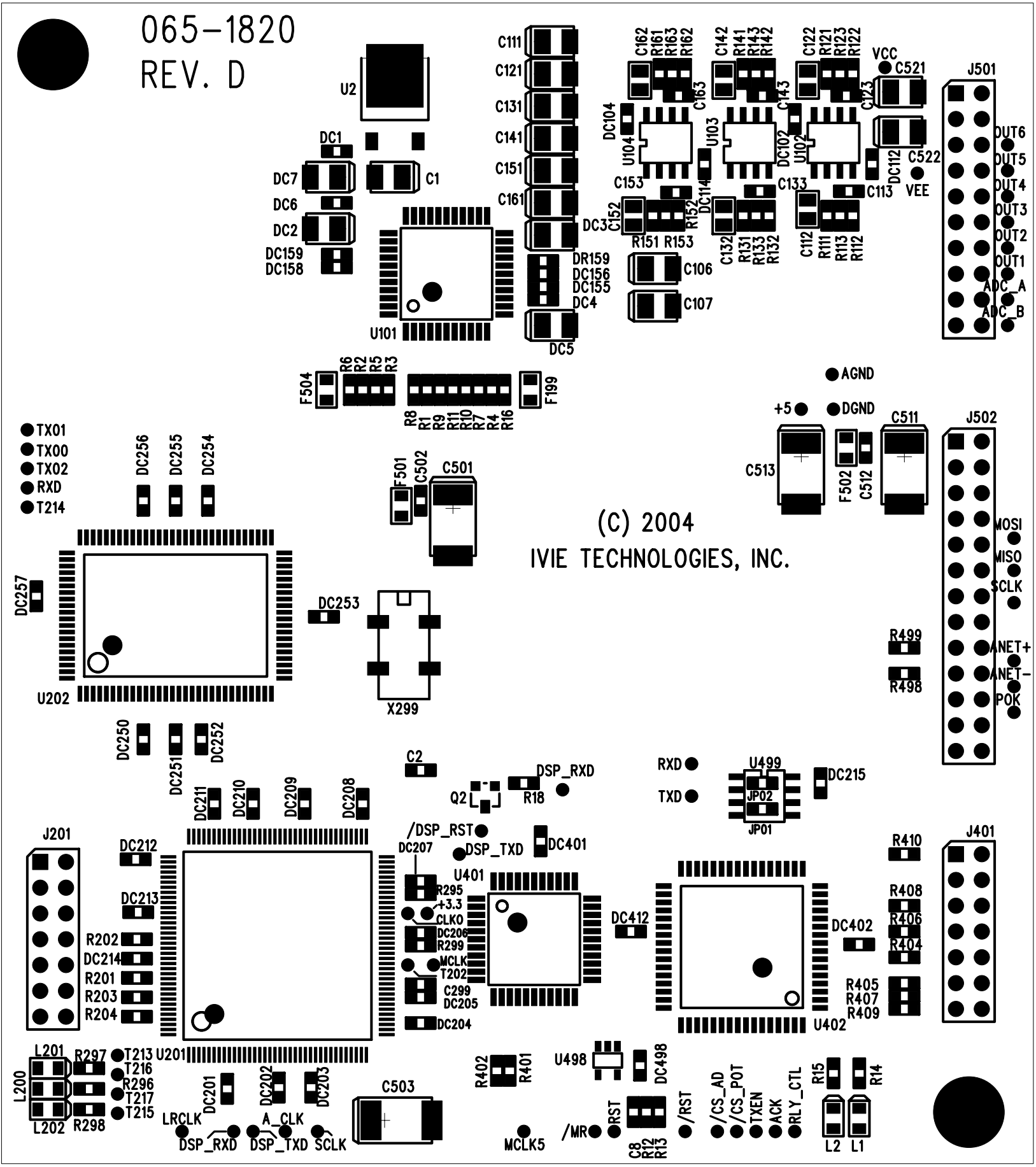

DAUGHTER TO MAIN CONNECTORS
PWR/GND FILTERING
+3.3R
F501 FERRITE
+3.3 (DIGITAL)
C501 47uF
C502 0.1UF
C503 47uF
DGND
+5R
F502 FERRITE
+5 (DIGITAL)
C511 47uF
C512 0.1UF
C513 47uF
VEE
VCC
10uF C522
C521 10uF
AGND
F504 FERRITE
(DIGITAL)
(ANALOG)
AUDIO/PWR
J501
HEADER20
LPF_6
LPF_4
LPF_2
ADC_A
LPF_5
LPF_3
LPF_1
ADC_B
CONTROL/PWR
+5R
+3.3R
J502
HEADER26
/RST
/CS_POT
PSET
PSHIFT
ANET+
ANET-
POK
MOSI
MISO
SCLK
/CLIP_A
/CLIP_B
RLY_CTL
ACK
/POK
TEST POINTS (PG.2):
AUDIO SIGNALS:
ADC_A T112
ADC_B T113
LPF_6 T114
LPF_5 T115
LPF_4 T116
LPF_3 T117
LPF_2 T118
LPF_1 T119
TEST POINTS (PG.4):
RESET IC:
/MR T401
RST T402
/RST T403
485 INTRFCE:
RXD0 T404
TXD0 T405
TXEN T406
ANET+ T407
ANET- T408
C320 uC:
MCLK_5V T409
DSP_RXD T411
DSP_TXD T412
PSD813F:
MOSI T416
MISO T417
SCLK T418
POK T419
/CS_AD T420
/CS_POT T421
ACK T423
RLY_CTL T424
TEST POINTS (PG.5):
PWR / GND
+3.3
+5
T501
T502
T503
T505
T506
T507
AGND
DGND
AUDIO/CONTROL/POWER CONNECTORS
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043
TITLE
INTERCONNECT
626D.P01
002-1820
REV D0
DATE: 04/29/2004
SHEET 05 OF 06

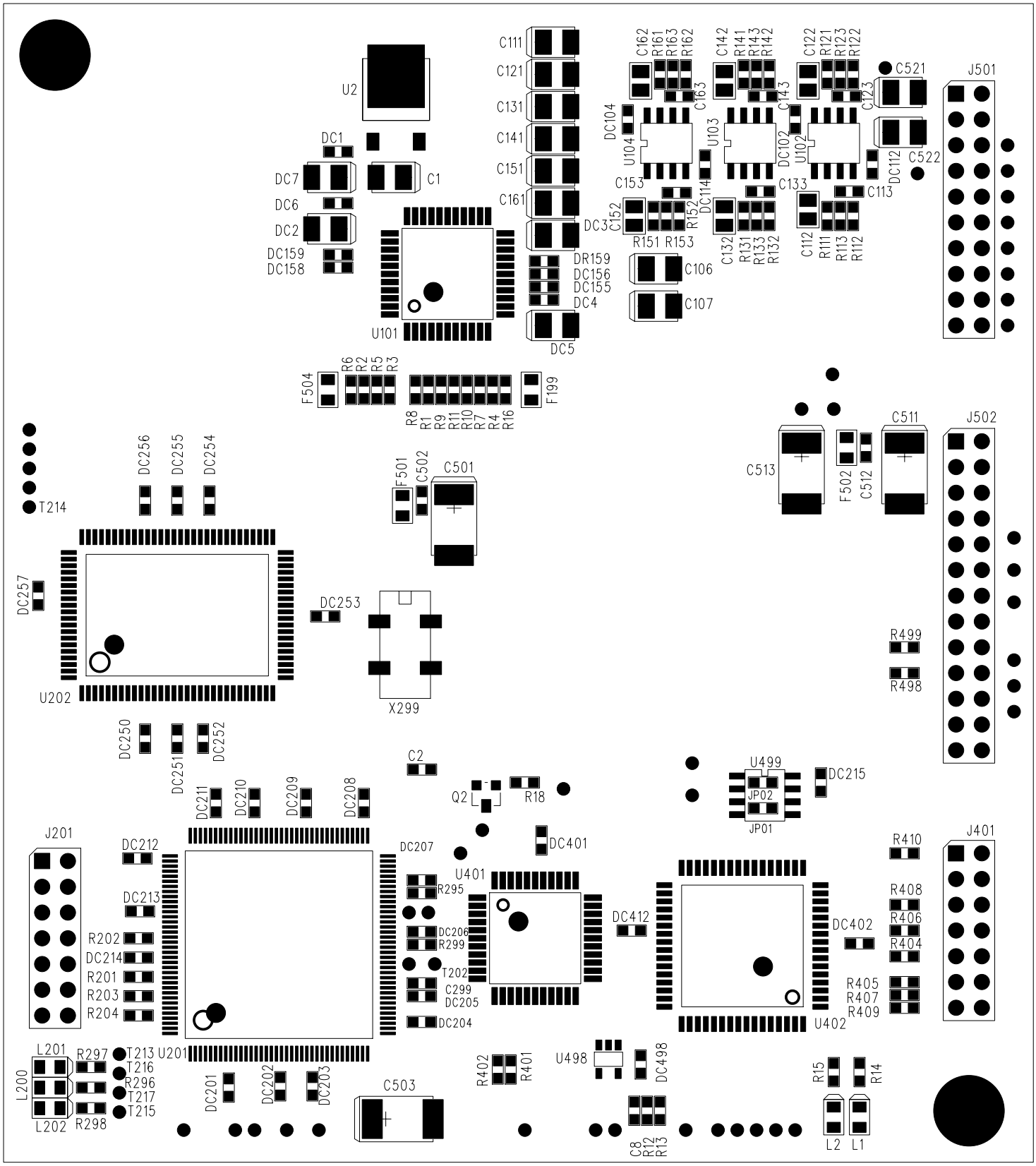
NOTES:

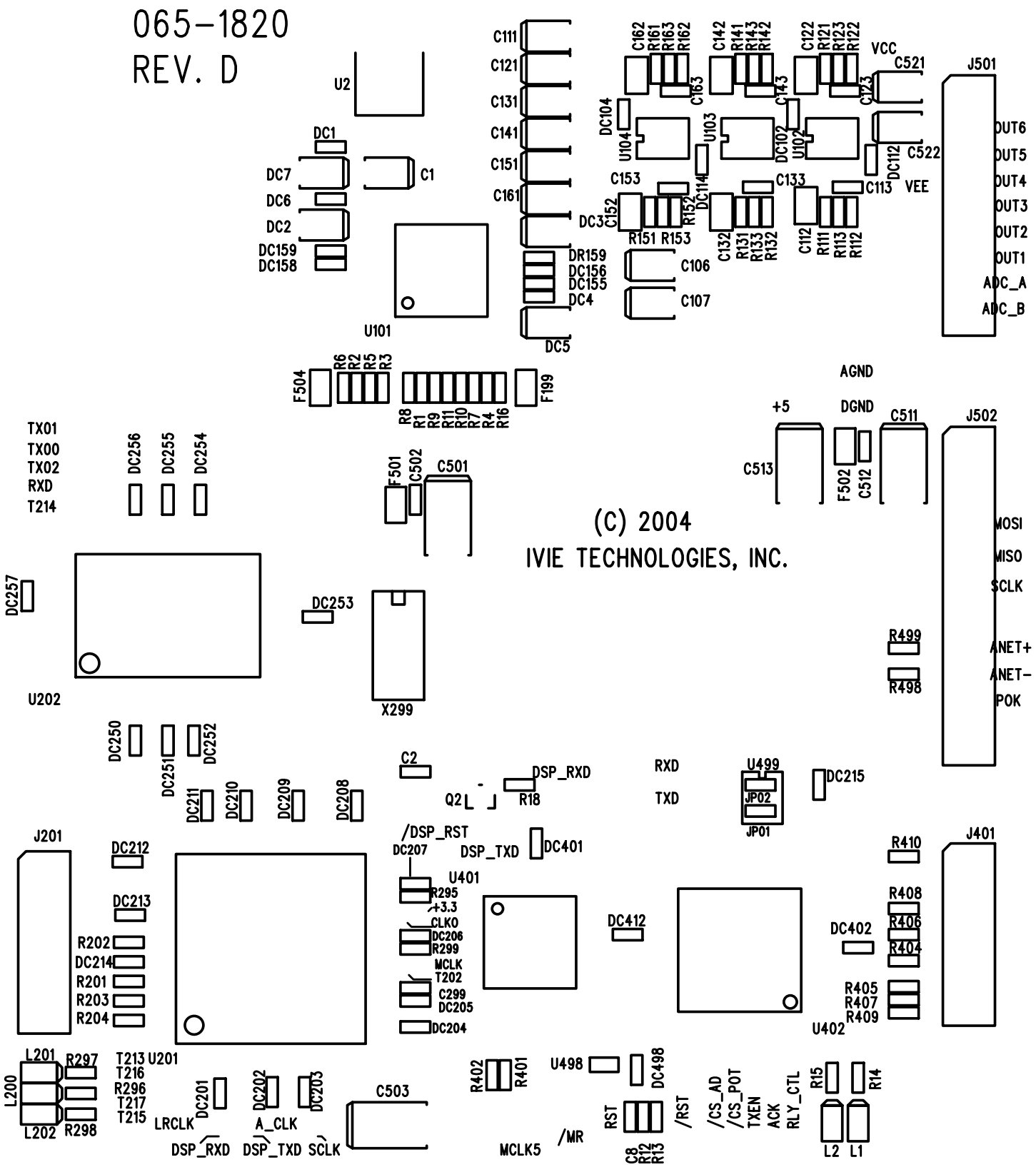
IVIE Technologies, Inc.
1605 NW STATE ST., LEHI, UTAH 84043

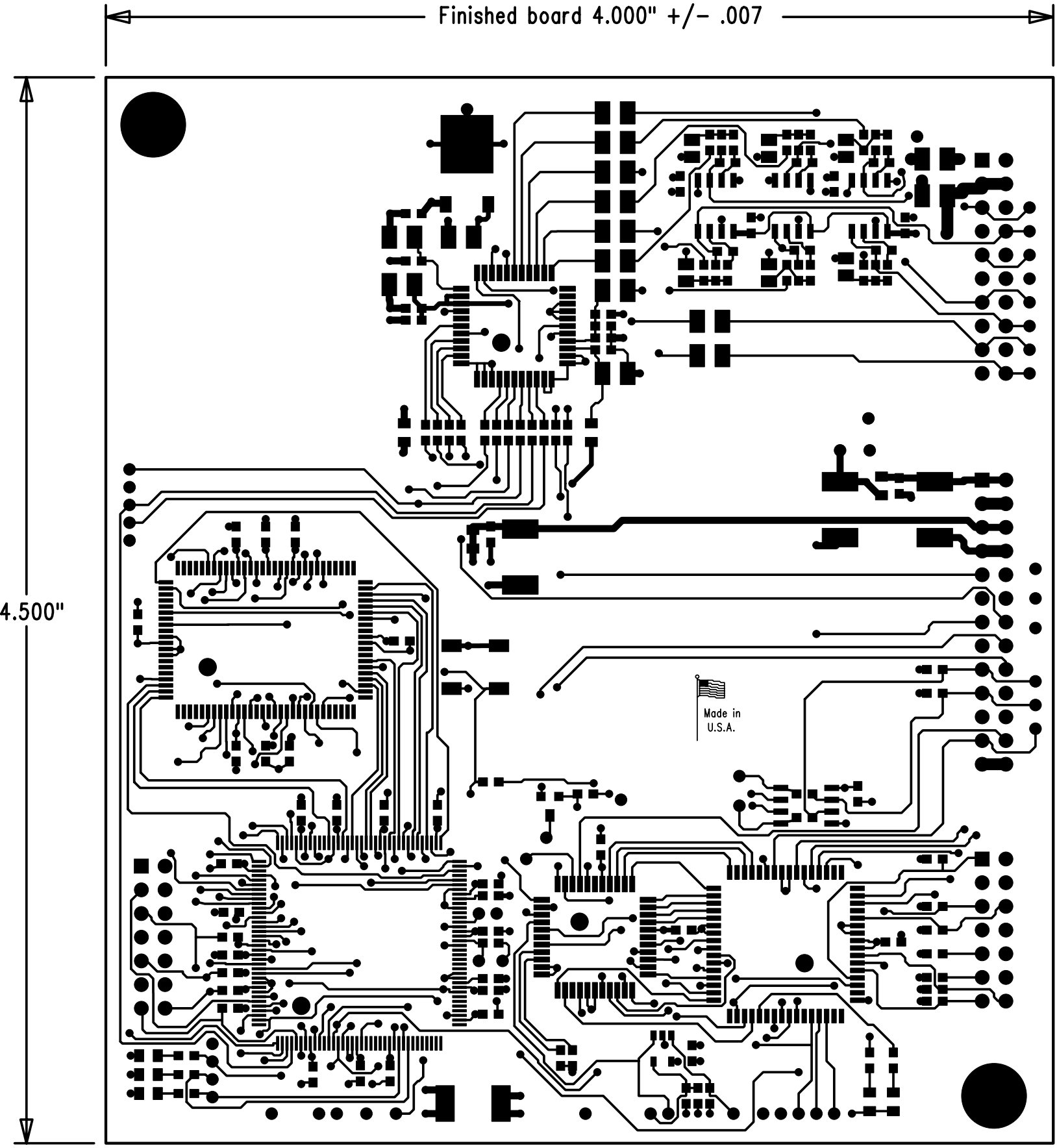
TITLE
DSP PEQ (DAUGHTER)

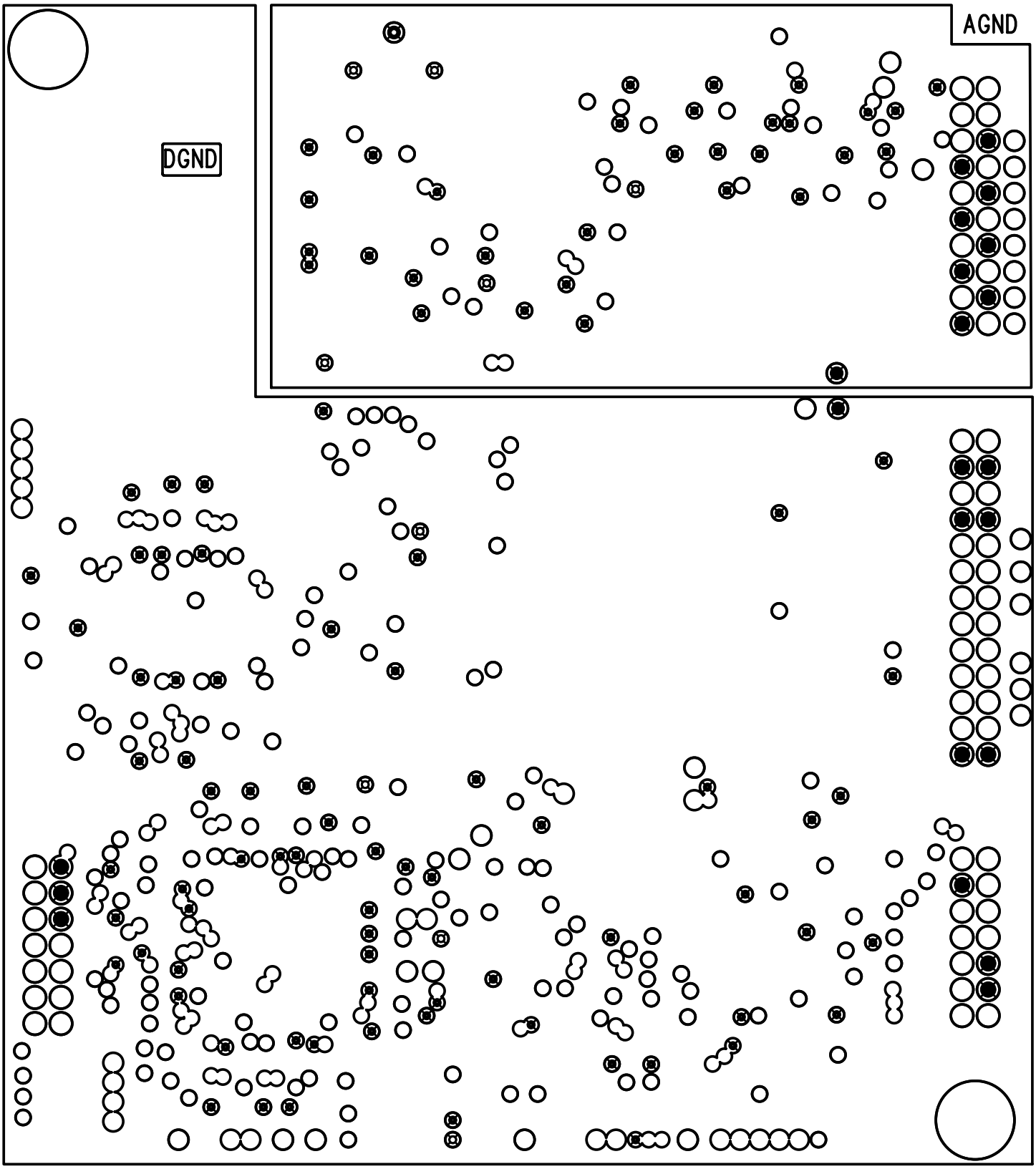
	626D.P01	002-1820	REV D0
DATE: 04/29/2004		SHEET 06 OF 06	

