

| Item                               | Qty | Reference            | Part Description                                | ManUFACTURE / Part #                   |
|------------------------------------|-----|----------------------|---|--|
|                                    |     |                      |   |  |
| <b>REQUIRED CIRCUIT COMPONENTS</b> |     |                      |   |  |
| 1                                  | 3   | CIN1,CIN2,CIN3       | Cap., X7R 2.2uF 100V 20%                        | TDK C4532X7R2A225MT 1812               |
| 2                                  | 1   | CO1                  | Cap., X7R 6.8uF 50V                             | TDK C4532X7R1H685M 1812                |
| 3                                  | 1   | CSYS                 | Cap., 330uF 35V                                 | Nippon Chemi-Con, EMZA350ADA331MJA0G   |
| 4                                  | 1   | CU1                  | Cap., X7S 4.7uF 16V                             | Taiyo Yuden EMK316BJ475ML 1206         |
| 5                                  | 2   | C3,C23               | Cap., X5R 1uF 16V 20%                           | Taiyo Yuden EMK107BJ105MA 0603         |
| 6                                  | 1   | C4                   | Cap., X7R 680PF 100V 10%                        | AVX 08051C681KAT1A                     |
| 7                                  | 2   | C5,C16               | Cap., X5R 0.22uF 25V 20%                        | AVX 08053D224KAT                       |
| 8                                  | 2   | C6,R10               | Res., Chip 0 1/10W 5%                           | AAC CJ10-000JM 0805                    |
| 9                                  | 3   | C7,C21,C26           | Cap., X7R 220pF 50V 10%                         | AVX 06035C221KAT1A                     |
| 10                                 | 3   | C8,C9,C30            | Cap., X7R 100pF 50V 10%                         | AVX 06035C101KAT1A                     |
| 11                                 | 4   | C10,C27,C28,C29      | Cap., X7R 0.1uF 50V 10%                         | AVX 06035C104KAT1A                     |
| 12                                 | 1   | C12                  | Cap., X7R 470pF 50V 10%                         | AVX 06035C471KAT1A                     |
| 13                                 | 1   | C13                  | Cap., X7R 0.47uF 10V 20%                        | AVX 0603ZC474KAT                       |
| 14                                 | 2   | C19,C14              | Cap., X5R 1uF 10V 10%                           | AVX 0805ZD105KAT1A                     |
| 15                                 | 1   | C15                  | Cap., X7R 2200pF 250V 10%                       | Murata,GA343QR7GD222KW01L 1812         |
| 16                                 | 1   | C17                  | Cap., SD 0.015uF 10V 10%                        | Taiyo Yuden LMK107SD153KA-T 0603       |
| 17                                 | 1   | C25                  | Cap., X7R 0.047uF 200V 20%                      | AVX 12062C473MAT                       |
| 18                                 | 6   | D1,D2,D3,D11,D12,D14 | Diode, High-Speed Diode                         | Phillips Semi. BAS516 SOD-523          |
| 19                                 | 2   | D5,D9                | Diode, Voltage Regulator                        | Phillips Semi. PDZ9.1B SOD-323         |
| 20                                 | 2   | D6,D8                | Diode, High Voltage Switching Diode             | Phillips Semi. BAS21H SOD-123          |
| 21                                 | 1   | D10                  | Diode, Schottky Barrier                         | Phillips Semi. BAT760 SOD-323          |
| 22                                 | 1   | D13                  | Diode, Voltage Regulator                        | Phillips Semi. PDZ5.1B SOD-323         |
| 23                                 | 1   | L1                   | Inductor, 39uH                                  | Pulse Eng. PA2050.393                  |
| 24                                 | 1   | L2                   | Inductor, 1.5mH                                 | Coilcraft DO1607B-155ML-C              |
| 25                                 | 1   | Q1                   | Mosfet, N-Channel enhancement mode field-effect | Phillips Semi. PHM21NQ15T SOT685-1     |
| 26                                 | 1   | Q2                   | Mosfet, N-Channel Power Switching               | Renesas HAT2174H LFPK                  |
| 27                                 | 1   | Q3                   | Mosfet, N-Channel                               | Vishay Siliconix Si7846DP SO8-POWERPAK |
| 28                                 | 1   | Q10                  | Trans., NPN High voltage transistor             | Phillips Semi. PZTA42 SOT223           |
| 29                                 | 1   | Q12                  | Trans., PNP general purpose transistor          | Phillips Semi. BC856T SOT490           |
| 30                                 | 1   | Q13                  | Mosfet, SMPS, SO8                               | IR, IRF6217                            |
| 31                                 | 1   | RCS1                 | Res., Chip 0.010 1/2W 1%                        | Vishay Dale WSL2010-0.010-1%-R86       |
| 32                                 | 1   | R1                   | Res., Chip 2.2 1/10W 5%                         | AAC CR16-2R2JM                         |
| 33                                 | 1   | R3                   | Res., Chip 41.2 1/10W 1%                        | AAC CR16-41R2FM                        |
| 34                                 | 2   | R5,R31               | Res., Chip 10 1/10W 5%                          | AAC CR16-100JM                         |
| 35                                 | 3   | R7,R42,Q9            | Res., Chip 0                                    | Vishay CRCW0603000ZSTA                 |

