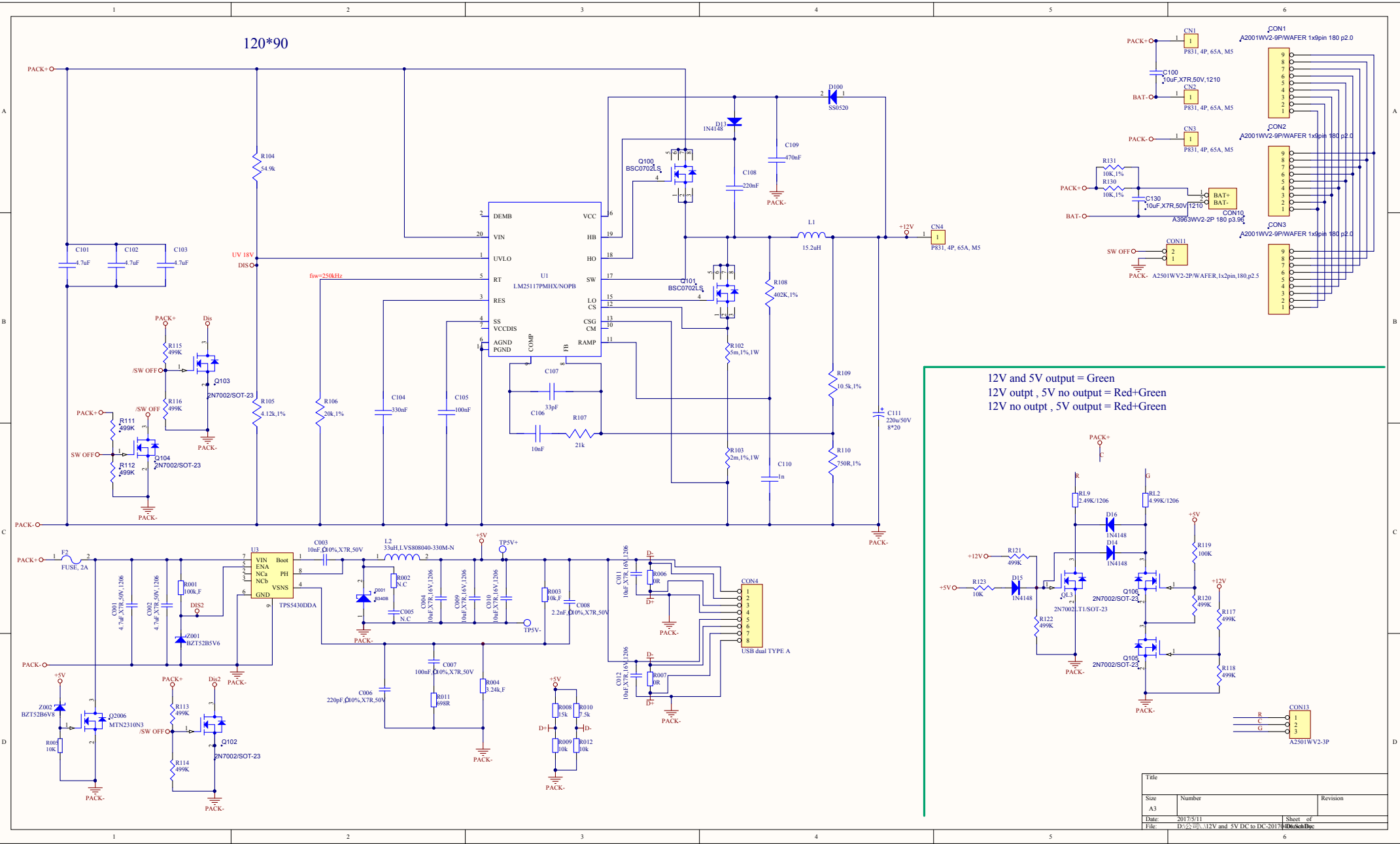




12V and 5V output = Green  
12V output , 5V no output = Red+Green  
12V no output , 5V output = Red+Green

The circuit diagram shows a dual-voltage regulator. It features two 7802 regulators (Q103, Q106) for 12V output and two 7805 regulators (Q104, Q105) for 5V output. The input is connected to a 10K resistor (R123) and a 499K resistor (R121). The output of the 7802 regulators is connected to a 499K resistor (R120) and a 100K resistor (R119). The output of the 7805 regulators is connected to a 499K resistor (R117) and a 499K resistor (R118). The circuit includes a status LED indicator (D16) and a 1N4148 diode (D14). The input is connected to a 10K resistor (R123) and a 499K resistor (R121). The output of the 7802 regulators is connected to a 499K resistor (R120) and a 100K resistor (R119). The output of the 7805 regulators is connected to a 499K resistor (R117) and a 499K resistor (R118). The circuit includes a status LED indicator (D16) and a 1N4148 diode (D14).