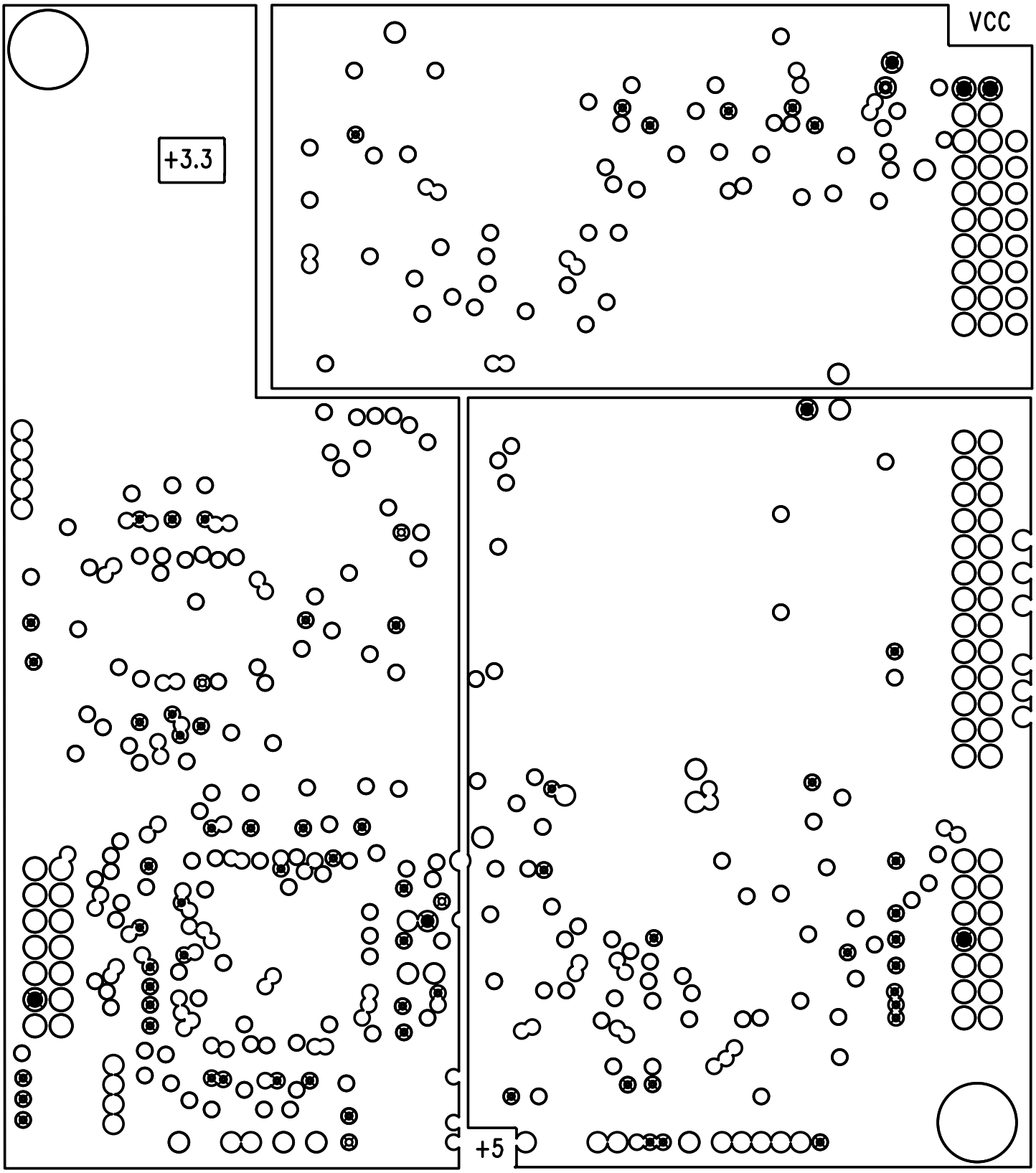

065-1820
REV. D
U2
DC1
DC7
C1
DC6
DC2
DC159
DC158
U101
C111
C121
C131
C141
C151
C161
DC3
DR159
DC156
DC155
DC4
DC5
C162
R161
R163
R162
C163
C142
R141
R143
R142
C143
C122
R121
R123
R122
C123
VCC
C521
J501
DC104
U104
U103
DC102
U102
DC112
C522
VEE
C153
C152
R152
DC114
C133
C113
R151
R153
C132
R131
R133
R132
C112
R111
R113
R112
C106
C107
OUT6
OUT5
OUT4
OUT3
OUT2
OUT1
ADC_A
ADC_B
F504
R6
R2
R5
R3
R8
R1
R9
R11
R10
R7
R4
R16
F199
AGND
+5
DGND
C511
J502
C513
F502
C512
TX01
TX00
TX02
RXD
T214
DC256
DC255
DC254
F501
C502
C501
(C) 2004
IVIE TECHNOLOGIES, INC.
MOSI
MISO
SCLK
DC257
DC253
R499
R498
ANET+
ANET-
POK
U202
X299
DC250
DC251
DC252
C2
DSP_RXD
RXD
U499
DC215
DC211
DC210
DC209
DC208
Q2
R18
TXD
JP02
JP01
J201
DC212
/DSP_RST
DSP_TXD
DC401
R410
J401
DC207
U401
DC213
R295
+3.3
CLKO
DC412
R408
DC402
R406
R202
DC206
R299
R404
DC214
MCLK
T202
R201
C299
DC205
R405
R407
R409
R203
DC204
U402
R204
L201
R297
T213
U201
T216
L200
R296
T217
T215
L202
R298
DC201
DC202
DC203
C503
R402
R401
U498
DC498
LRCLK
A_CLK
DSP_RXD
DSP_TXD
SCLK
MCLK5
/MR
RST
C8
R12
R13
/RST
/CS_AD
/CS_POT
TXEN
ACK
RLY_CTL
R15
R14
L2
L1

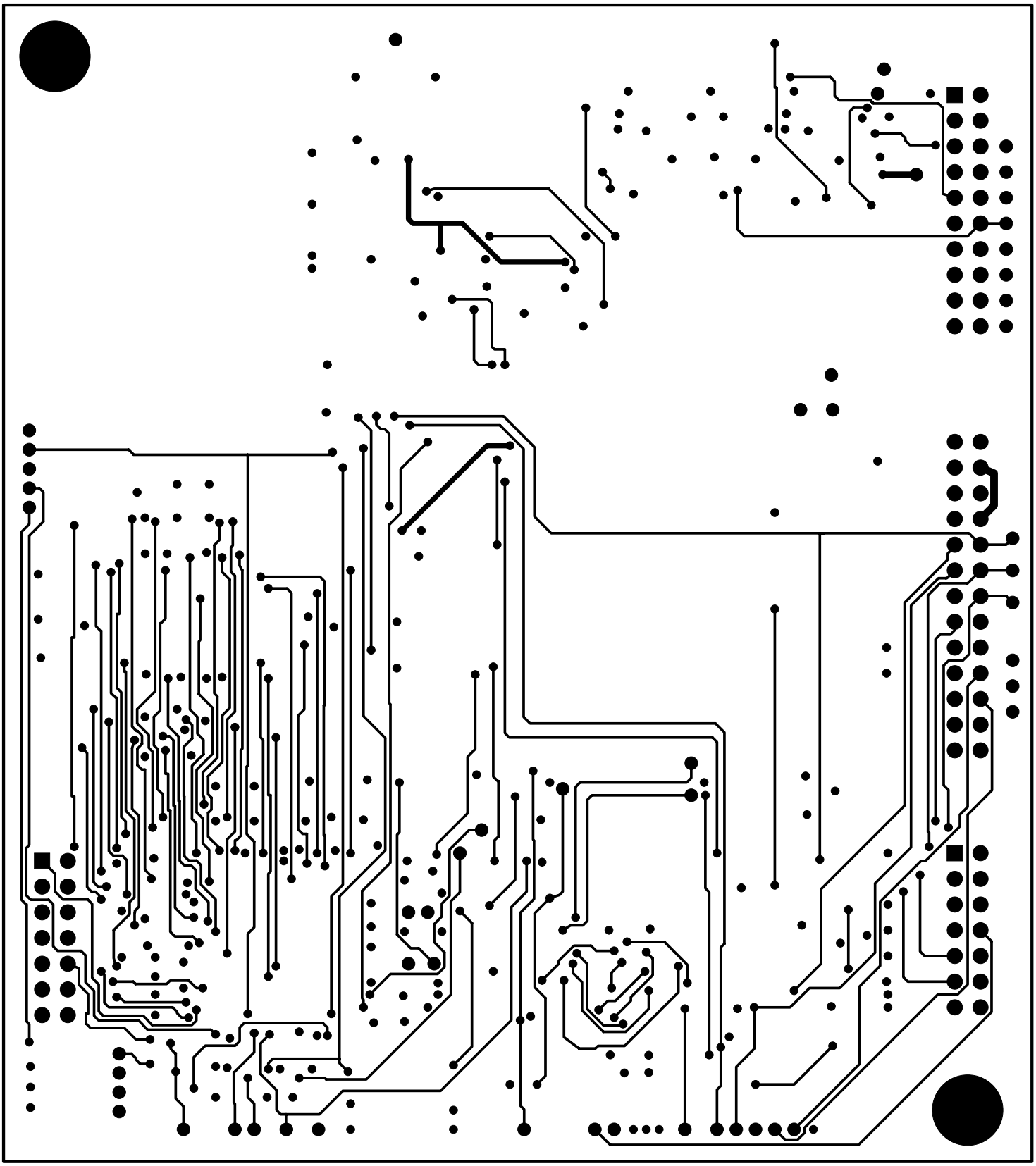

U2
DC1
C1
DC7
DC6
DC2
DC159
DC158
U101
C111
C121
C131
C141
C151
C161
DC3
DR159
DC156
DC155
DC4
DC5
C162
R161
R163
R162
C163
C142
R141
R143
R142
C143
C122
R121
R123
R122
C123
C521
C522
J501
DC104
U104
U103
DC102
U102
DC112
C153
DC114
C133
C113
C152
R152
R151
R153
C132
R131
R133
R132
C112
R111
R113
R112
C106
C107
F504
R6
R2
R5
R3
R8
R1
R9
R11
R10
R7
R4
R16
F199
C511
J502
C513
F502
C512
T214
DC256
DC255
DC254
F501
C502
C501
DC257
DC253
U202
X299
R499
R498
DC250
DC251
DC252
C2
DC211
DC210
DC209
DC208
Q2
R18
U499
JP02
JP01
DC215
J201
DC212
DC207
DC401
U401
R410
J401
DC213
R295
R408
R406
R404
R202
DC214
R201
R203
R204
DC206
R299
T202
C299
DC205
DC204
DC412
DC402
R405
R407
R409
U402
L201
R297
T213
U201
T216
R296
T217
T215
L200
L202
R298
DC201
DC202
DC203
C503
R402
R401
U498
DC498
C8
R12
R13
R15
R14
L2
L1


065-1820
REV. D
U2
DC1
DC7
C1
DC6
DC2
DC159
DC158
U101
C111
C121
C131
C141
C151
C161
DR159
DC156
DC155
DC4
DC5
C162
R161
R163
R162
C142
R141
R143
R142
C122
R121
R123
R122
VCC
C521
J501
C163
C143
C123
DC104
U104
U103
DC102
U102
C522
DC112
C153
C133
C113
VEE
DC114
C152
R152
DC3
R151
R153
C132
R131
R133
R132
C112
R111
R113
R112
C106
C107
OUT6
OUT5
OUT4
OUT3
OUT2
OUT1
ADC_A
ADC_B
F504
R6
R2
R5
R3
R8
R1
R9
R11
R10
R7
R4
R16
F199
AGND
+5
DGND
C511
J502
C513
F502
C512
TX01
TX00
TX02
RXD
T214
DC256
DC255
DC254
F501
C502
C501
(C) 2004
IVIE TECHNOLOGIES, INC.
MOSI
MISO
SCLK
DC257
DC253
R499
R498
ANET+
ANET-
POK
U202
X299
DC250
DC251
DC252
C2
DSP_RXD
RXD
U499
DC215
DC211
DC210
DC209
DC208
Q2
R18
TXD
JP02
JP01
J201
DC212
/DSP_RST
DC207
DSP_TXD
DC401
R410
J401
U401
DC213
R295
+3.3
R408
CLKO
DC412
DC402
R406
R202
DC206
R404
DC214
R299
MCLK
R201
T202
R405
R203
C299
R407
R204
DC205
R409
DC204
U402
L201
R297
T213
U201
T216
L200
R296
T217
T215
L202
R298
DC201
DC202
DC203
C503
R402
R401
U498
DC498
R15
R14
LRCLK
A_CLK
RST
/RST
/CS_AD
/CS_POT
TXEN
ACK
RLY_CTL
DSP_RXD
DSP_TXD
SCLK
MCLK5
/MR
C8
R12
R13
L2
L1


Finished board 4.000" +/- .007
4.500"
Made in
U.S.A.


AGND
DGND


VCC
+3.3
+5



Ivie Technologies

005-1820 Rev D
PEQ DSP Board
Bill of Materials

05/06/2004

Parts List for Assembly P/N: 005-1820_D

Printed 5/6/2004

005-1820_D

Assembly, 626 PEQ Daughter Board
OPT 2 (1026 Style RS-485 I/O)

Type	PL	Size	
Revision	0	Profile	
Status	U	Tooling	
Date	5/6/2004	Artwork	
By		Stock Bin	

Item	Qty	P/N	Title	Size	Detail
1	1	065-1820	PCB, 626 DSP Daughter		
2	8	107-0010	SMT Cap, 0.01uF, 50v, 10%, X7R, 0603	0603	
3	33	107-0020	SMT Cap, 0.1uF, 25v, Y5V, 0603	0603	
4	6	107-0030	SMT Cap, 1000pF, 50v, NPO, 5%, 0805	0805	
5	7	107-0040	SMT Cap, 150pF, 50v, NPO, 5%, 0603	0603	
6	1	107-0050	SMT Cap, .039uF, 50v, X7R, 10%, 0603	0603	
7	13	108-0020	SMT Cap, 10uf, 16v, Tant, 10%	EIA-B (3528)	
8	4	108-0040	SMT Cap, 47uf, 10v, Tant, 10%	EIA-D	
9	2	108-0050	SMT Cap, 10uf, 20v, Tant, 10%	EIA-B	
10	13	127-0010	SMT Res, 100, 1/16w, 1%, 0603	0603	
11	3	127-0020	SMT Res, 1.00K, 1/16w, 1%, 0603	0603	
12	24	127-0170	SMT Res, 11.0K, 1/16w, 1%, 0603	0603	
13	6	127-1150	SMT Res, 22.1K, 1/16w, 1%, 0603	0603	
14	6	127-1920	SMT Res, 3.92K, 1/16w, 1%, 0603	0603	
15	3	127-2145	SMT Res, 475, 1/16w, 1%, 0603	0603	
16	2	137-0020	SMT Res, 0 Ohm, 0603	0603	
17	1	137-2285	SMT Rstr, 5.1 ohm, 1/10w, 5%, 0603	0603	
18	1	152-0060	MOSFET SMT, 2N7002E	SOT-23	
19	5	161-0420	LED, SMT, Red, 0805	0805 (2.0x1.2mm)	

Ivie Technologies, Inc
1605 N West State Street, Lehi, Utah, 84043,
(801) 766-7600 Fax (801) 766-8282

Item	Qty	P/N	Title	Size	Detail
20	1	165-0050	SMT OSC, 24.576MHz, 3.3v	10.5 x 5mm (len x width)	
21	3	186-0040	SMT Inductor, Ferrite, 120ohm@100MHz	0805	
22	1	415-1050	Header, Dual Row, 14pin, Vertical, .1"	0.425" overall, .095" tail, .230 Pin	
23	1	415-1060	Header, Dual Row, 20pin, Vertical, .1"		
24	1	415-1070	Header, Dual Row, 26pin, Vertical, .1"		
25	3	430-0010	SMT IC, MC33078, Low Noise Dual Op Amp	8pin SOIC	
26	1	430-0030	SMT IC, Memory System, PSD813F1-A-90 U	TQFP64	
27	0	430-0040	SMT IC, RS-485 Transceiver, (LTC485)	8pin SO	
28	1	430-0060	SMT IC, DS80C320-ECG, High Speed uController, 25MHz	44-pin TQFP	
29	1	430-0070	SMT IC, DSP, Motorola DSP56303	144pin TQFP	
30	1	430-0080	SMT IC, 64K x 24 Bit Static RAM, 12ns	100-pin TQFP	
31	1	430-0100	SMT IC, MAX825, uP Supervisor, 4.38v Reset Thresh	SOT23-5	
32	1	430-0680	SMT IC, Codec, AK4626VQ	TQFP-44	
33	1	430-0690	SMT IC, Reg, 5.0v, 500ma, LM78M05CDT	TO-252AA	
34	3	999-9998	OPTIONAL_PARTS - DO NOT LOAD -		

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Assy Tree for: 005-1820_D

Printed 5/6/2004

005-1820_D

Assembly, 626 PEQ Daughter Board
OPT 2 (1026 Style RS-485 I/O)

Type	PL	Size	
Revision	0	Profile	
Status	U	Tooling	
Date	5/6/2004	Artwork	
By		Stock Bin	

Item	Qty	P/N	Title	Ref(m)	Vendor
Top		005-1820_D	Assembly, 626 PEQ Daughter Board		
1	1	065-1820	PCB, 626 DSP Daughter		
2	8	107-0010	SMT Cap, 0.01uF, 50v, 10%, X7R, 0603	DC156 DC159 DC205 DC207-210 DC213	
				Murata	SMT Cap, 0.01uF, 50v, GRM39X7R103K050AD
				AVX	SMT Cap, 0.01uF, 50v, 06035C103KAT2A
				Walker (IEC)	
				Meritek	SMT Cap, 0.01uF, 50v, MA 0603XR103K500

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Item	Qty	P/N	Title	Ref(m)	Vendor
3	33	107-0020	SMT Cap, 0.1uF, 25v, Y5V, 0603	C8 C502 C512 DC1 DC4 DC6 DC102 DC104 DC112 DC114 DC155 DC158 DC201-204 DC206 DC211-212 DC214-215 DC250-257 DC401-402 DC412 DC498	Arrow
			Arrow		
			Meritek	SMT Cer Cap, 0.1uF, 25v, MA 0603YV104Z250	
			Digi-Key	PCC1794TR-ND	
			Panasonic	SMT Cer Cap, 0.1uF, 25v, ECJ-1VF1E104Z	
			Digi-Key	PCC1794CT-ND	
			Panasonic	SMT Cer Cap, 0.1uF, 25v, ECJ-1VF1E104Z	
			Future		
			Murata	SMT Cer Cap, 0.1uF, 50v, GRM39Y5V104Z25C500	
			Walker (IEC)		
			Meritek	SMT Cer Cap, 0.1uF, 50v, MA 0603YV104Z500	
			Walker (IEC)		
			Meritek	SMT Cer Cap, 0.1uF, 25v, MA 0603YV104Z250	
4	6	107-0030	SMT Cap, 1000pF, 50v, NPO, 5%, 0805	C112 C122 C132 C142 C152 C162	Digi-Key
			Digi-Key	PCC102CGTR-ND	
			Panasonic	SMT Cap, 1000pF, 50v, ECJ-2VC1H102J	
			Future	08055A102JAT2A	
			AVX	SMT Cap, 1000pF, 50v, 08055A102JAT2A	
			Walker (IEC)	MA 0805 CG 102 J 500	
			Meritek	SMT Cap, 1000pF, 50v, MA 0805CG102J500	

Item	Qty	P/N	Title		Ref(m)	Vendor
5	7	107-0040	SMT Cap, 150pF, 50v, NPO, 5%, 0603		C2 C113 C123 C133 C143 C153 C163	Digi-Key
				Digi-Key	PCC151ACVTR-ND	
				Panasonic	SMT Cap, 150pF, 50v, ECJ-1VC1H151J	
				Future	06035A151JAT2A	
				AVX	SMT Cap, 150pF, 50v, 06035A151JAT2A	
				Walker (IEC)	MA 0603 CG 151 J 500	
				Meritek	SMT Cap, 150pF, 50v, MA 0603CG151J500	
6	1	107-0050	SMT Cap, .039uF, 50v, X7R, 10%, 0603		C299	
				Future	0603 5 C 393 K AT2A	
				AVX	SMT Cap, .039uF, 50v, 06035C393KAT2A	
				Walker (IEC)	MA 0603 XR 393 K 500	
				Meritek	SMT Cap, .039uF, 50v, MA 0603XR393K500	
7	13	108-0020	SMT Cap, 10uf, 16v, Tant, 10%		C1 C106-107 C111 C121 C131 C141 C151 C161 DC2-3 DC5 DC7	Walker (IEC)
				AVX	SMT Cap, 10uf, 16v, Tant, TAJB106K016R	
				Digi-Key	PCS3106TR-ND	
				Panasonic	SMT Cap, 10uf, 16v, Tant, ECS-T1CX106R	
				Walker (IEC)		
				Meritek	SMT Cap, 10uf, 16v, Tant, TC106K16B	

Item	Qty	P/N	Title	Ref(m)	Vendor
8	4	108-0040	SMT Cap, 47uf, 10v, Tant, 10%	C501 C503 C511 C513	Future
			Future Kemet	SMT Cap, 47uf, 10v, Tant, T491D476K010AS	
			Future Sprauge	SMT Cap, 47uf, 10v, Tant, 293D476X9010D2T	
			Future Cal-Chip	SMT Cap, 47uf, 10v, Tant, TCK1A476DT	
			Future AVX	SMT Cap, 47uf, 10v, Tant, TAJD476K010R	
9	2	108-0050	SMT Cap, 10uf, 20v, Tant, 10%	C521-522	Future
			Digi-Key Panasonic	P11324TR-ND SMT Cap, 10uf, 20v, Tant, ECS-T1DX106R	
			Future Vishay - Dale	SMT Cap, 10uf, 20v, Tant, 293D106X9020B2T	
			Future AVX	SMT Cap, 10uf, 20v, Tant, TAJB106K020R	
			Walker (IEC) NEMCO	SMT Cap, 10uf, 20v, Tant, LSR10/20BK1000	

Item	Qty	P/N	Title	Ref(m)	Vendor
10	13	127-0010	SMT Res, 100, 1/16w, 1%, 0603	R1-11 R16 R299	Future
			Avnet Electronics Mktg	9C06031A1000FKRT/R	
			Phillips Components	0603, 1/16W, 100, 1%, 5K 9C06031A1000FKRT/R	
			Digi-Key	P100HTR-ND	
			Panasonic	SMT Res, 100, 1/16w, 1%, ERJ-3EKF1000V	
			Future		
			AVX	SMT Res, 100, 1/16w, 1%, CR10-1000F-T	
			Future		
			Vishay - Dale	SMT Res, 100, 1/16w, 1%, CRCW0603-1000FRT1	
11	3	127-0020	SMT Res, 1.00K, 1/16w, 1%, 0603	R13-15	Future
			Avnet Electronics Mktg	9C06031A1001FKRT/R	
			Phillips Components	0603, 1/16W, 1.00K, 1%, 9C06031A1001FKRT/R	
			Digi-Key	P1.00KHTR-ND	
			Panasonic	SMT Res, 1.00K, 1/16w, ERJ-3EKF1001V	
			Future		
			AVX	SMT Res, 1.00K, 1/16w, CR10-1001F-T	
			Future		
			Vishay - Dale	SMT Res, 1.00K, 1/16w, CRCW0603-1001FRT1	