|    |   |                 |  |                |                        |              |
|----|---|-----------------|--|----------------|------------------------|--------------|
| 36 | 1 | R8              | Res., Chip   | 2.2 1/10W 5%   | AAC CR10-2R2JM         | 0805         |
| 37 | 1 | R9              | Res., Chip   | 47 1/10W 5%    | AAC CR16-470JM         |              |
| 38 | 2 | R24,R11         | Res., Chip   | 82K 1/10W 5%   | AAC CR16-823JM         |              |
| 39 | 2 | R29,R13         | Res., Chip   | 22K 1/10W 5%   | AAC CR16-223JM         |              |
| 40 | 1 | R14             | Res., Chip   | 33K 1/10W 5%   | AAC CR16-333JM         |              |
| 41 | 1 | R15             | Res., Chip   | 115K 1/10W 1%  | AAC CR16-1153FM        |              |
| 42 | 1 | R16             | Res., Chip   | 56K 1/10W 5%   | AAC CR10-563JM         | 0805         |
| 43 | 1 | R17             | Res., Chip   | 560 1/10W 5%   | AAC CR16-561JM         |              |
| 44 | 4 | R18,R21,R45,R47 | Res., Chip   | 10K 1/10W 5%   | Vishay CRCW0603103JRT6 |              |
| 45 | 1 | R19             | Res., Chip   | 38.3K 1/10W 1% | AAC CR16-3832FM        |              |
| 46 | 1 | R20             | Res., Chip   | 43.2K 1/10W 1% | AAC CR16-4322FM        |              |
| 47 | 1 | R22             | Res., Chip   | 13.3K 1/10W 1% | AAC CR16-1332FM        |              |
| 48 | 1 | R23             | Res., Chip   | 1.5K 1/10W 5%  | AAC CR16-152JM         |              |
| 49 | 1 | R26             | Res., Chip   | 220 1/10W 5%   | AAC CR16-221JM         |              |
| 50 | 1 | R27             | Res., Chip   | 270 1/10W 5%   | AAC CR16-271JM         |              |
| 51 | 1 | R28             | Res., Chip   | 442K 1/10W 1%  | AAC CR16-4423FM        |              |
| 52 | 1 | R30             | Res., Chip   | 1.2K 1/10W 5%  | AAC CR16-122JM         |              |
| 53 | 1 | R32             | Res., Chip   | 383K 1/10W 1%  | AAC CR16-3833FM        |              |
| 54 | 1 | R33             | Res., Chip   | 158K 1/10W 1%  | AAC CR16-1583FM        |              |
| 55 | 1 | R34             | Res., Chip   | 16.9K 1/10W 1% | AAC CR16-1692FM        |              |
| 56 | 1 | R35             | Res., Chip   | 280K 1/10W 1%  | AAC CR10-2803FM        | 0805         |
| 57 | 1 | R38             | Res., Chip   | 6.19K 1/10W 1% | AAC CR16-6191FM        |              |
| 58 | 1 | R43             | Res., Chip   | 1K 1/10W 5%    | AAC CR16-102JM         |              |
| 59 | 1 | R44             | Res., Chip   | 11.3K 1/10W 1% | AAC CR16-1132FM        |              |
| 60 | 1 | R46             | Res., Chip   | 2.2K 1/10W 5%  | AAC CR16-222JM         |              |
| 61 | 1 | R48             | Res., Chip   | 150 1/10W 5%   | AAC CR16-151JM         |              |
| 62 | 1 | T1              | Transformer, SMT   |                | Pulse Eng.,            | PA0856.003   |
| 63 | 1 | T2              | Transformer, SMT Gate Drive Transformers                 |                | Pulse Eng.             | PE-68386     |
| 64 | 1 | U1              | I.C., PWM Controller                                     |                | Linear Tech.           | LT1952EGN-1  |
| 65 | 1 | U2              | I.C., High Speed, High Voltage High Side Gate Driver     |                | Linear Tech.           | LTC4440ES6-5 |
| 66 | 1 | U3              | I.C., 74VHC123AMTC, TSSOP16                              |                | FAIRCHILD SEMI.,       | 74VHC123AMTC |
| 67 | 1 | U4              | I.C., Secondary-Side Optocoupler Driver                  |                | Linear Tech.           | LT4430ES6    |
| 68 | 1 | U5              | I.C., Synchronous Rectifier Driver for Forward Converter |                | Linear Tech.           | LTC3900CS8   |
| 69 | 1 | U6              | I.C., High Isolation Voltage SOP Photocoupler            |                | NEC                    | PS2801-1     |
| 70 | 1 | U7              | I.C., LTC4440ES6, SOT23-6                                |                | Linear Tech.           | LTC4440ES6   |
|    |   |                 |  |                |                        |              |
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|    |   |                 |  |                |                        |              |

| ADDITIONAL DEMO BOARD CIRCUIT COMPONENTS |   |                         |                                    |                   |
|--|---|-------------------------|------------------------------------|-------------------|
| 1  | 0 | CO2,CO3                 | Cap., OPT                          | OPT 1812          |
| 2  | 0 | C2                      | Cap., OPT                          | OPT 1206          |
| 3  | 0 | C11,C18,C24             | Cap., OPT                          | OPT 0603          |
| 4  | 0 | D7                      | Diode, OPT                         | OPT SOD-123       |
| 5  | 0 | L3                      | Inductor, OPT                      | OPT               |
| 6  | 0 | R6                      | Res., 0603 OPT                     | OPT               |
|  |   |                         |                                    |                   |
|  |   |                         |                                    |                   |
|  |   |                         |                                    |                   |
| HARDWARE FOR DEMO BOARD ONLY             |   |                         |                                    |                   |
| 1  | 6 | TP1,TP2,TP3,TP4,TP5,TP6 | Testpoint, Turret, .094"           | MILL-MAX 2501-2   |
| 2  | 4 | AT 4 CORNERS            | Bumpon, transparent and true white | 3M BUMPON SJ-5303 |
| 3  | 2 |                         | STENCILS FOR BOTH SIDES            | DC968A            |