Legend:

| Output                    | Color     |
|---------------------------|-----------|
| 12V and 5V output         | Green     |
| 12V output , 5V no output | Red+Green |
| 12V no output , 5V output | Red+Green |

|                                                   |           |          |
|---------------------------------------------------|-----------|----------|
| Title                                             |           |          |
| Size<br>A3                                        | Number    | Revision |
| Date:<br>2017/5/11                                | Sheet of  |          |
| File:<br>D:\公司\112V and 5V DC to DC-20170404\Doc\ | Sheet Doc |          |

| Comment                           | Description                                                                                             | Designator                                                       | Footprint            | LibRef                                                                         | Quantity |
|-----------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------|--------------------------------------------------------------------------------|----------|
|                                   |                                                                                                         | C001, C002, C004, C009, C010, C011, C012                         | C1206                | Cap Semi                                                                       | 7        |
| 2CC0017100GP                      | ,CAP,SMD,0805,104,J,50V,X7R,F0R,SONV,                                                                   | C003, C006                                                       | C0603W               | Cap Semi                                                                       | 2        |
| 2CB0001700GP                      | ,CAP,SMD,1206,102,K,1KV,X7R                                                                             | C005                                                             | C1206                | Cap                                                                            | 1        |
|                                   |                                                                                                         | C007, C008                                                       | C0603W               | Cap Semi                                                                       | 2        |
| 10uF,X7R,50V,1210                 |                                                                                                         | C100, C130                                                       | C1210                | CAP NP_Dup1                                                                    | 2        |
| GRM31CR71H475KA12L                | GRM31CR71H475KA1                                                                                        | C101, C102, C103                                                 | C1206                | GRM31CR71H475KA12L                                                             | 3        |
| 2CE0013600GP                      | ,CAP,SMD,0603,474,+,-10%,50V,X7R                                                                        | C104, C109                                                       | C0603W               | GRM155R60J474KE19D,EMK212B7474KD-T                                             | 2        |
| 2CE0017300HF                      | ,CAP,SMD,0603,153,+,-10%,50V,X7R                                                                        | C105                                                             | C0603W               | CC0805KRX7R9B8153                                                              | 1        |
| 2CE0001700GP                      | ,CAP,SMD,0603,102,K,50V,X7R                                                                             | C106                                                             | C0603W               | CL21C102JBCNFNC                                                                | 1        |
| 2CE0017000HF                      | ,CAP,SMD,0603,121,J,50V,NPO                                                                             | C107                                                             | C0603W               | CL21C121J/B61PNC                                                               | 1        |
| 2CE0002200HF                      | ,CAP,SMD,0603,104,+,-10%,50V,X7R                                                                        | C108                                                             | C0603W               | 08053C104KAT2A                                                                 | 1        |
| 2CE0003361GP                      | ,CAP,SMD,0603,821,+,-10%,50V,X7R,0603B821K500LT,WAL,SIN                                                 | C110                                                             | C0603W               | CC0805KRX7R9B8821                                                              | 1        |
| 2EG0100909GP                      | ,CAP,ALL LOW ESR,180uF,50V,7000Hrs,105°C,+,-20%,8*20,PIN=15,PITCH=3.5,PET,910mA,EKY-500ETD181MH20,N,C,C | C111                                                             | ECAP3.5-8            | Cap Pol2                                                                       | 1        |
| SU0009700GP                       | ,INSULATOR,PCB TERMINAL,M5*0.8,PCB-7(M5),                                                               | CN1, CN2, CN3, CN4                                               | P-M5X0.8             | CON1                                                                           | 4        |
| A2001WV2-9P/WAFER 1x9pin,180,p2,0 |                                                                                                         | CON1, CON2, CON3                                                 | WAFER-1X9-P2.0-180-B | HEADER 14_0                                                                    | 3        |
| US8 dual TYPE A                   |                                                                                                         | CON4                                                             | US8 TYPEA            | HEADER 14_31                                                                   | 1        |
| A3963WV2-2P 180 p3,96             |                                                                                                         | CON10                                                            | WAFER-1X2-P2.5-180-B | HEADER 14_84                                                                   | 1        |
| A2501WV2-2P/WAFER,1x2pin,180,p2,5 |                                                                                                         | CON11                                                            | WAFER-1X2-P2.5-180-B | HEADER 14_9                                                                    | 1        |
| A2501WV2-3P                       |                                                                                                         | CON13                                                            | WAFER-1X3-P2.5-180-B | HEADER 14_10                                                                   | 1        |
| B340B                             |                                                                                                         | D001                                                             | SMB                  | Schottky diode                                                                 | 1        |
| 1DR000612GGP                      | ,DIODE,SWITCH,0.15A,75V,0805,SMD,F0R,SONV,CD414BWP,CROWNPO                                              | D13, D14, D15, D16                                               | SOD-123              | DIODE1                                                                         | 4        |
| 1DS004503BHF                      | ,DIODE,SCHOTTKY,0.5A,20V,SOD-123,SMD,S50520,POWER,SILICON                                               | D100                                                             | SOD-123              | DIODE1                                                                         | 1        |