Item	Qty	P/N	Title	Ref(m)	Vendor
12	24	127-0170	SMT Res, 11.0K, 1/16w, 1%, 0603	R12 R18 R111 R121 R131 R141 R151 R161 R201-204 R295 R401-402 R404-410 R498-499	Future
			Avnet Electronics Mktg	9C06031A1102FKRT/R	
			Phillips Components	0603, 1/16W, 11.0K, 1%, 9C06031A1102FKRT/R	
			Digi-Key	P11.0KHTR-ND	
			Panasonic	SMT Res, 11.0K, 1/16w, ERJ-3EKF1102V	
			Future		
			AVX	SMT Res, 11.0K, 1/16w, CR10-1102F-T	
			Future		
			Vishay - Dale	SMT Res, 11.0K, 1/16w, CRCW0603-1102FRT1	
13	6	127-1150	SMT Res, 22.1K, 1/16w, 1%, 0603	R113 R123 R133 R143 R153 R163	Future
			Avnet Electronics Mktg	9C06031A2212FKRT/R	
			Phillips Components	0603, 1/16W, 22.1K, 1%, 9C06031A2212FKRT/R	
			Digi-Key	P22.1KMHTR-ND	
			Panasonic	SMT Res, 22.1K, 1/16w, ERJ-3EKF2212V	
			Future		
			Vishay - Dale	SMT Res, 22.1K, 1/16w, CRCW0603-2212FRT1	
14	6	127-1920	SMT Res, 3.92K, 1/16w, 1%, 0603	R112 R122 R132 R142 R152 R162	Future
			Avnet Electronics Mktg	9C06031A3921FKRT/R	
			Phillips Components	0603, 1/16W, 3.92K, 1%, 9C06031A3921FKRT/R	
			Digi-Key	P3.92KMHTR-ND	
			Panasonic	SMT Res, 3.92K, 1/16w, ERJ-3EKF3921V	
			Future		
			Vishay - Dale	SMT Res, 3.92K, 1/16w, CRCW0603-3921FRT1	

Item	Qty	P/N	Title	Ref(m)	Vendor
15	3	127-2145	SMT Res, 475, 1/16w, 1%, 0603	R296-298	Future
				Avnet Electronics Mktg: 9C06031A4750FKRT/R 0603, 1/16W, 475, 1%, 5K	
				Phillips Components: 9C06031A4750FKRT/R	
				Digi-Key: P475HCT-ND (Cut Tape) SMT Res, 475, 1/16w, 1%,	
				Panasonic: ERJ-3EKF4750V	
				Future: SMT Res, 475, 1/16w, 1%,	
				Vishay - Dale: CRCW0603-4750FRT1	
16	2	137-0020	SMT Res, 0 Ohm, 0603	JP01 JP02	Walker (IEC)
				Future:	
				Vishay - Dale: CRCW0603-000JRT1	
				Walker (IEC):	
				Meritek: CR16000J	
17	1	137-2285	SMT Rstr, 5.1 ohm, 1/10w, 5%, 0603	DR159	Digi-Key
				Digi-Key: P5.1GCT-ND (Cut Tape) SMT Rstr, 5.1 ohm, 1/10w,	
				Panasonic: ERJ-3GEYJ5R1V	
18	1	152-0060	MOSFET SMT, 2N7002E	Q2	Future
				Central Semiconductor: Enhanced 2N7002 - See MOSFET SMT, Sim to CMPDM7002A	
				Future: MOSFET SMT, 2N7002E,	
				Vishay - Siliconix: 2N7002E	
				Future: MOSFET SMT, 2N7002E,	
				Philips Semiconductor: 2N7002E	

Item	Qty	P/N	Title	Ref(m)	Vendor
19	5	161-0420	LED, SMT, Red, 0805	L1-2 L200-202	Future
			Fairchild — LED, SMT, HiEff Red, QTLP630C-2		
			Future — Aligent Technologies (HP) — LED, SMT, HiEff Red, HSMS-C170		
			Future — Kingbright — LED, SMT, HiEff Red, APT2012EC		
20	1	165-0050	SMT OSC, 24.576MHz, 3.3v	X299	
			Epson — Custom Programmed SMT OSC, 24.576MHz, SG-8002JC-24.5760M-PC		
			Epson — SMT OSC, 24.576MHz, SG-636 PCE24.576M C		
21	3	186-0040	SMT Inductor, Ferrite, 120ohm@100MHz	F199 F502 F504	Digi-Key
			Steward — DigiKey 240-1023-1-ND SMT Inductor, Ferrite, LI 0805 D 121 R		
			Digi-Key — Steward — 240-1041-2-ND (Reel) SMT Inductor, Ferrite, LI0805H121R-00		
22	1	415-1050	Header, Dual Row, 14pin, Vertical, .1"	J401	
			Berg — Header, Dual Row, 14pin, 54102-G05-07		
			Berg — Header, Dual Row, 14pin, 67996-114		

Item	Qty	P/N	Title	Ref(m)	Vendor
23	1	415-1060	Header, Dual Row, 20pin, Vertical, .1"	J501	
			Berg	(new part number) Header, Dual Row, 20pin, 54102-G05-10	
			Berg	Header, Dual Row, 20pin, 67996-120	
24	1	415-1070	Header, Dual Row, 26pin, Vertical, .1"	J502	
			Berg	(new part number) Header, Dual Row, 26pin, 54102-G05-13	
			Berg	(old part number) Header, Dual Row, 26pin, 67996-126	
25	3	430-0010	SMT IC, MC33078, Low Noise Dual Op Amp	U102-104	Future
			Future ON Semi	D =>8pin SOIC, Rail SMT IC, MC33078, Dual MC33078D	
			Future ON Semi	DR2 =>8pin SOIC, SMT IC, MC33078, Dual MC33078DR2	
26	1	430-0030	SMT IC, Memory System, PSD813F1-A-90 U	U402	
			STMicro (SGS)	-90 = 90ns access time, U Memory System, (8051), PSD813F1A-90 U	

Item	Qty	P/N	Title	Ref(m)	Vendor
27	0	430-0040	SMT IC, RS-485 Transceiver, (LTC485)	U499	Future
			Future / Analog Devices	SO-8 pkg => 8pin SO, RS-485 Transceiver, SO-8, ADM485JR	
			Linear Direct / Linear Technologies	S8 pkg => 8pin SO RS-485 Transceiver, SO-8, LTC485CS8	
			Maxim Direct / Maxim	S pkg => 8pin SO, 2.5M RS-485 Transceiver, SO-8, MAX485CSA	
			Maxim Direct / Maxim	S pkg => 8pin SO, 250K RS-485 Transceiver, SO-8, MAX487CSA	
28	1	430-0060	SMT IC, DS80C320-ECG, High Speed uController, 25MHz	U401	Future
			Avnet Electronics Mktg / Dallas	SMT, DS80C320-ECG, DS80C320-ECG	
			Future / Dallas	SMT, DS80C320-ECG, DS80C320-ECG	
			Insight / Dallas	SMT, DS80C320-ECG, DS80C320-ECG	
29	1	430-0070	SMT IC, DSP, Motorola DSP56303	U201	
			Motorola	Motorola DSP56303, DSP56303PV100	

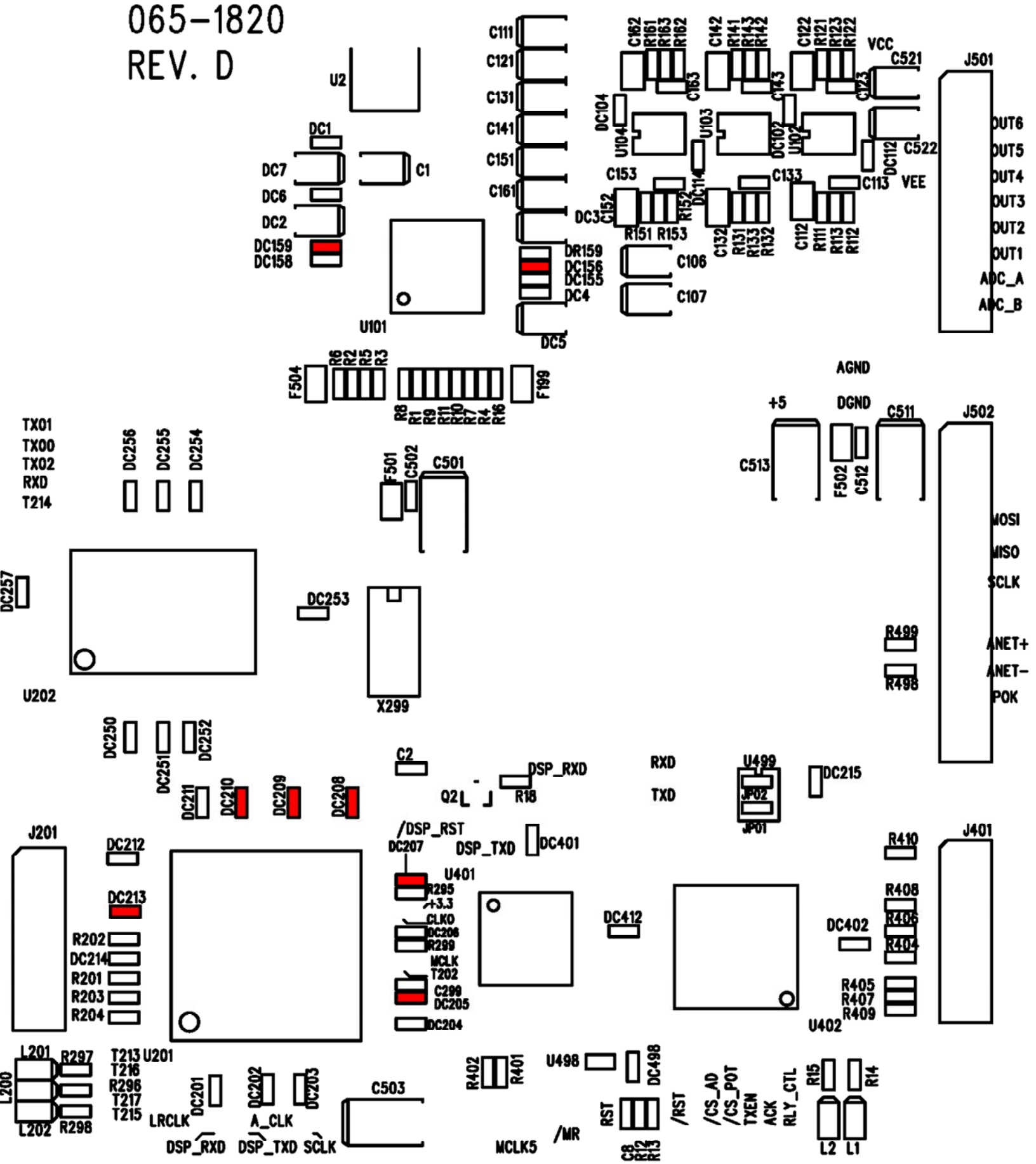
Item	Qty	P/N	Title	Ref(m)	Vendor
30	1	430-0080	SMT IC, 64K x 24 Bit Static RAM, 12ns	U202	Impact
			Avnet Electronics Mktg GSI	64K x 24 Bit Static RAM, GS71024T-12	
			Impact GSI	64K x 24 Bit Static RAM, GS71024T-12	
			Nu Horizons GSI	64K x 24 Bit Static RAM, GS71024T-12	
31	1	430-0100	SMT IC, MAX825, uP Supervisor, 4.38v Reset Thresh	U498	Maxim Direct
			Avnet Electronics Mktg Maxim	MAX825, uP Supervisor, MAX825MEUK	
			Maxim Direct Maxim	MAX825, uP Supervisor, MAX825MEUK	
32	1	430-0680	SMT IC, Codec, AK4626VQ	U101	All American
			All American AKM	SMT IC, Codec, AK4626VQ	
33	1	430-0690	SMT IC, Reg, 5.0v, 500ma, LM78M05CDT	U2	Future
			Future National Semiconductor	SMT IC, Reg, 5.0v, 500ma, LM78M05CDT	
34	3	999-9998	OPTIONAL_PARTS - DO NOT LOAD -	F501 J201 U499	

Ivie Technologies

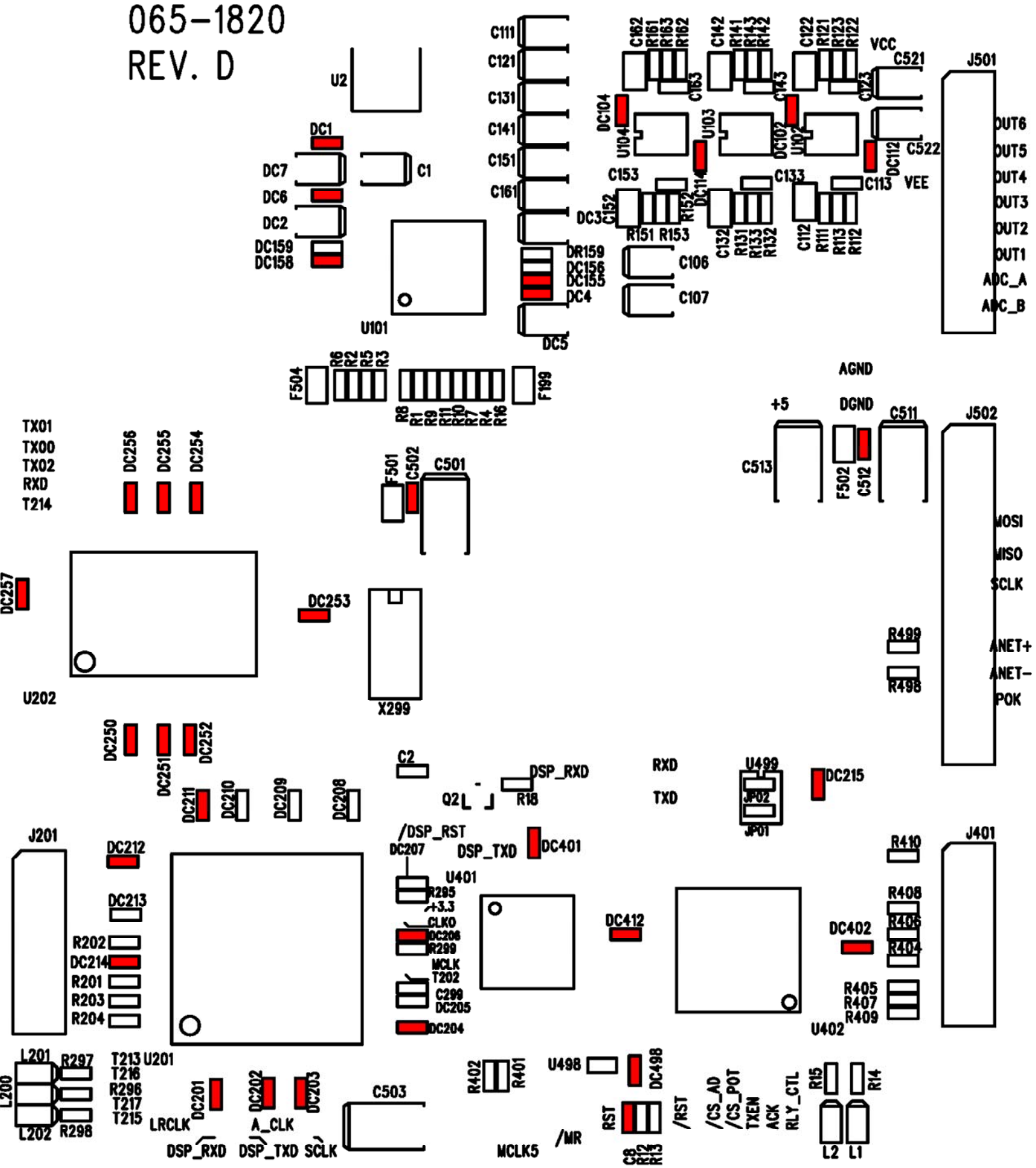
005-1820 Rev D
PEQ DSP Board
Loading Diagrams

05/06/2004

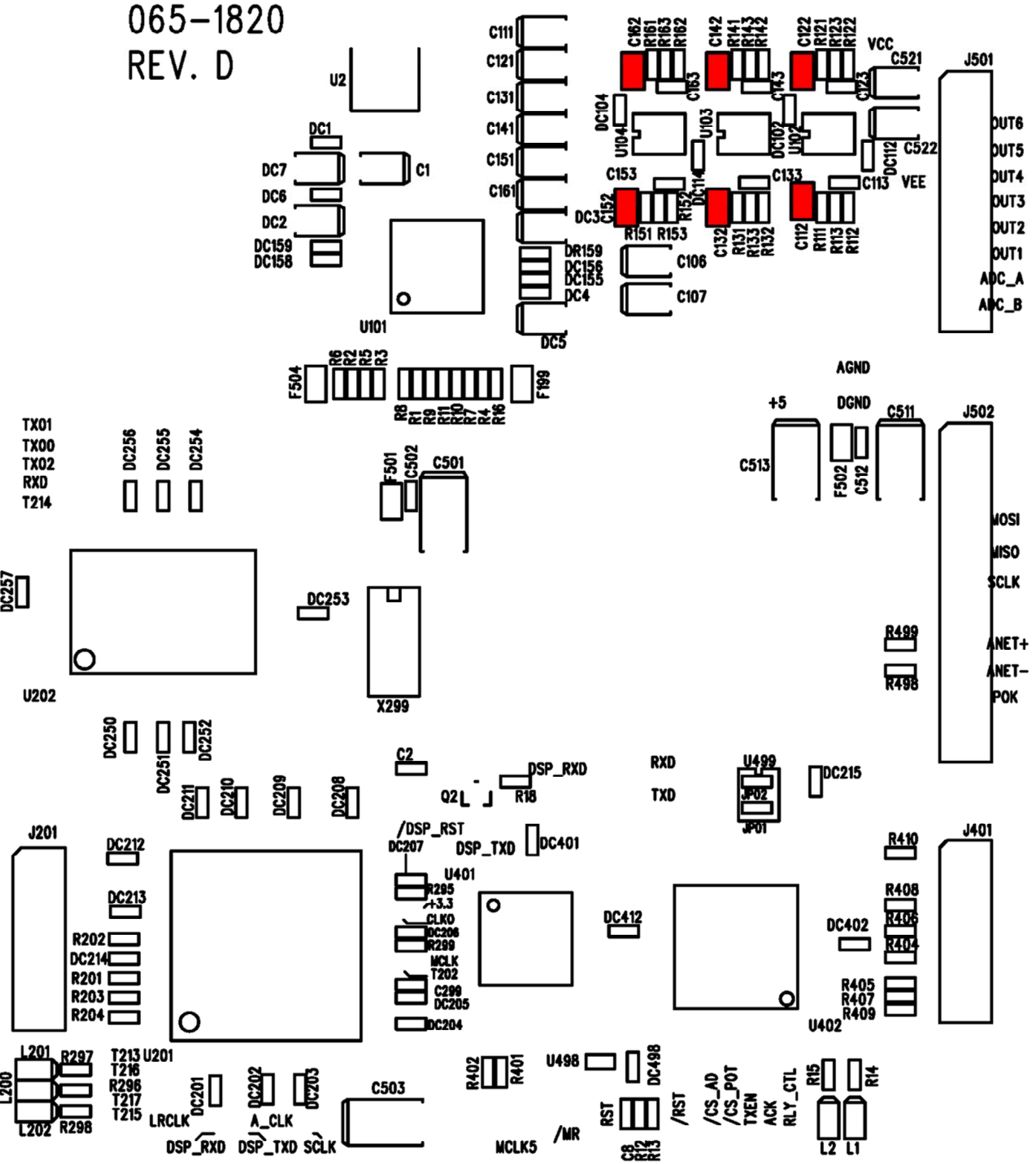
Ivie Part # 107-0010
8 each 0.01uF Cap, 50V, 0603