| FUSE, 2A                          |                                                                                                         | F2                                                               | F1206                | FUSE                                                                           | 1        |
| SRP1270-4R7M                      | SRP1270-4R7M                                                                                            | L1                                                               | LF12*22-5.5          | SRP1270-4R7M                                                                   | 1        |
| 33uH,LVS808040-330M-N             |                                                                                                         | L2                                                               | LVS808040            | LVS80840                                                                       | 1        |
| B5C0702LS                         |                                                                                                         | Q100, Q101                                                       | TDSON-8              | FDMS86540_1                                                                    | 2        |
| 2N7002/SOT-23                     |                                                                                                         | Q102, Q103, Q104, Q105, Q106                                     | SOT-23               | 2N7002                                                                         | 5        |
| 1TN0006647GP                      | ,TR,N-MOSFET,0.115A,60V,SOT-23,SMD,2N7002LTI,ON                                                         | Q2006, QL3                                                       | SOT-23               | 2N7002                                                                         | 2        |
|                                   |                                                                                                         | R001, R003, R004, R006, R007, R008, R009, R010, R011, R012       | R0603W               | Res2                                                                           | 10       |
| 2RS0037500GP                      | ,RES,SMD,0805,6.8ohm,F                                                                                  | R002                                                             | R1206                | Res2                                                                           | 1        |
| 2RS0012500GP                      | ,RES,SMD,0805,1Kohm,F                                                                                   | R005                                                             | R0603W               | RES2                                                                           | 1        |
| 2RQ0004400GP                      | ,RES,CURRENT SENSING,SMD,1206,5mohm,+/-1%,1W                                                            | R102                                                             | R1206                | R                                                                              | 1        |
| 2RQ0007233GP                      | ,RES,CURRENT SENSING,SMD,1206,2mohm,+/-1%,1W,LR1206-23R,RALEC                                           | R103                                                             | R1206                | R                                                                              | 1        |
| 2RH0056100GP                      | ,RES,SMD,0603,54.9Kohm,+/-1%                                                                            | R104                                                             | R0603W               | CRCW040254K9FKED                                                               | 1        |
| 2RH0041300GP                      | ,RES,SMD,0603,4.12Kohm,+/-1%                                                                            | R105                                                             | R0603W               | CRCW04024K12FKED                                                               | 1        |
| 2RH0014400GP                      | ,RES,SMD,0603,20Kohm,+/-1%,30-27067-01,8,0                                                              | R106                                                             | R0603W               | CRCW040212K1FKED                                                               | 1        |
| CRCW040244K2FKED                  | CRCW040244K2FKED                                                                                        | R107                                                             | R0603W               | CRCW040244K2FKED                                                               | 1        |
| 2RH0038500GP                      | ,RES,SMD,0603,82.5Kohm,+/-1%                                                                            | R108                                                             | R0603W               | CRCW040282K5FKED                                                               | 1        |
| 2RH0002300GP                      | ,RES,SMD,0603,14Kohm,+/-1%                                                                              | R109                                                             | R0603W               | ERJ-6ENF1402V                                                                  | 1        |
| 2RH0012200GP                      | ,RES,SMD,0603,1Kohm,+/-1%                                                                               | R110                                                             | R0603W               | CRCW04021K00FKED                                                               | 1        |
| 499K                              |                                                                                                         | R111, R112, R113, R114, R115, R116, R117, R118, R120, R121, R122 | R0603W               | R_Dup2, R_Dup2, R_Dup1, R_Dup1, R_Dup1, R_Dup1, R_Dup1, R_Dup1, R_Dup1, R_Dup1 | 11       |
| 100K                              |                                                                                                         | R119                                                             | R0603W               | R_Dup1                                                                         | 1        |
| 10K                               |                                                                                                         | R123                                                             | R0603W               | R_Dup1                                                                         | 1        |
|                                   |                                                                                                         | R130, R131, RL2, RL9                                             | R1206                | R, R, Res2, Res2                                                               | 4        |
| T POINT R                         |                                                                                                         | TPSV+, TPSV-                                                     | TP1.0                | T POINT R                                                                      | 2        |
| LM5117PMHX/NOPB                   | LM25117PMHX/NOPB                                                                                        | U1                                                               | PWP0020A             | LM5117PMHX/NOPB                                                                | 1        |
| TPS5430DDA                        |                                                                                                         | U3                                                               | TPS5430-SC08         | TPS5430                                                                        | 1        |
|                                   |                                                                                                         | Z001, Z002                                                       | DO-SOD123            | ZENER                                                                          | 2        |