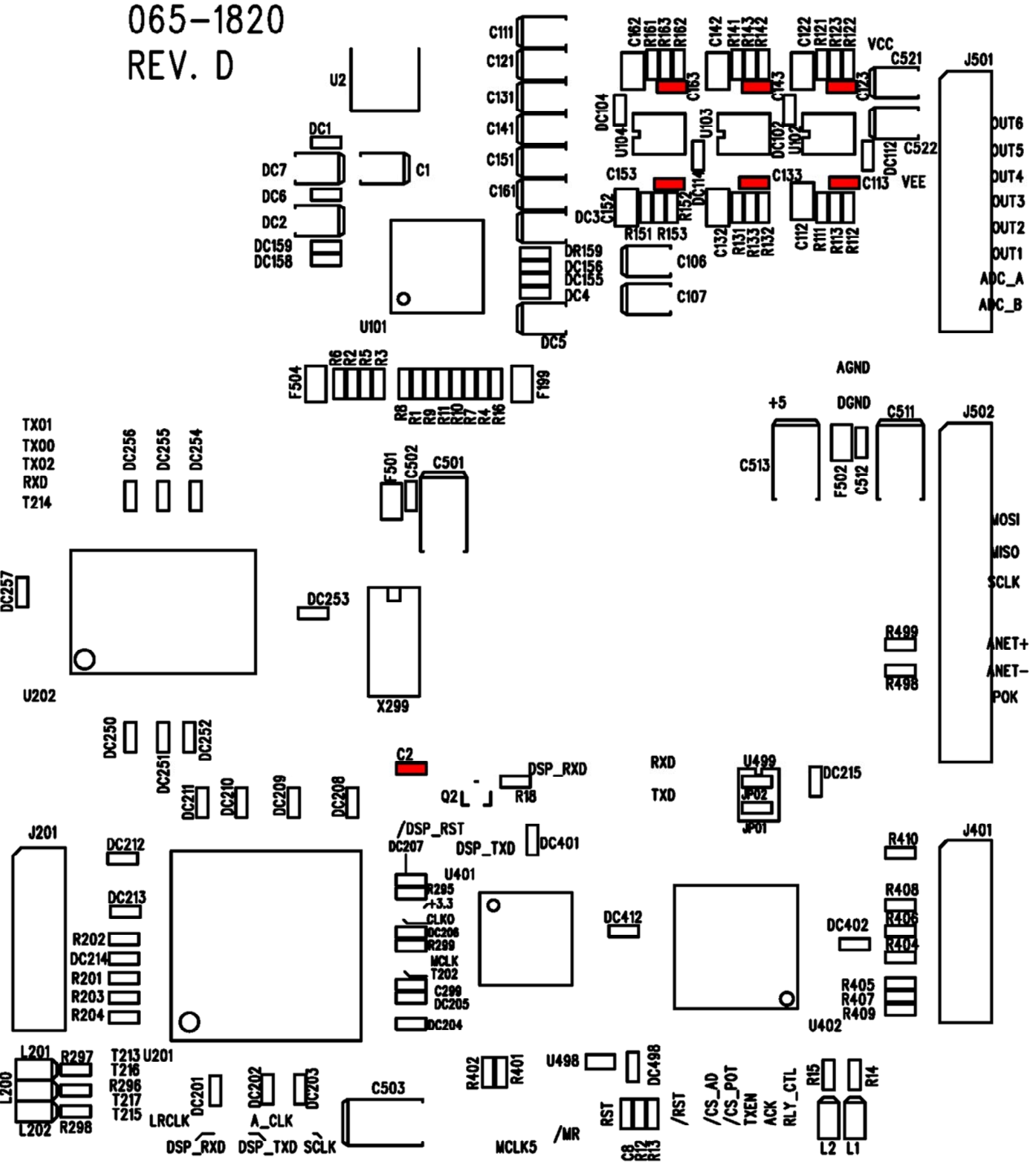
Ivie Part # 107-0020
33 each 0.1uF Cap, 25V, 0603



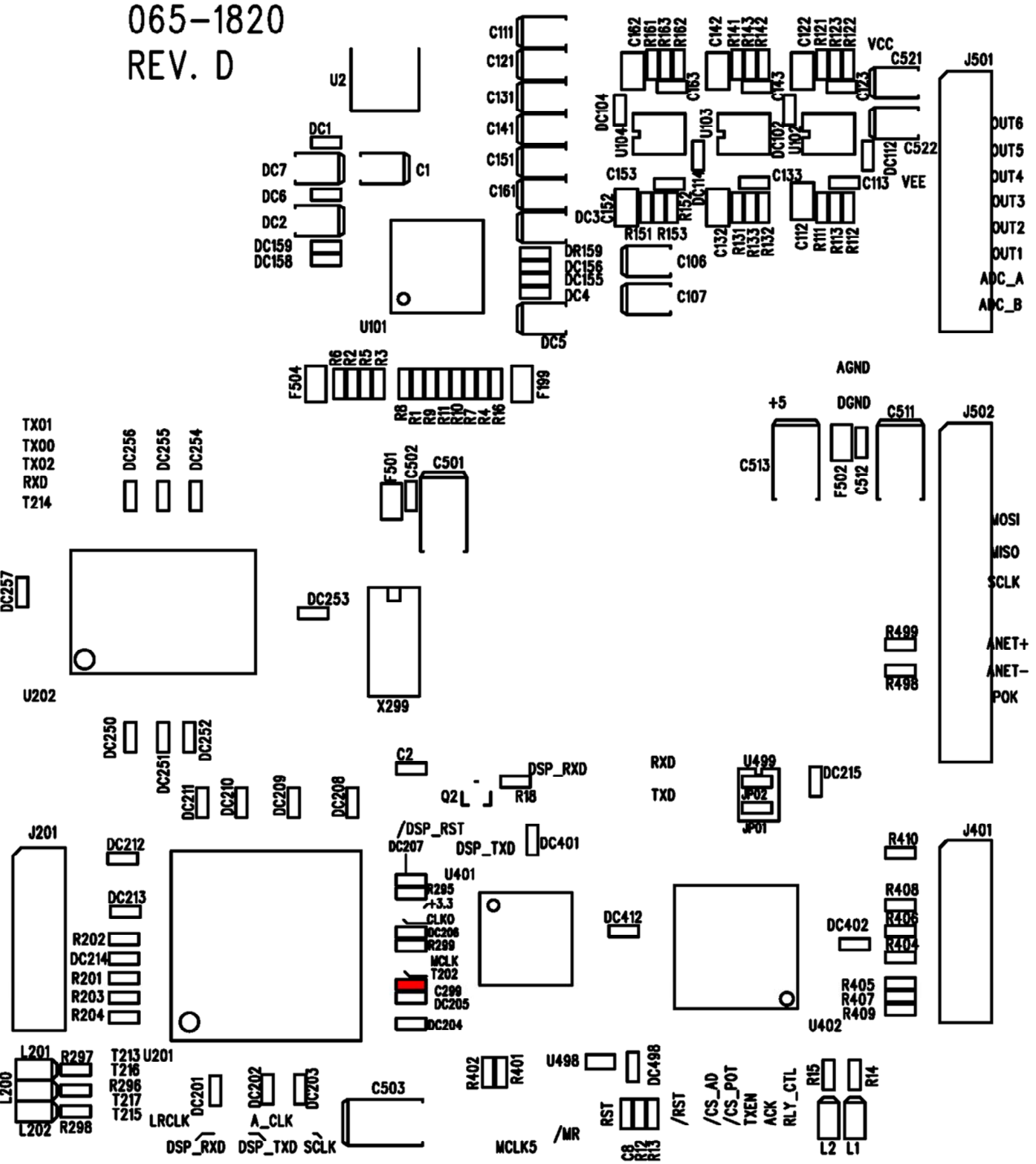
Ivie Part # 107-0030
6 each 1000 pF Cap, 50V, 0805



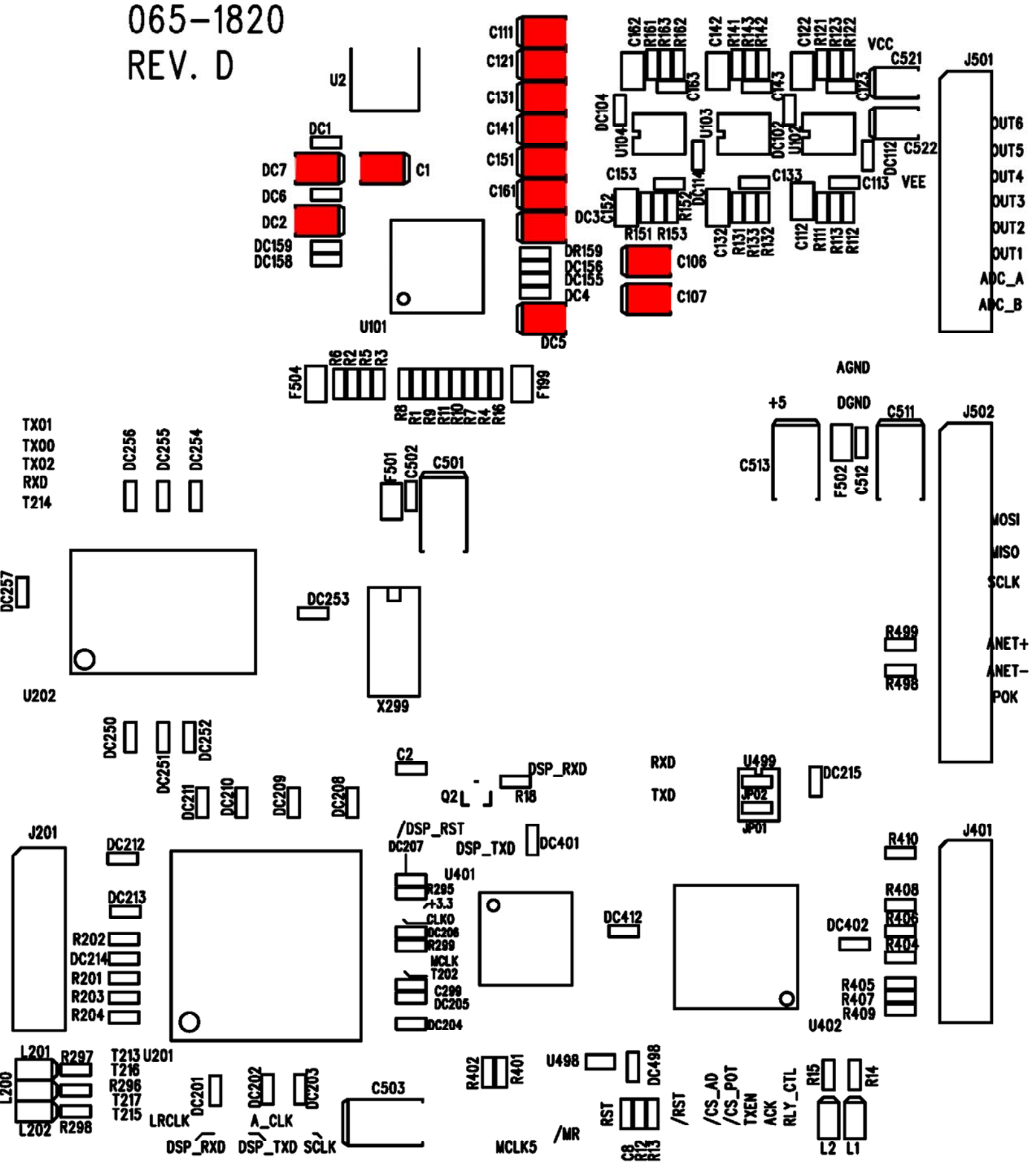
Ivie Part # 107-0040
7 each 150 pF Cap, 50V, 0603



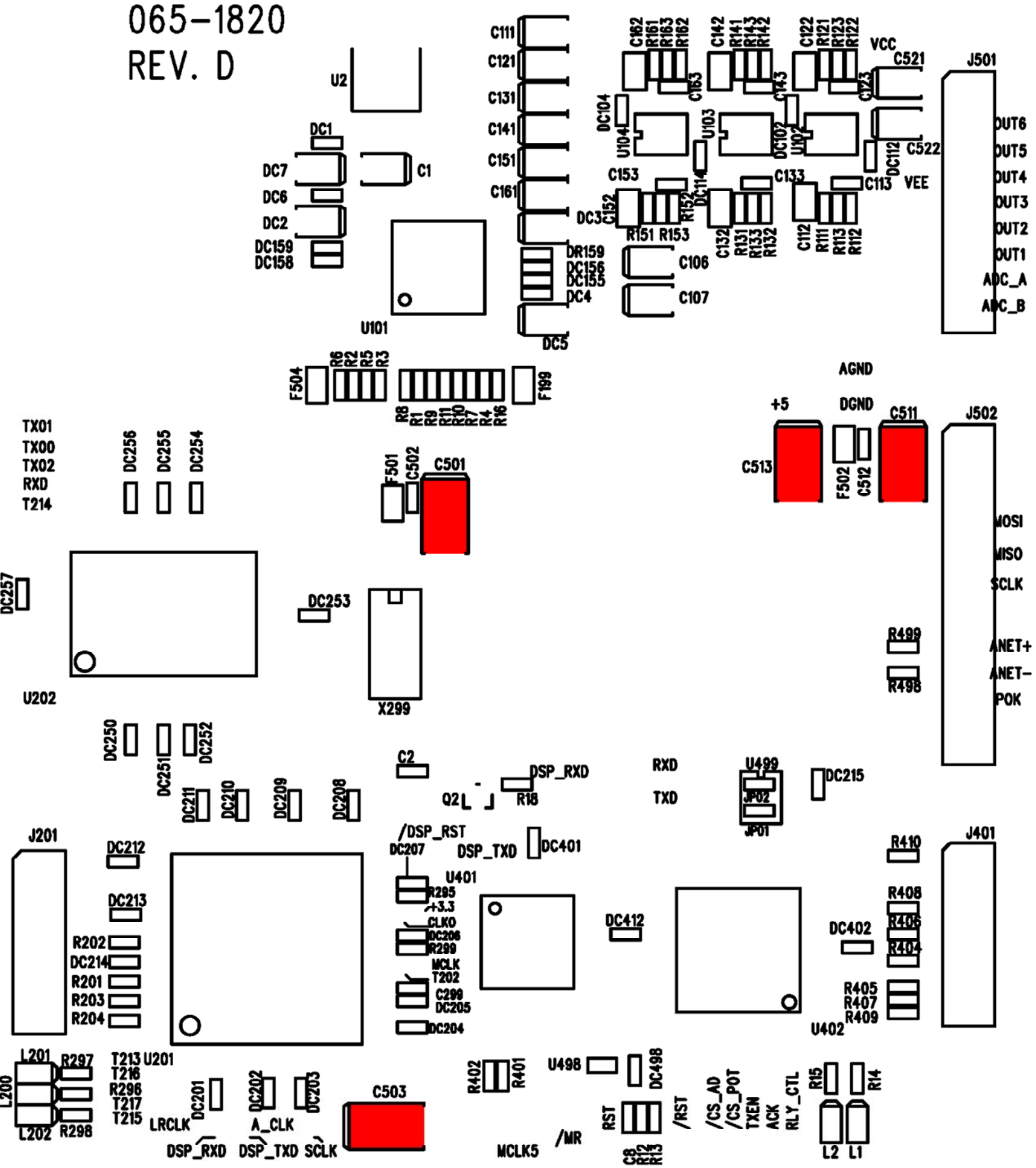
Ivie Part # 107-0050
1 each 0.039 uF Cap, 50V, 0603



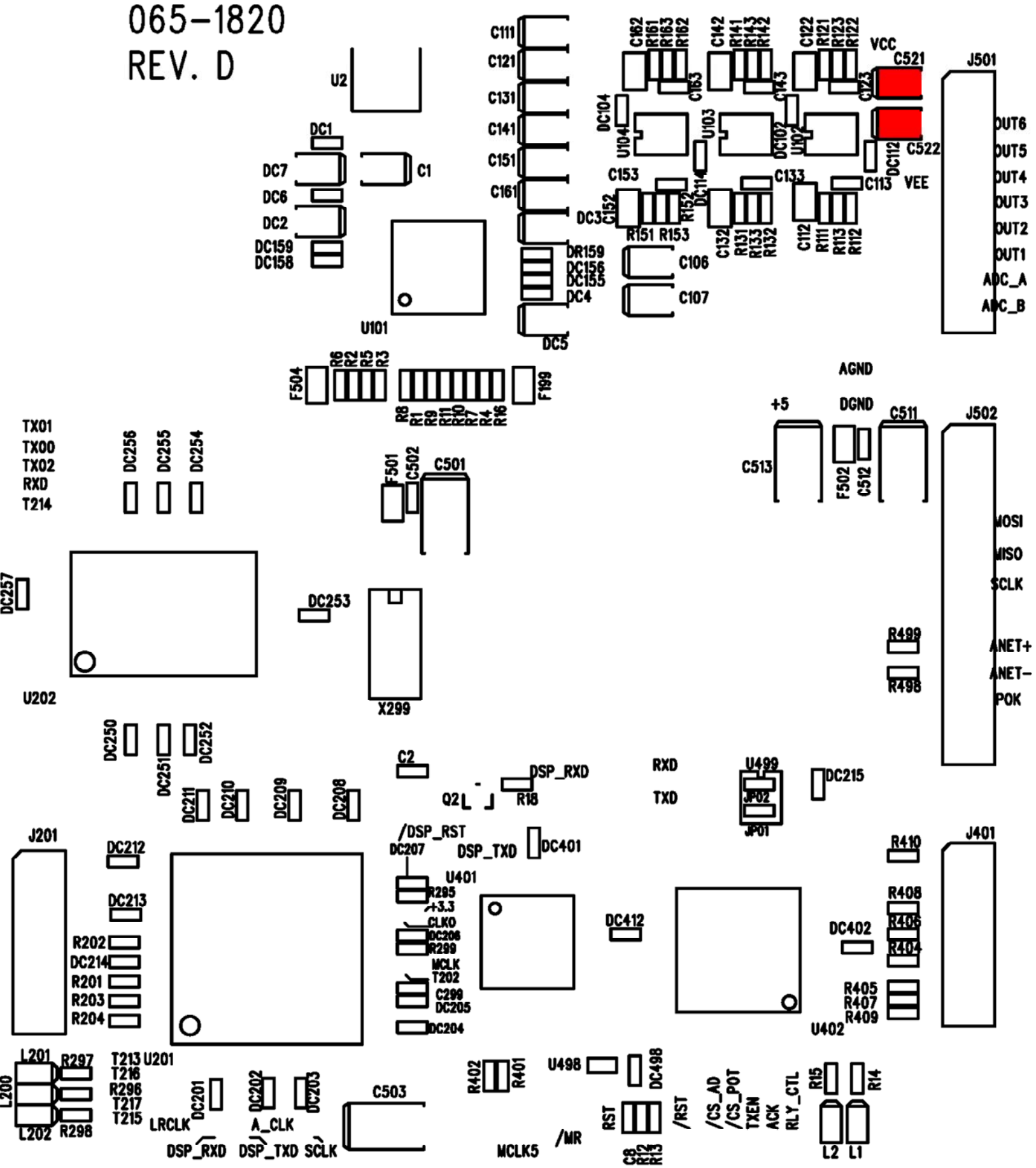
Ivie Part # 108-0020
13 each 10 uF, 16V, Tant Cap, 3528



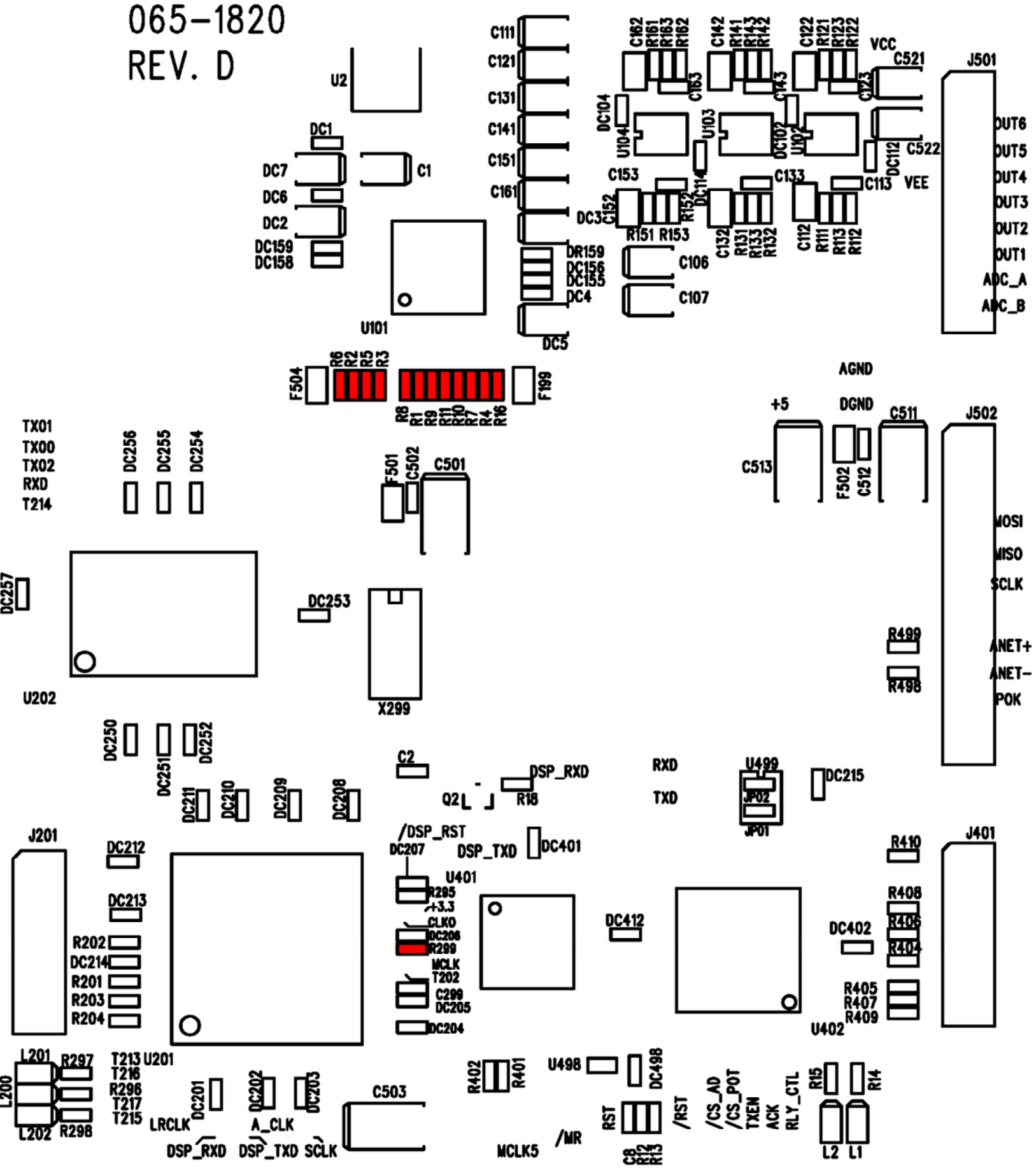
Ivie Part # 108-0040
4 each 47 uF, 10V, Tant Cap, EIA-D



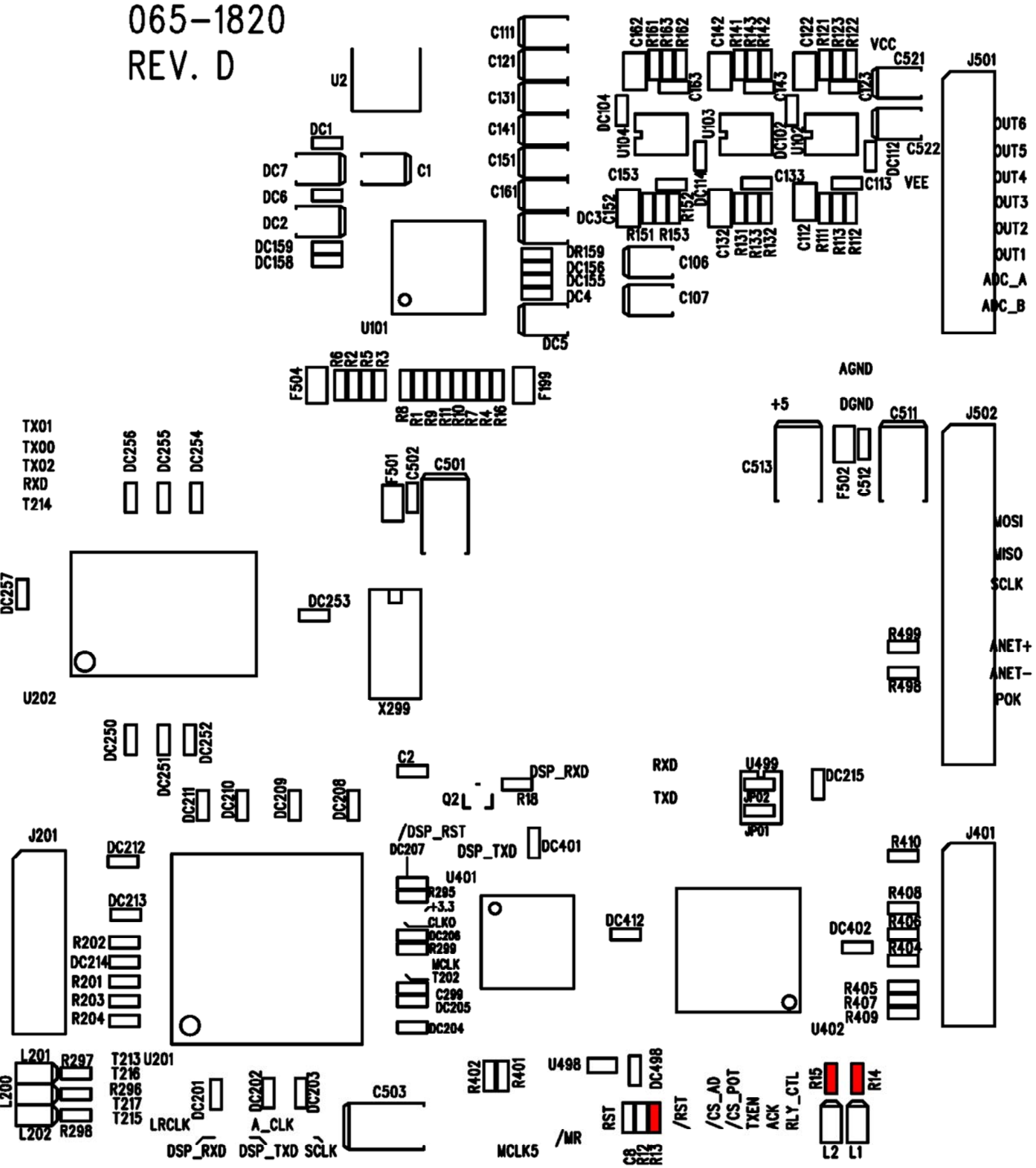
Ivie Part # 108-0050
12 each 10 uF, 20V, Tant Cap, 3528



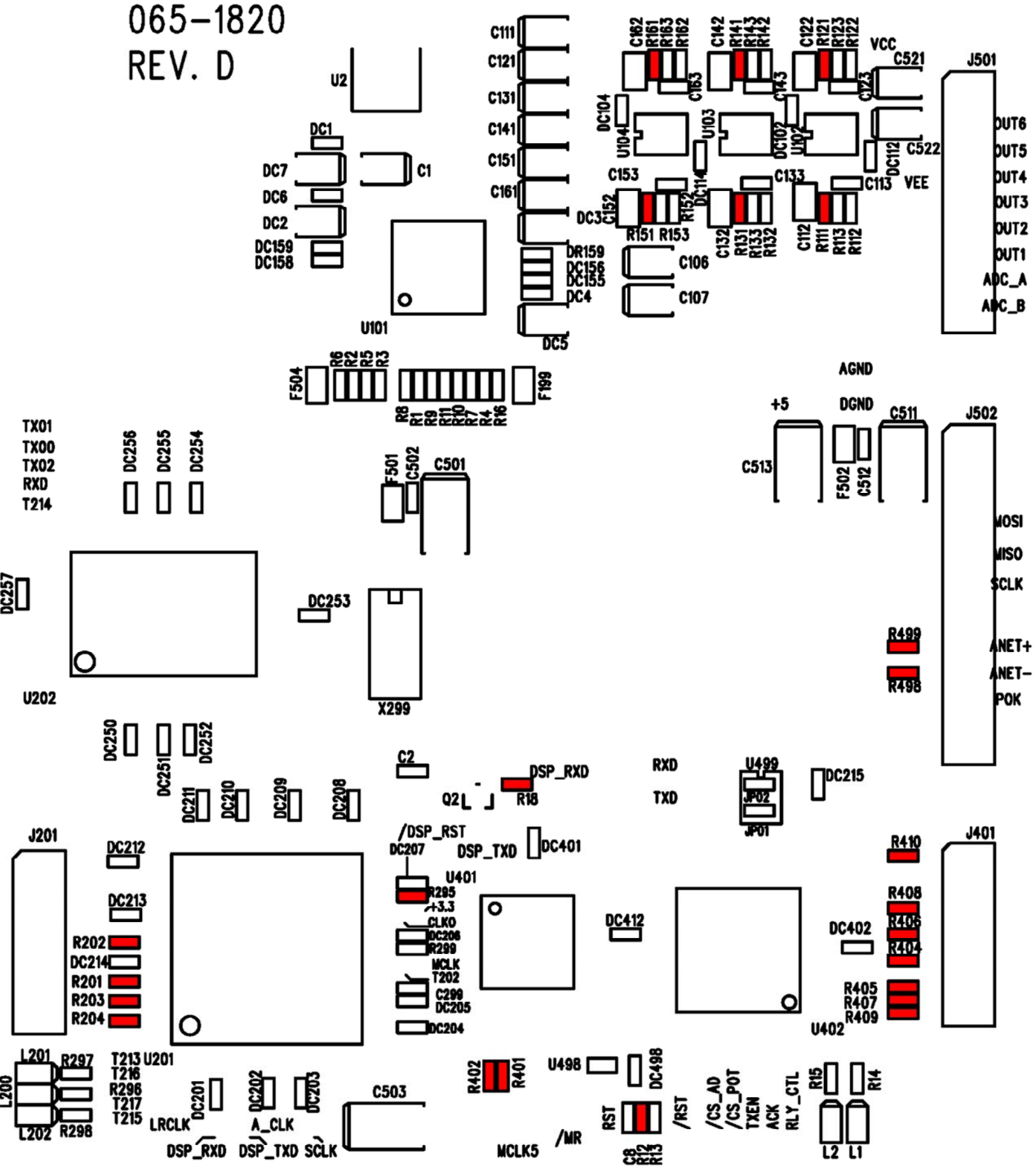
Ivie Part # 127-0010
13 each 100 ohm Resistor, 0603



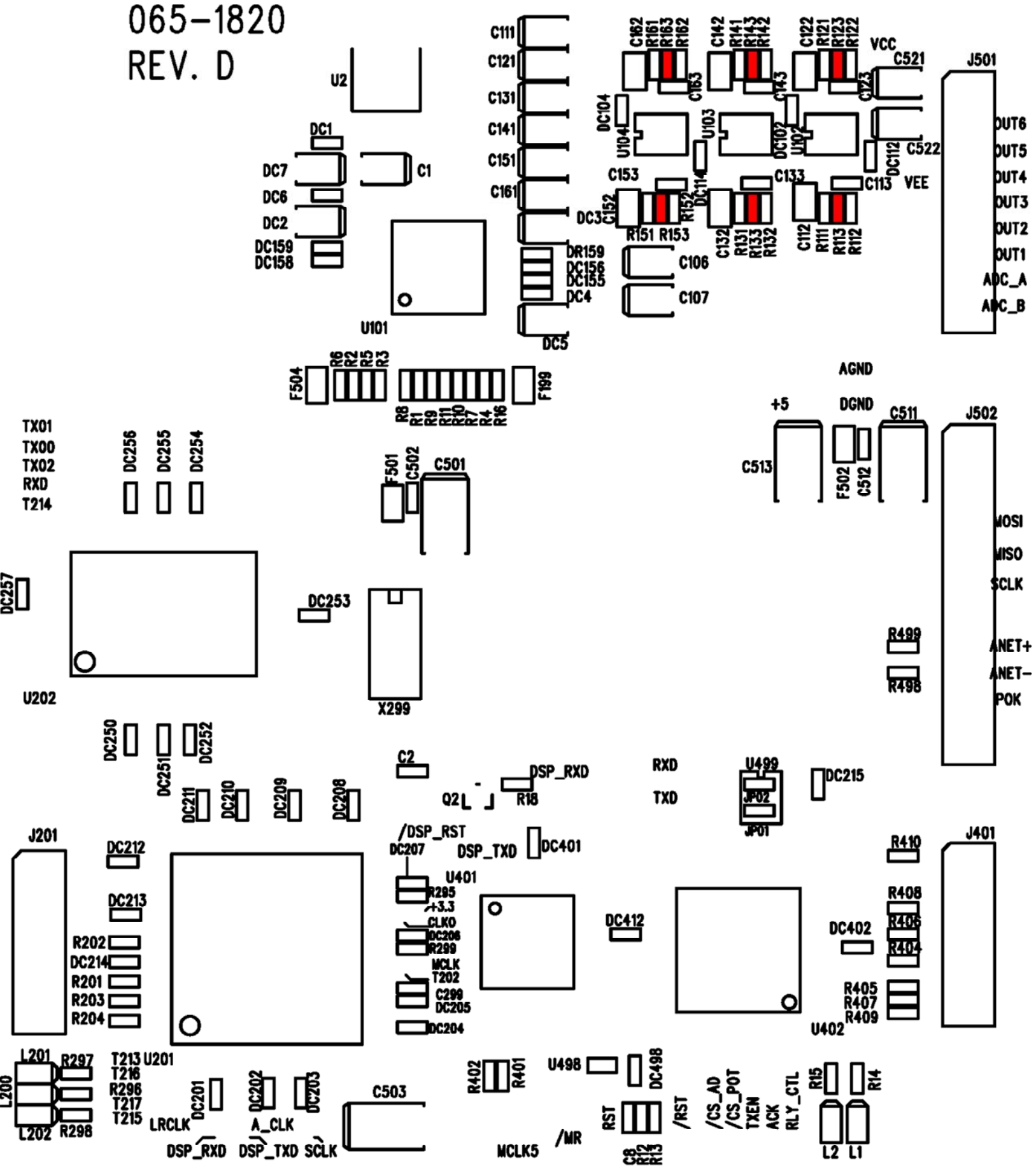
Ivie Part # 127-0020
3 each 1.00K Resistor, 0603



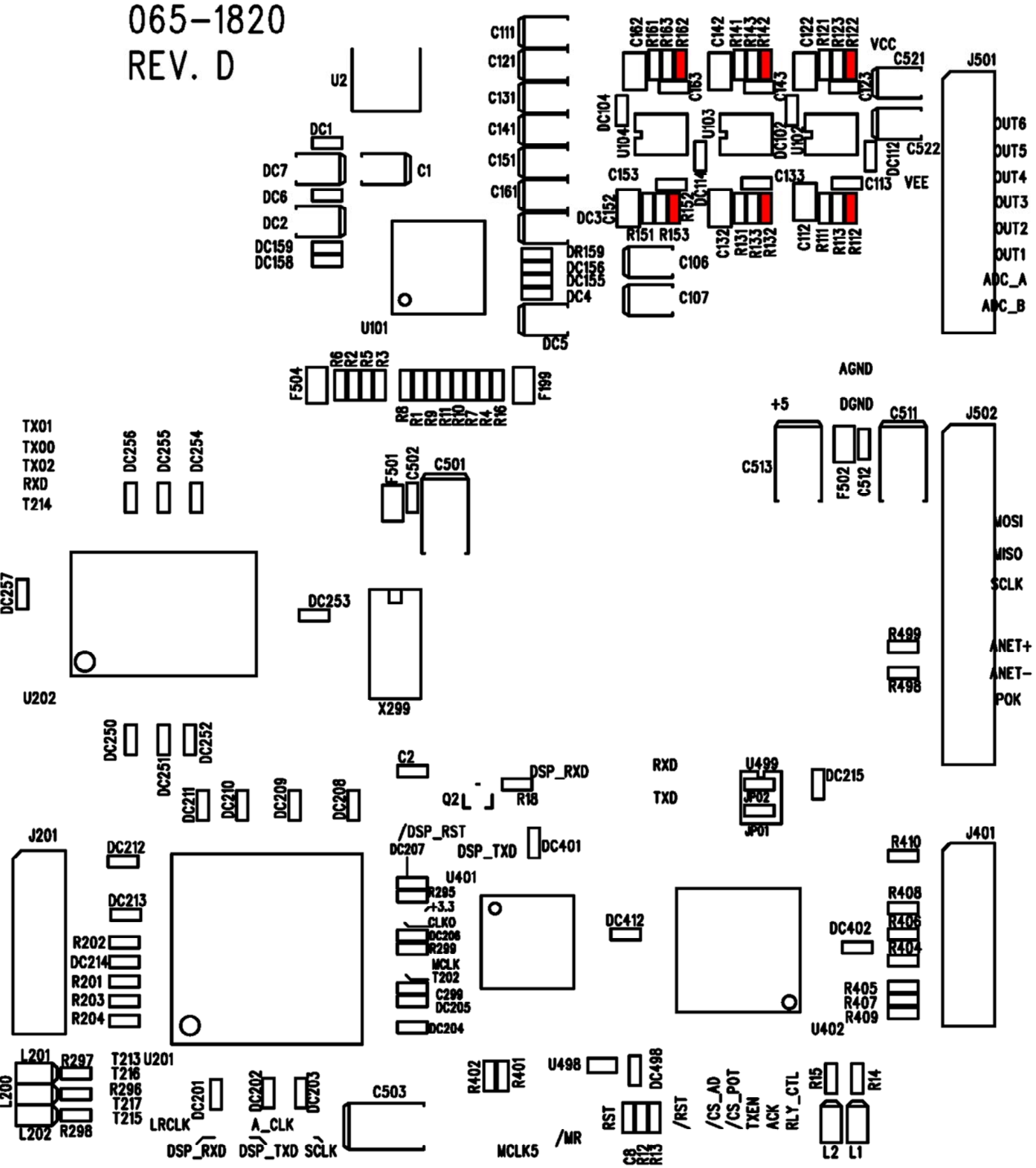
Ivie Part # 127-0170
24 each 11.0K Resistor, 0603



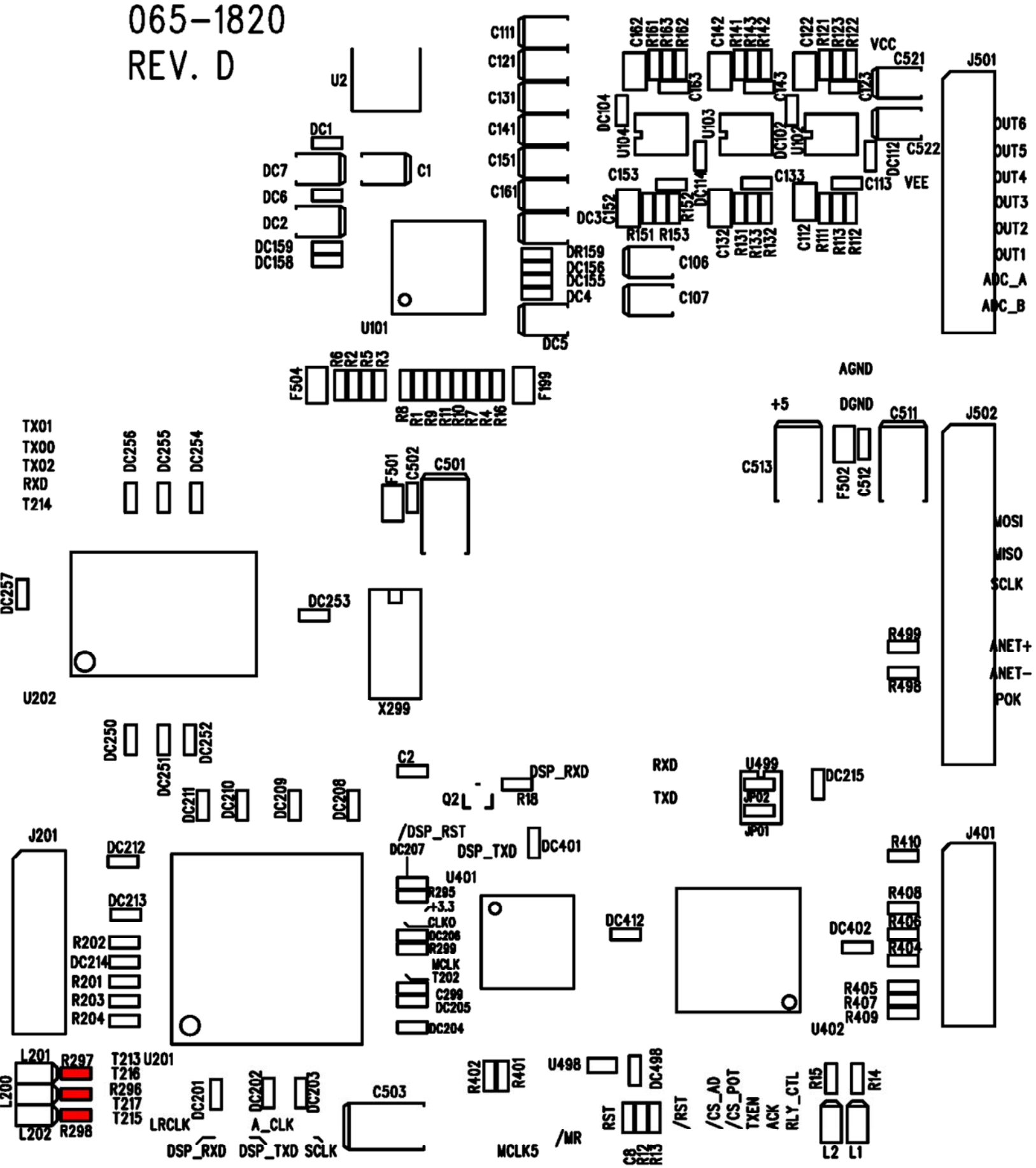
Ivie Part # 127-1150
6 each 22.1K Resistor, 0603



Ivie Part # 127-1920
6 each 3.92K Resistor, 0603

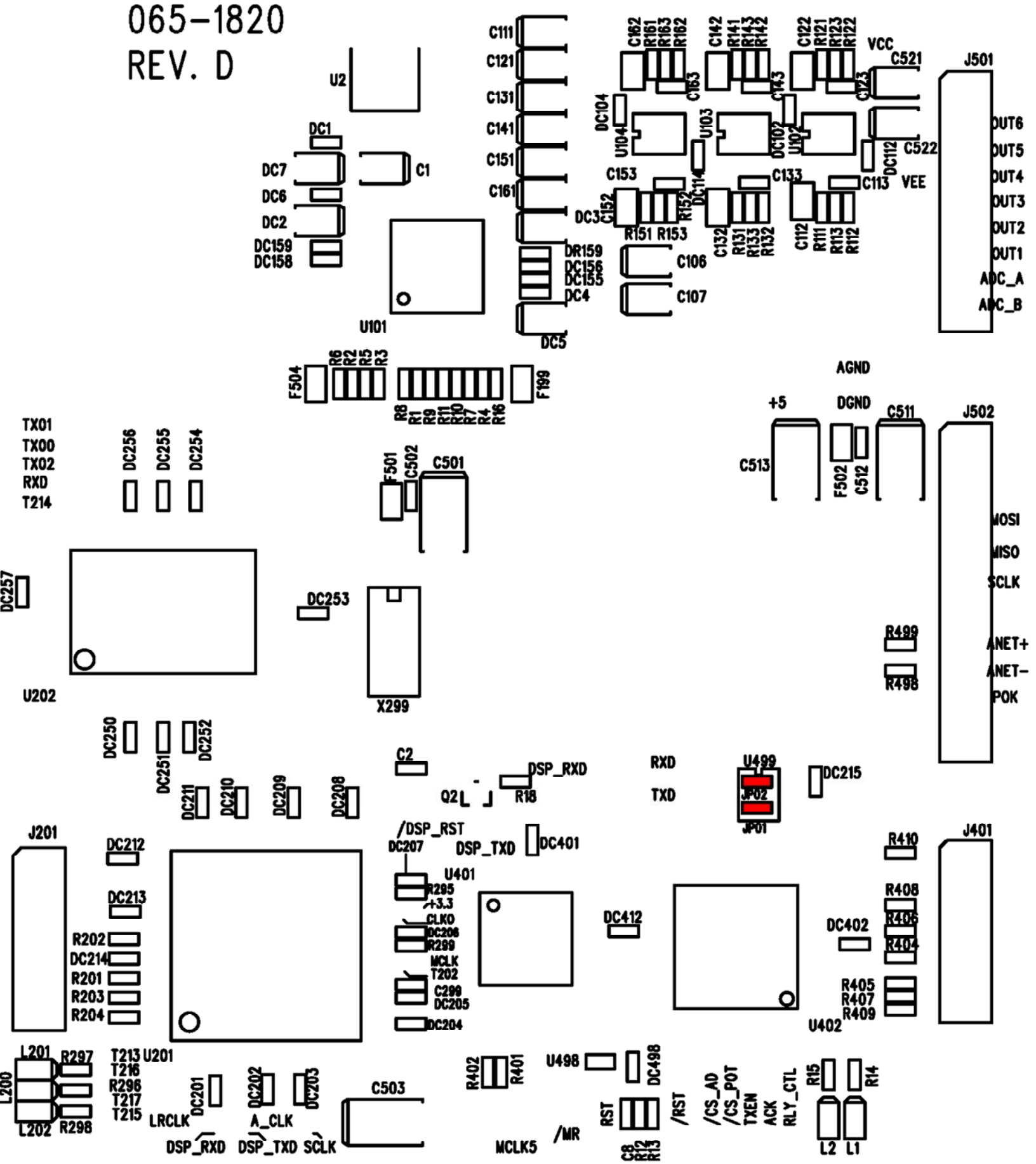


Ivie Part # 127-2145
3 each 475 ohm Resistor, 0603

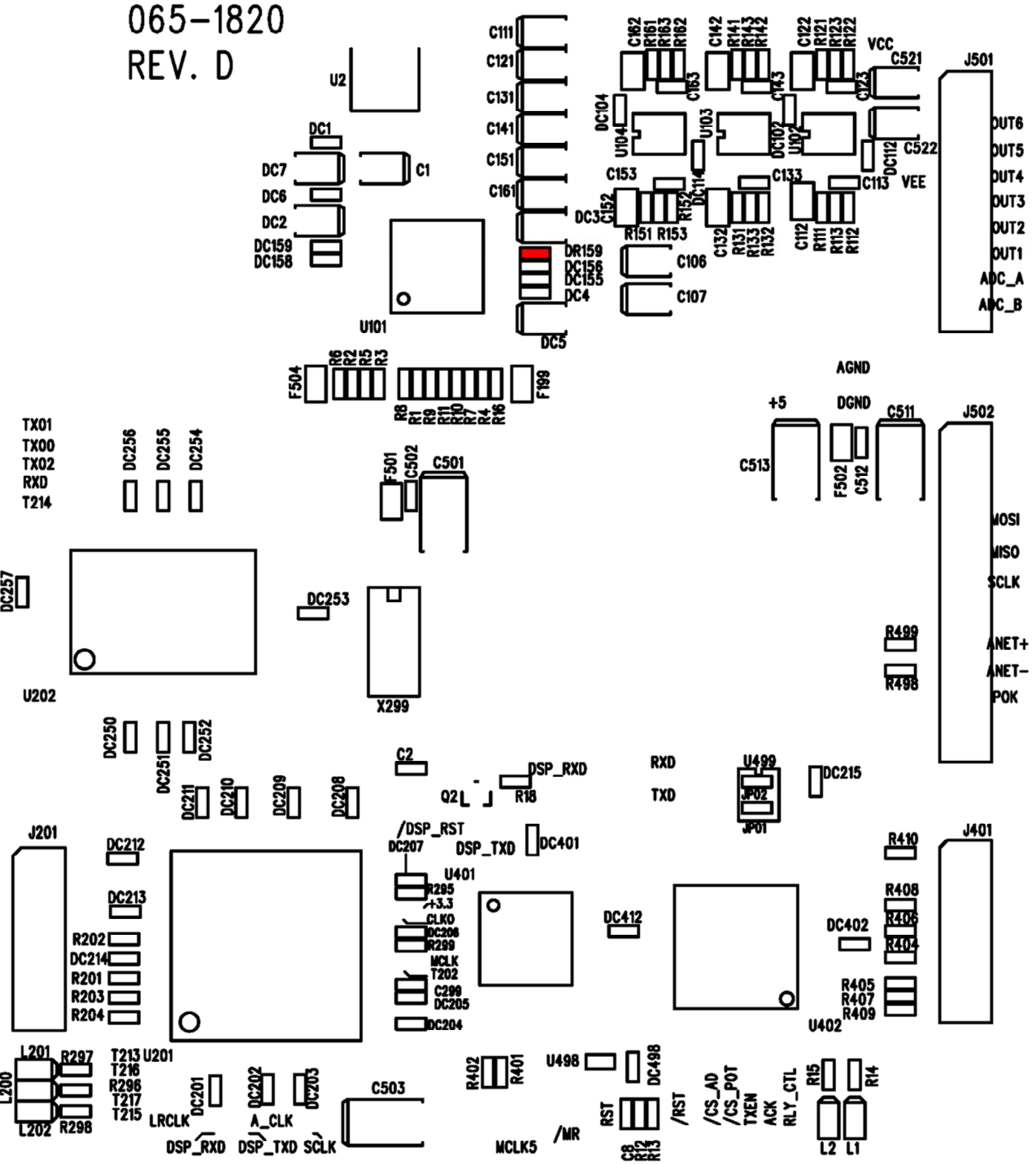


Ivie Part # 137-0020

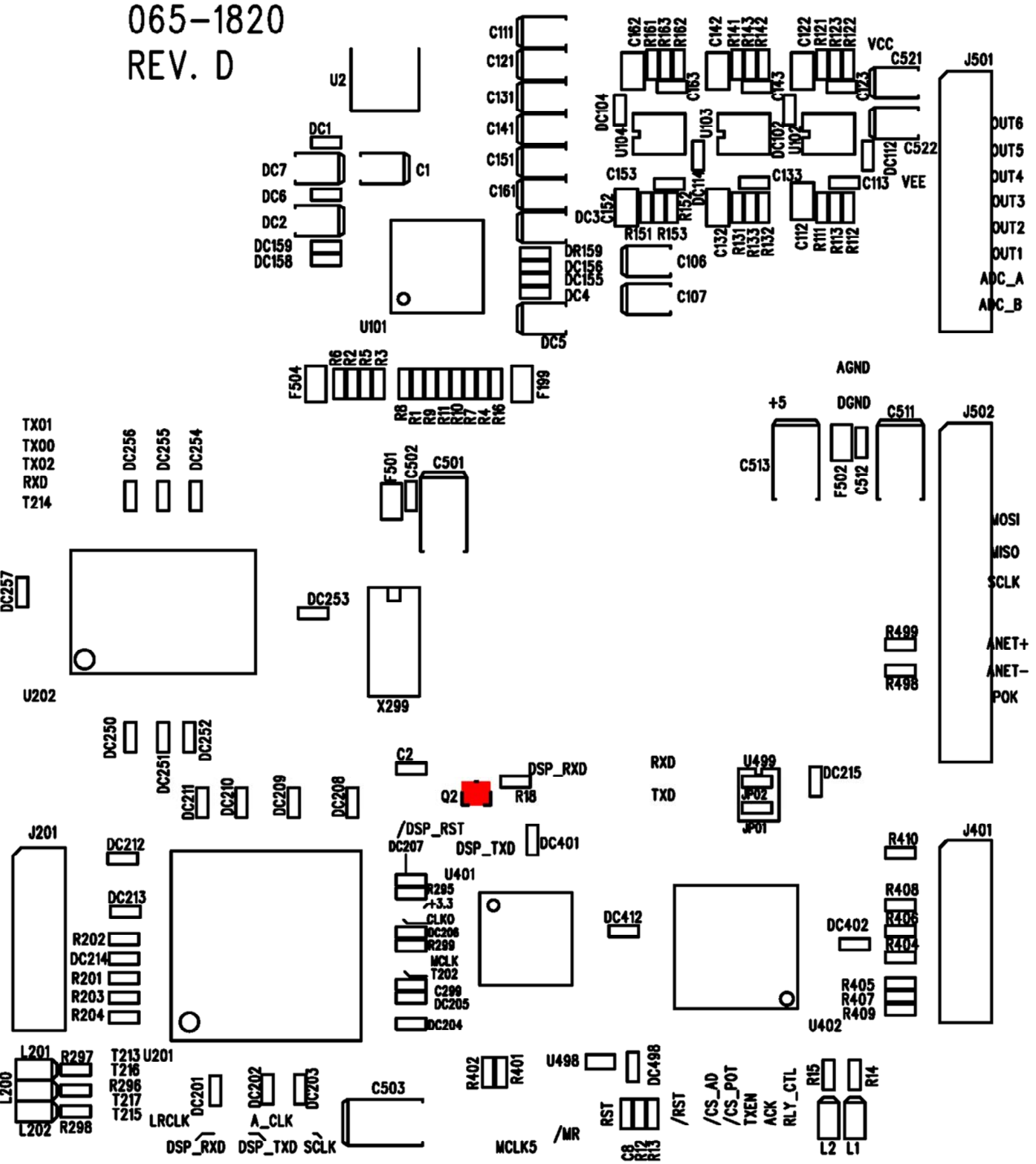
2 each 0 ohm Jumper Resistors, 0603 (Load ONLY if **OPTION 2**)



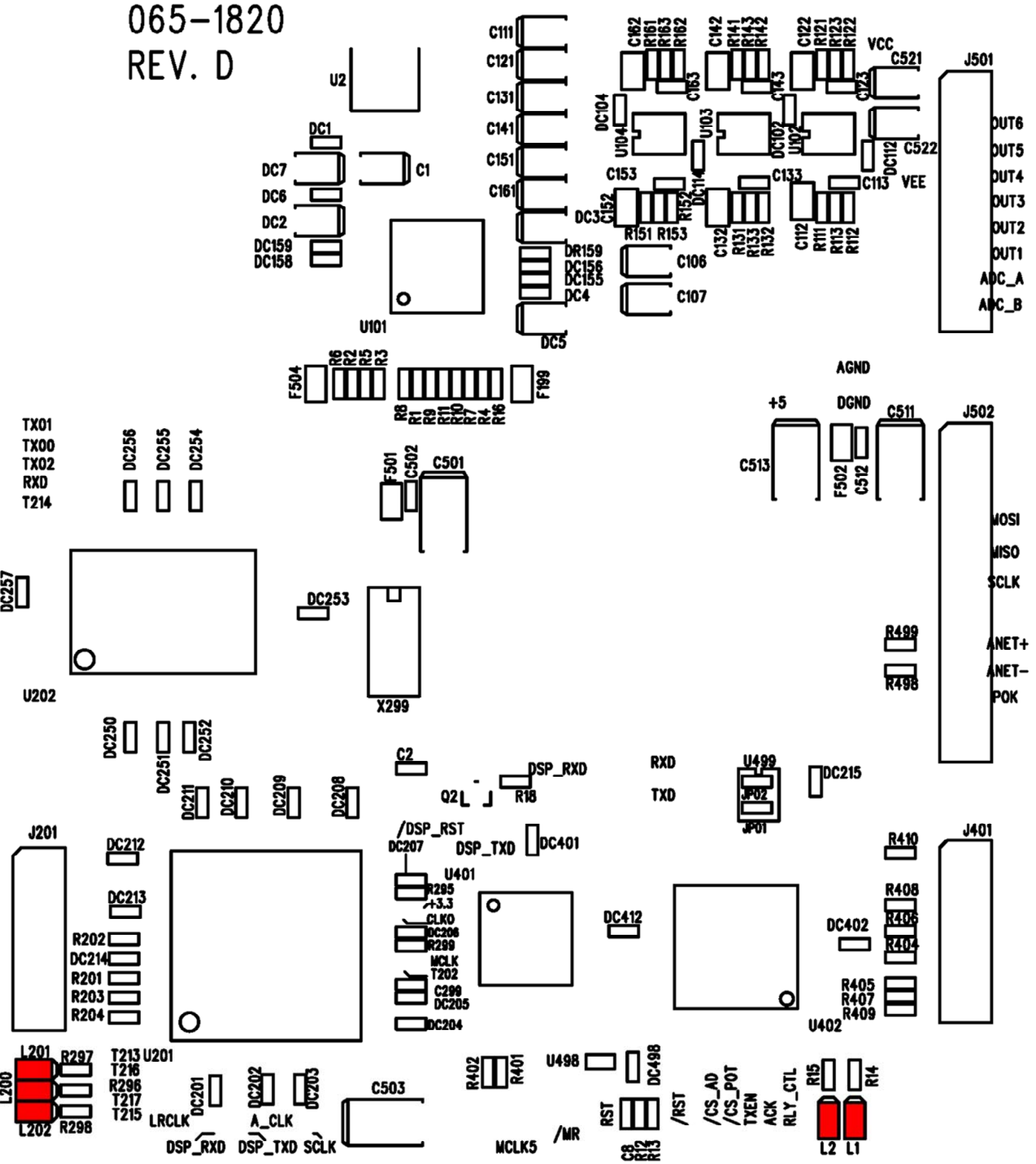
Ivie Part # 137-2285
1 each 5.1 ohm Resistor, 0603



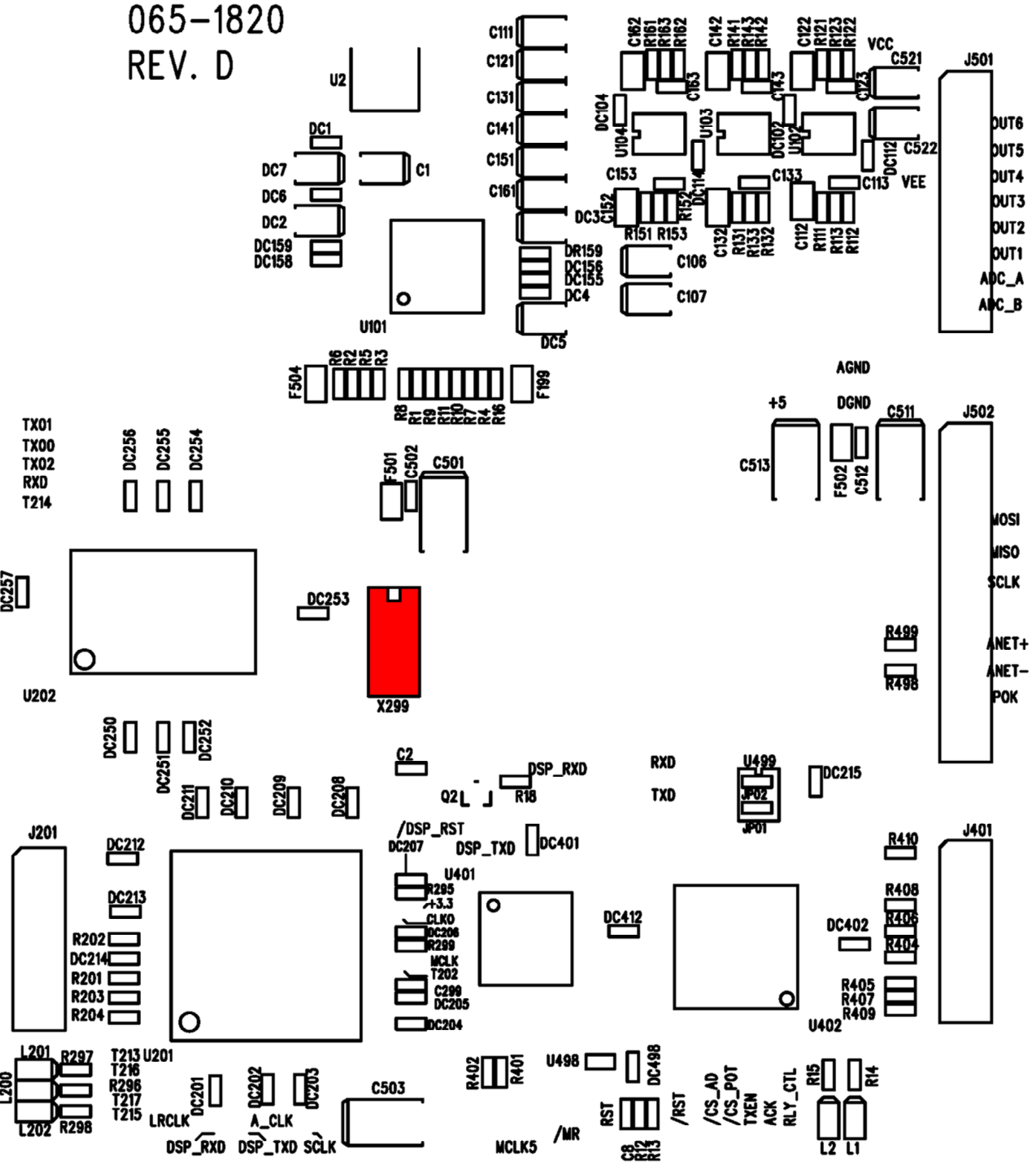
Ivie Part # 152-0060
1 each 2N7000E MOSFET, SOT-23



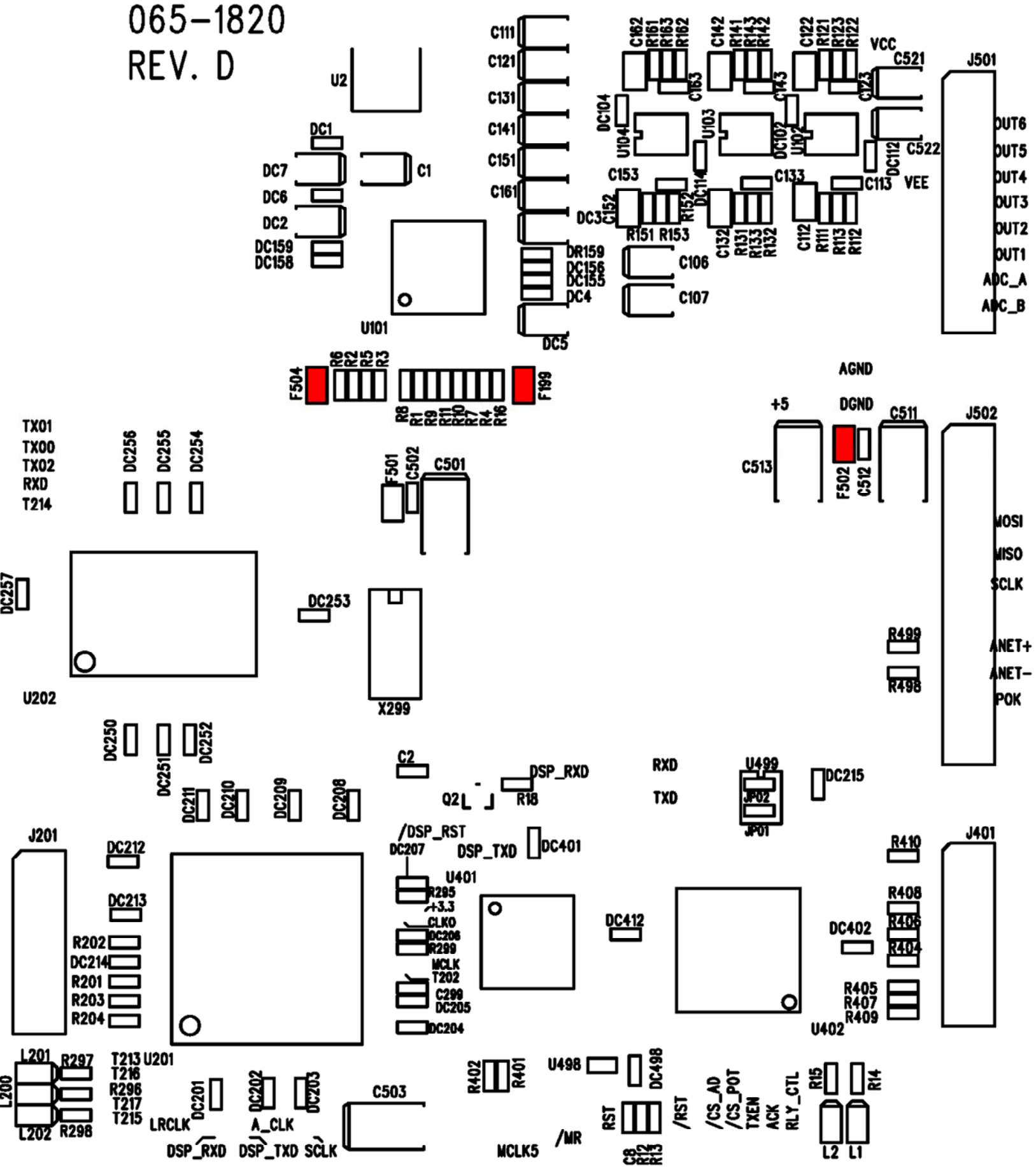
Ivie Part # 161-0420
5 each Red LED, 0805



Ivie Part # 165-0050
1 each 24.576 MHz OSC, 10.5x5 mm

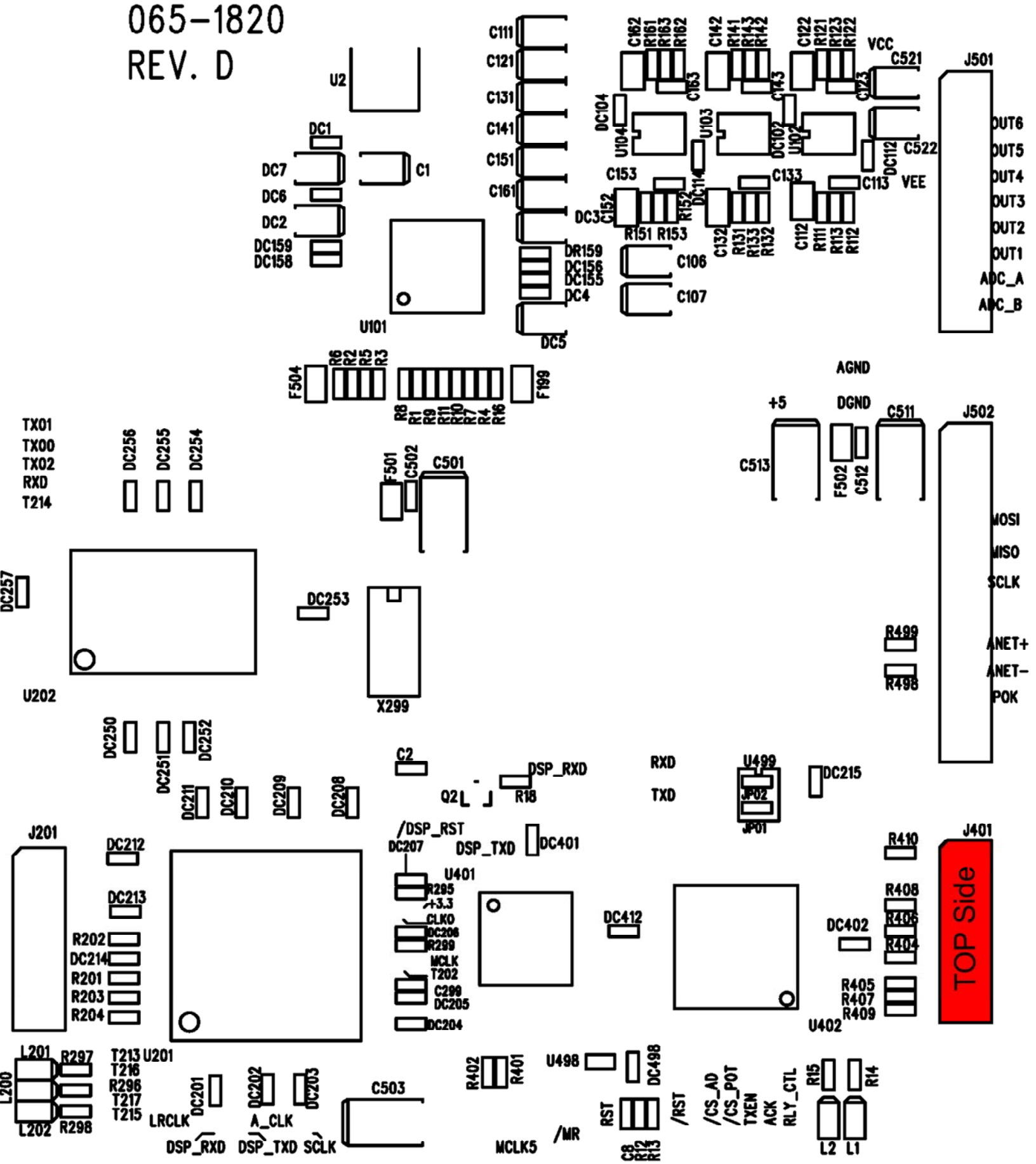


Ivie Part # 186-0040
3 each Ferrite Inductor, 0805



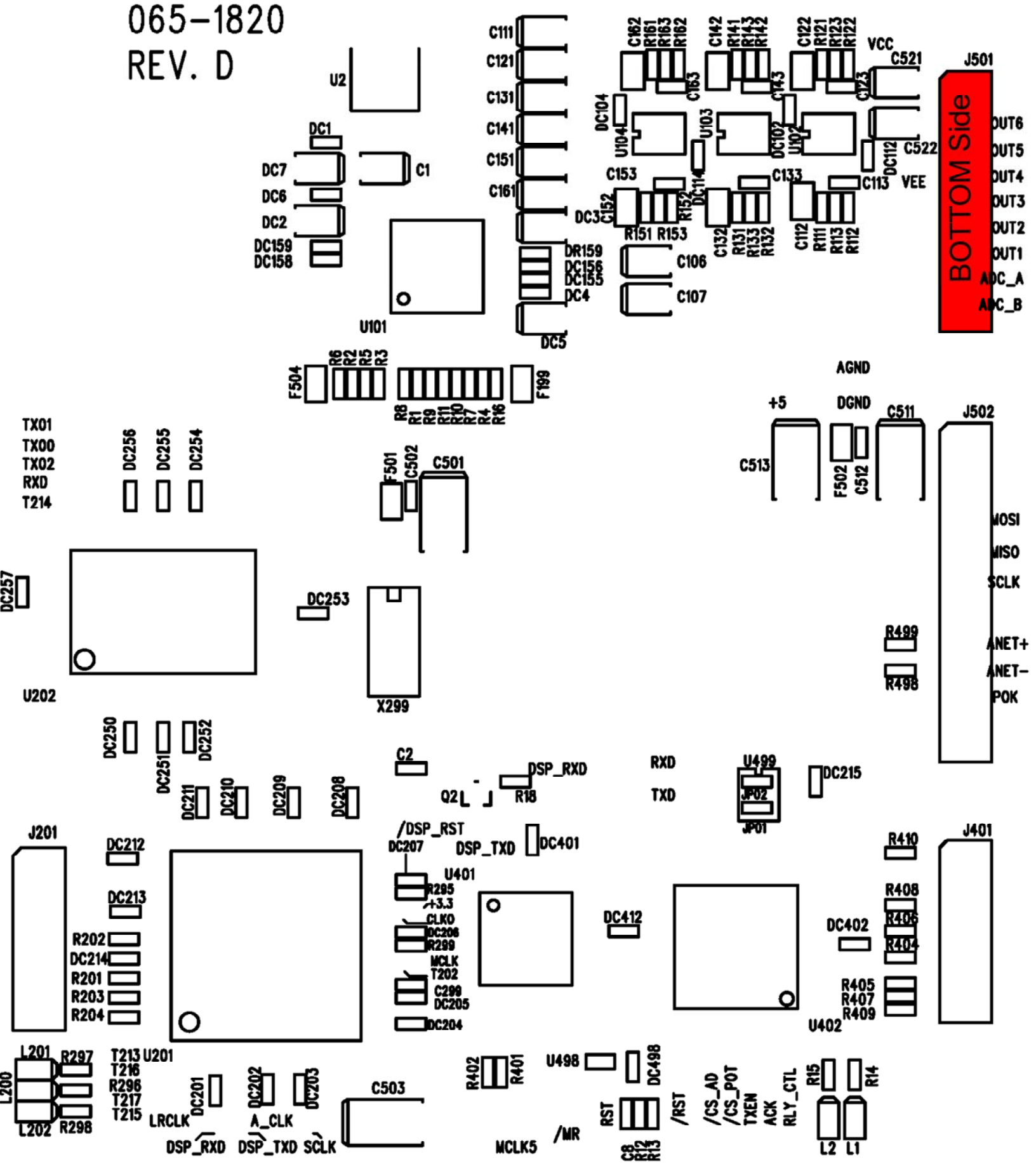
Ivie Part # 415-1050

1 each 14 pin Dual Row Header, TOP MOUNTED



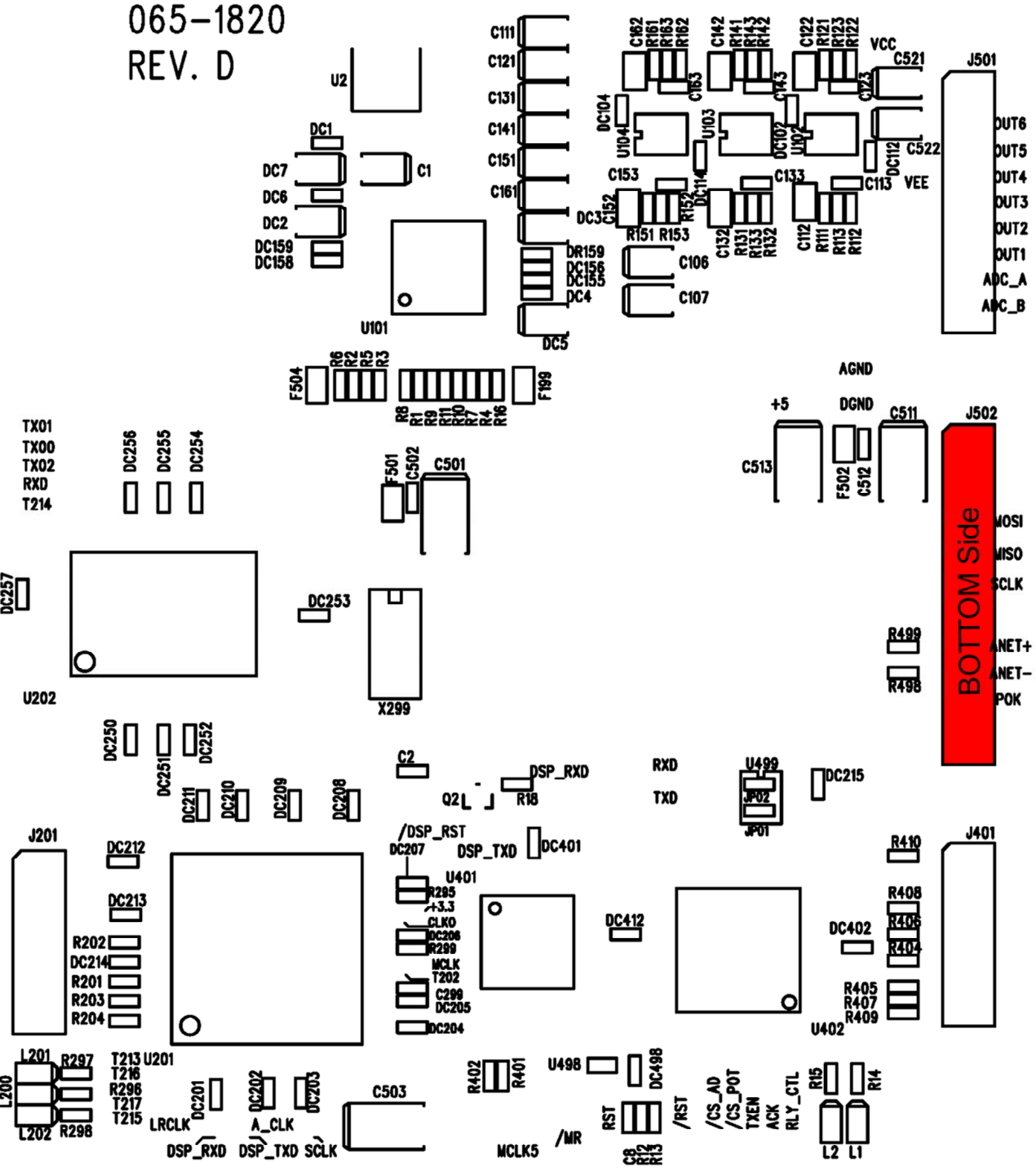
Ivie Part # 415-1060

1 each 20 pin Dual Row Header, BOTTOM MOUNTED

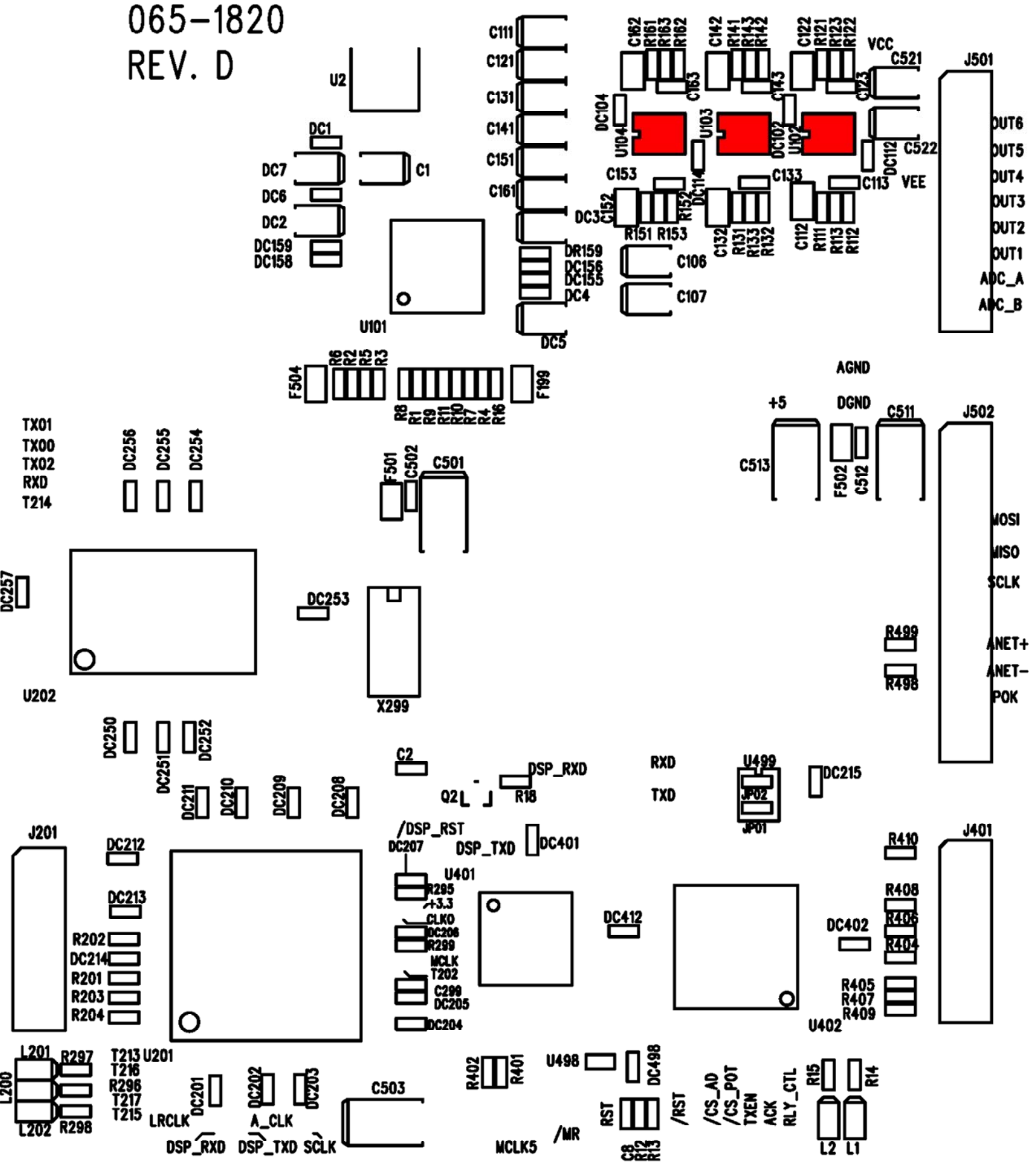


Ivie Part # 415-1070

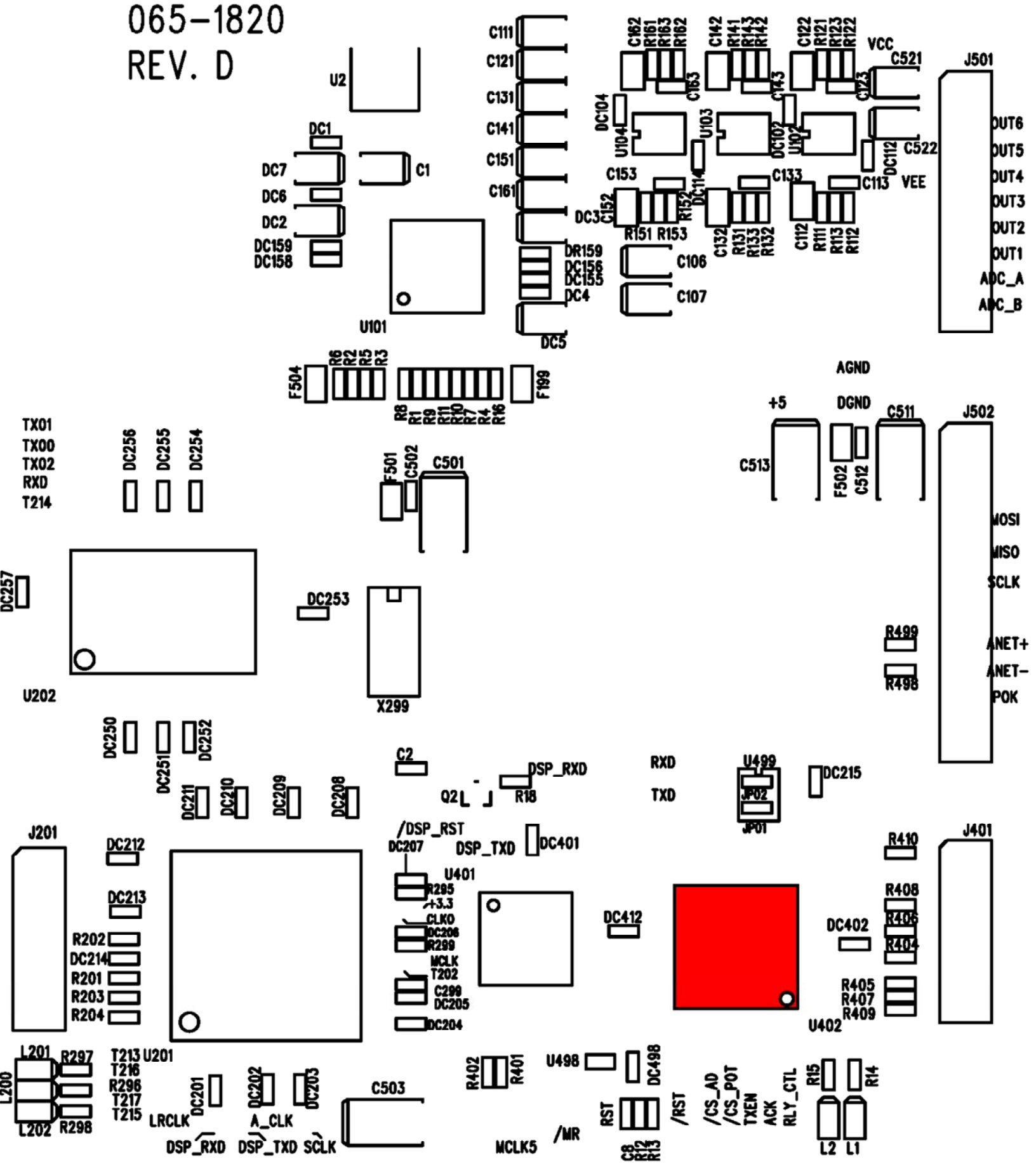
1 each 26 pin Dual Row Header, BOTTOM MOUNTED



Ivie Part # 430-0010
3 each MC33078 Op Amp, SOIC-8

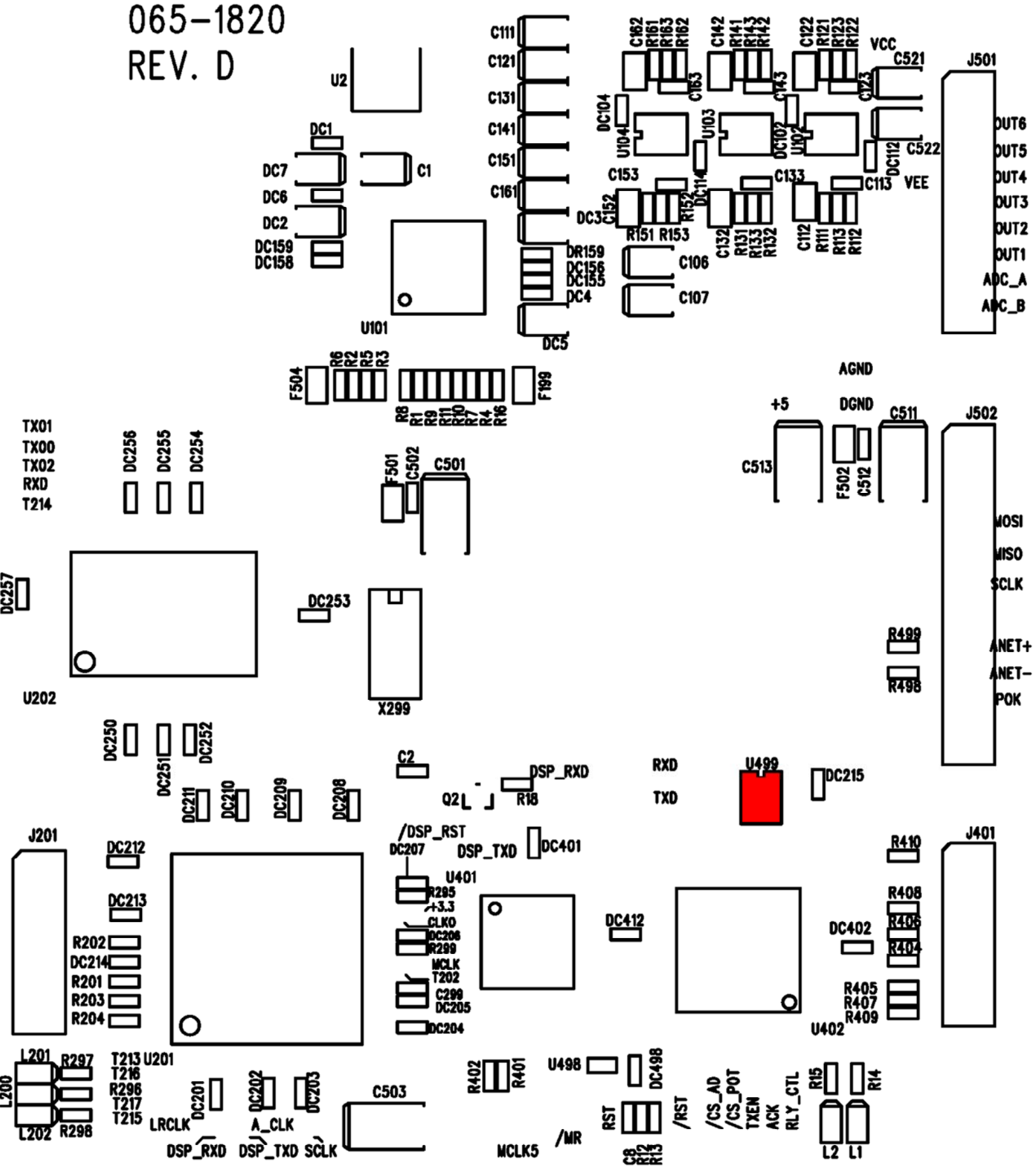


Ivie Part # 430-0030
1 each PSD813F1-A-90 U, TQFP64

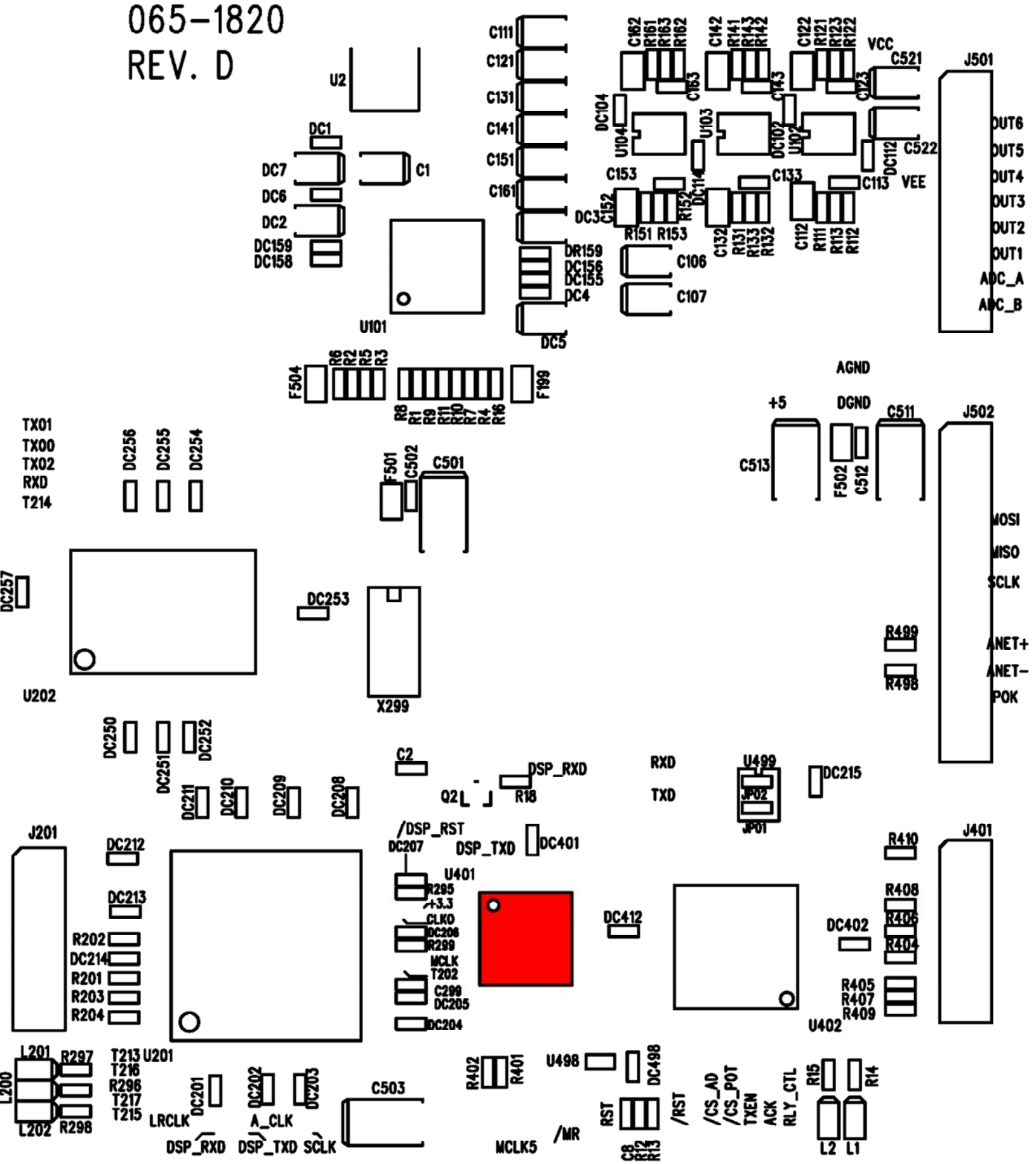


Ivie Part # 430-0040

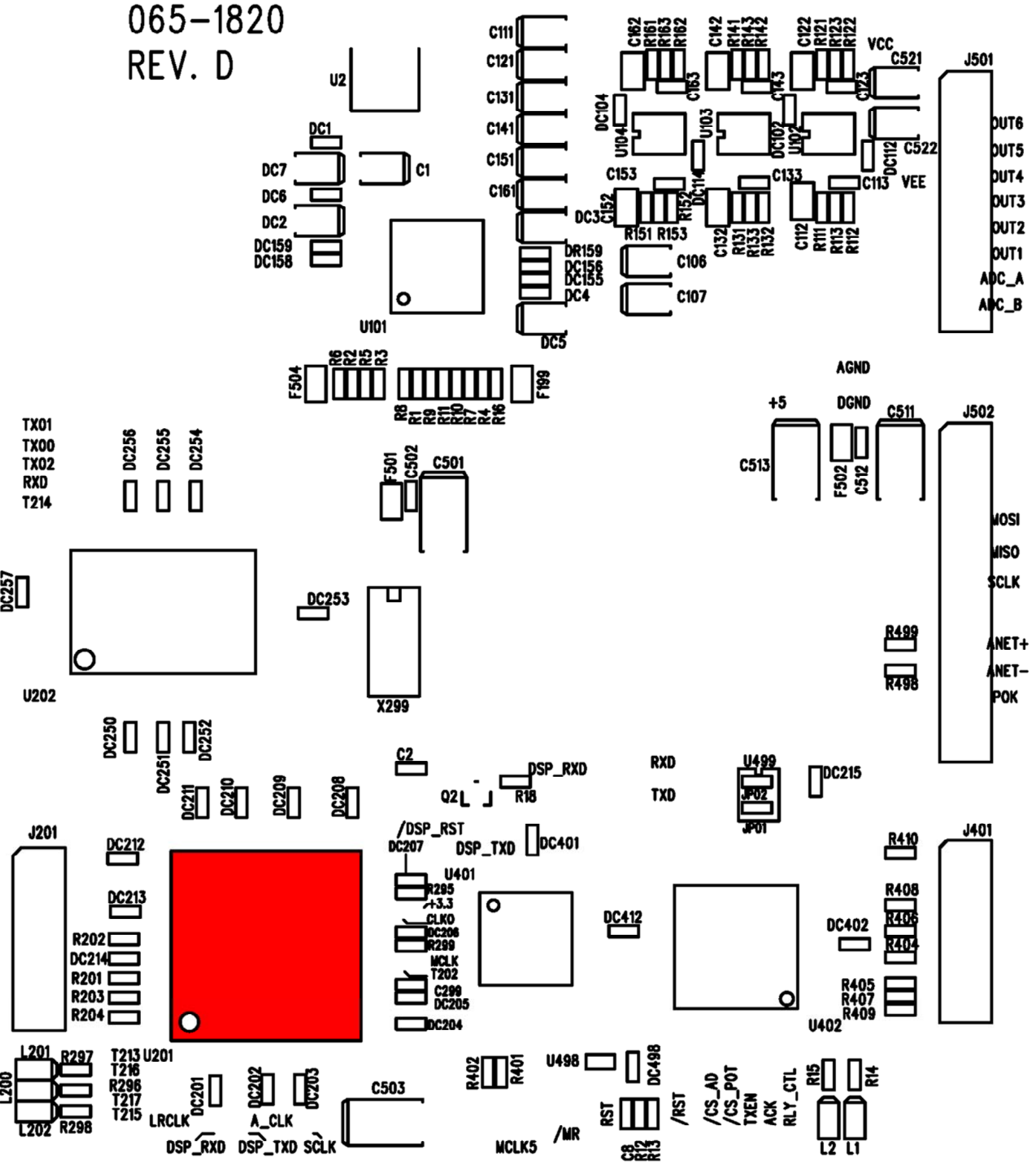
1 each LTC485, SO-8 (Load ONLY if **OPTION 1**)



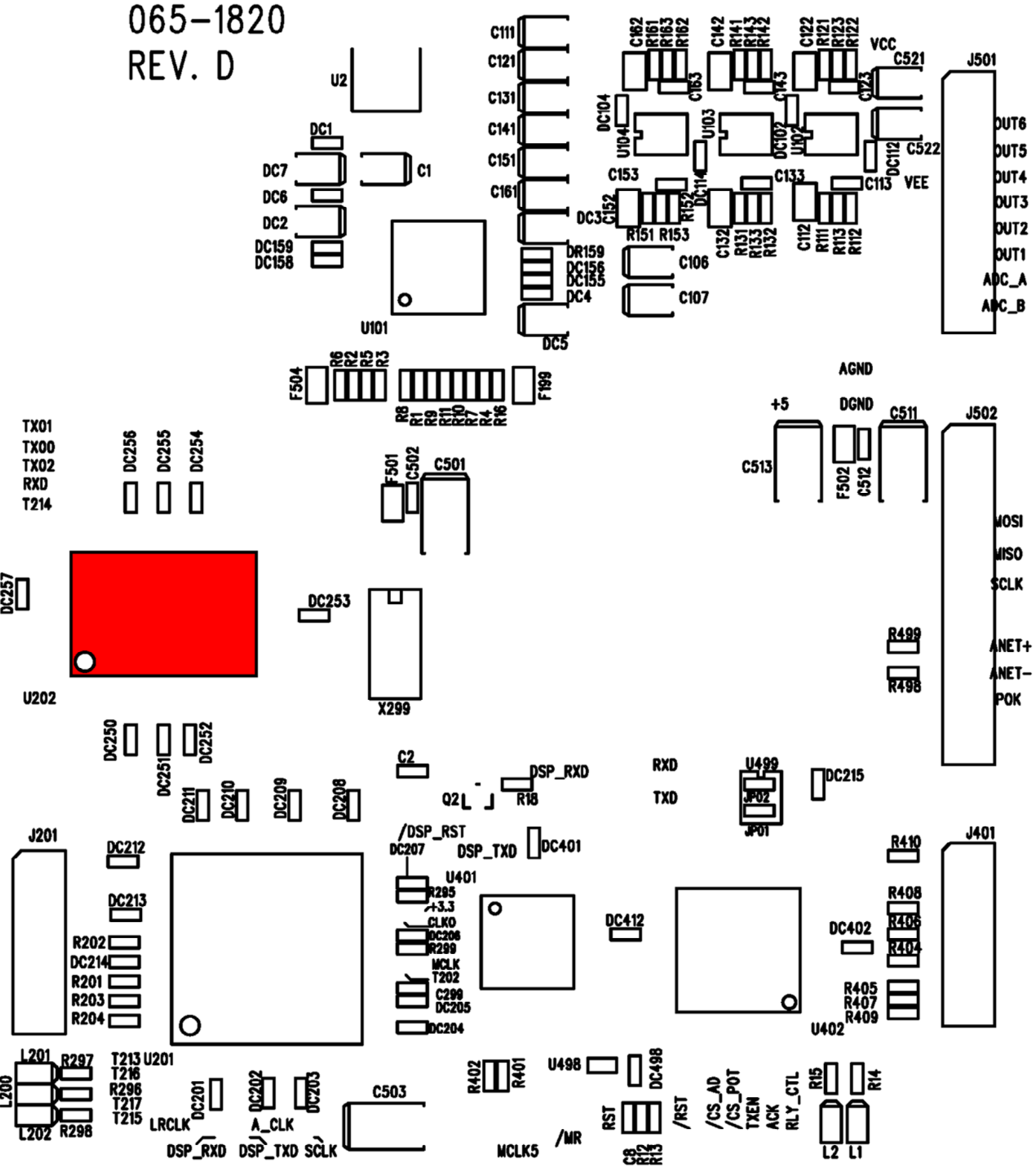
Ivie Part # 430-0060
1 each DS80C320-ECG, TQFP44



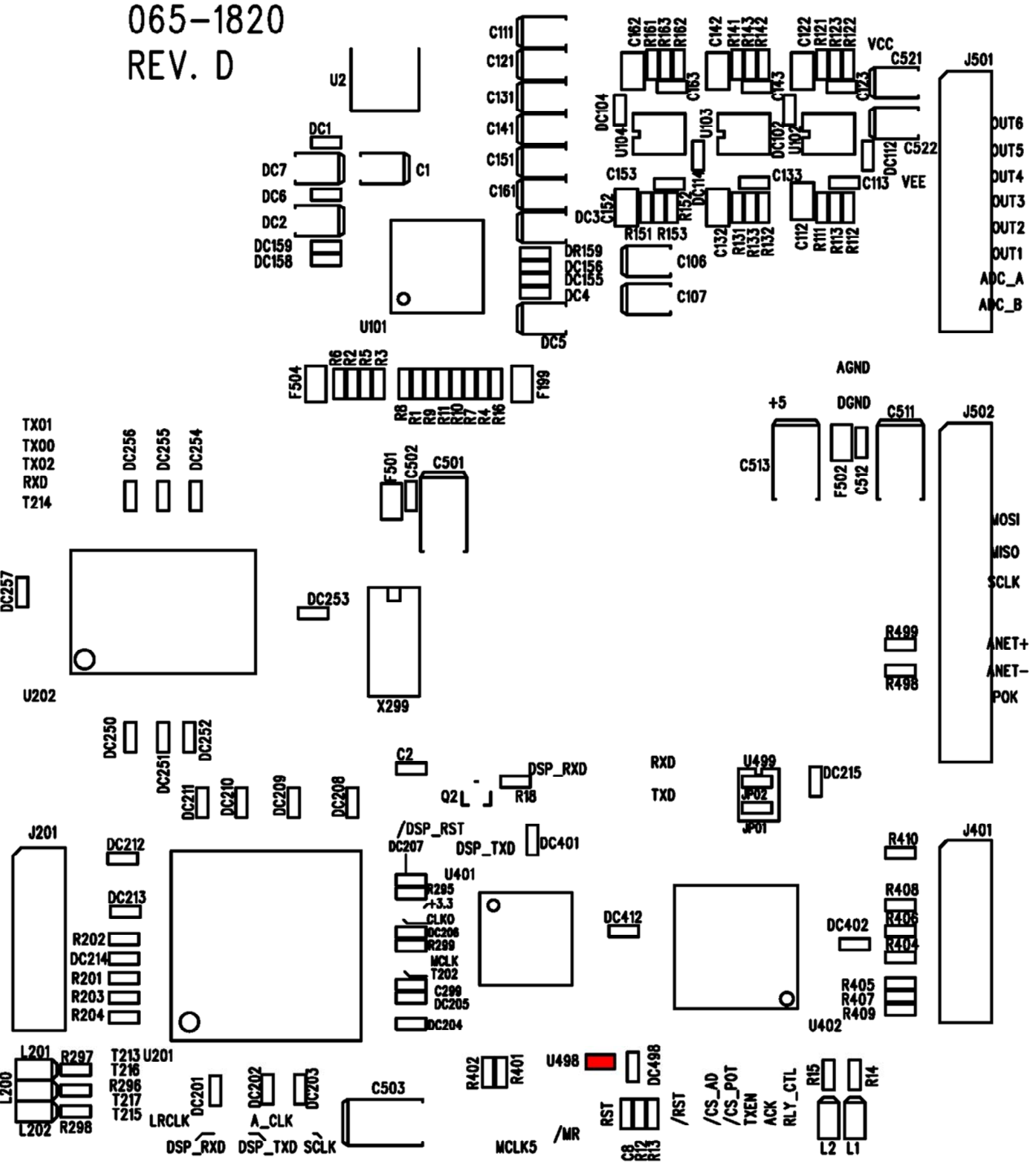
Ivie Part # 430-0070
1 each DSP56303-100, TQFP144



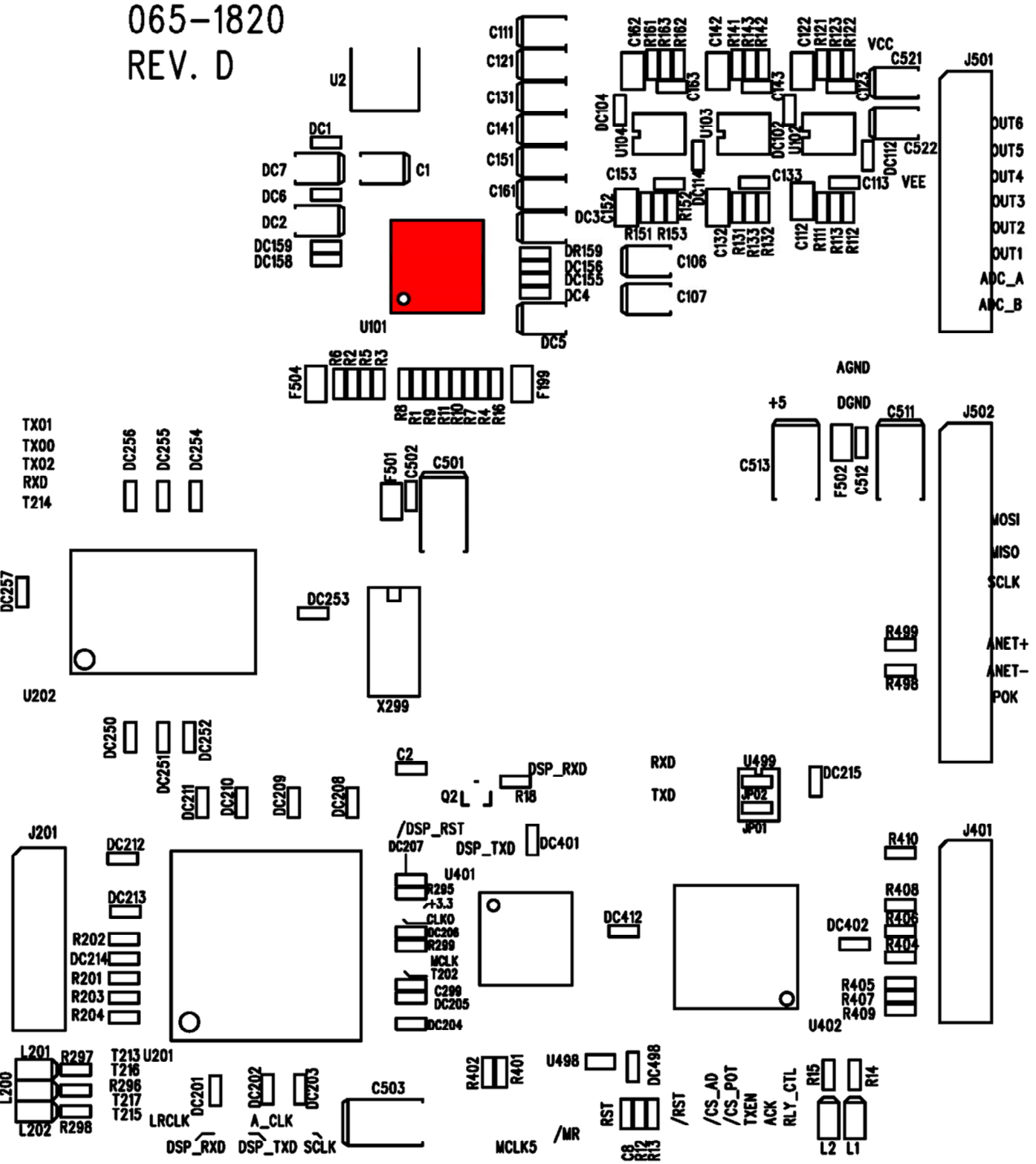
Ivie Part # 430-0080
1 each GS71024T-12 RAM, TQFP100



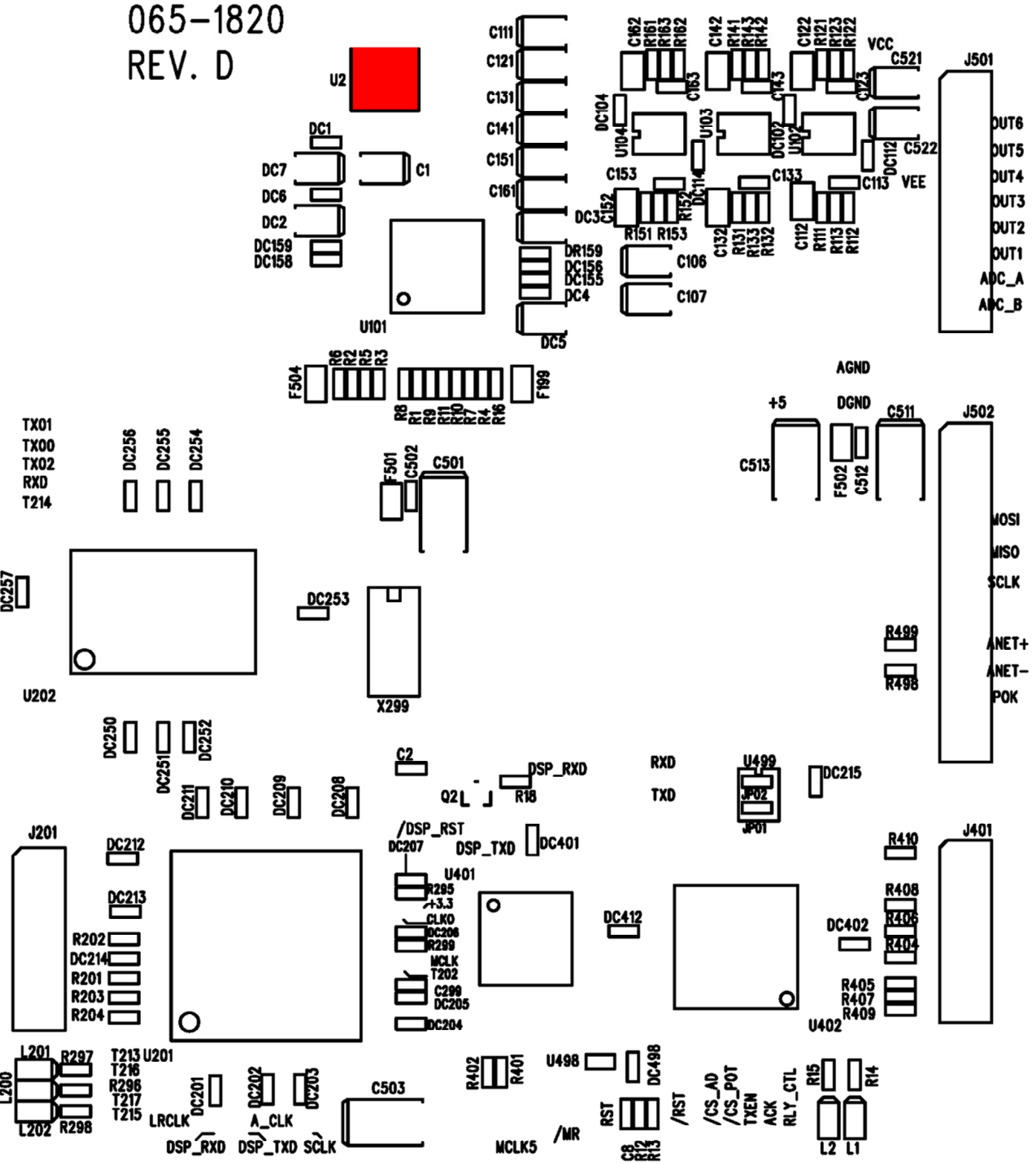
Ivie Part # 430-0100
1 each MAX825, SOT23-5



Ivie Part # 430-0680
1 each AK4626VQ Codec, TQFP44



Ivie Part # 430-0690
1 each LM78M05CDT +5V Reg, TO-252AA



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