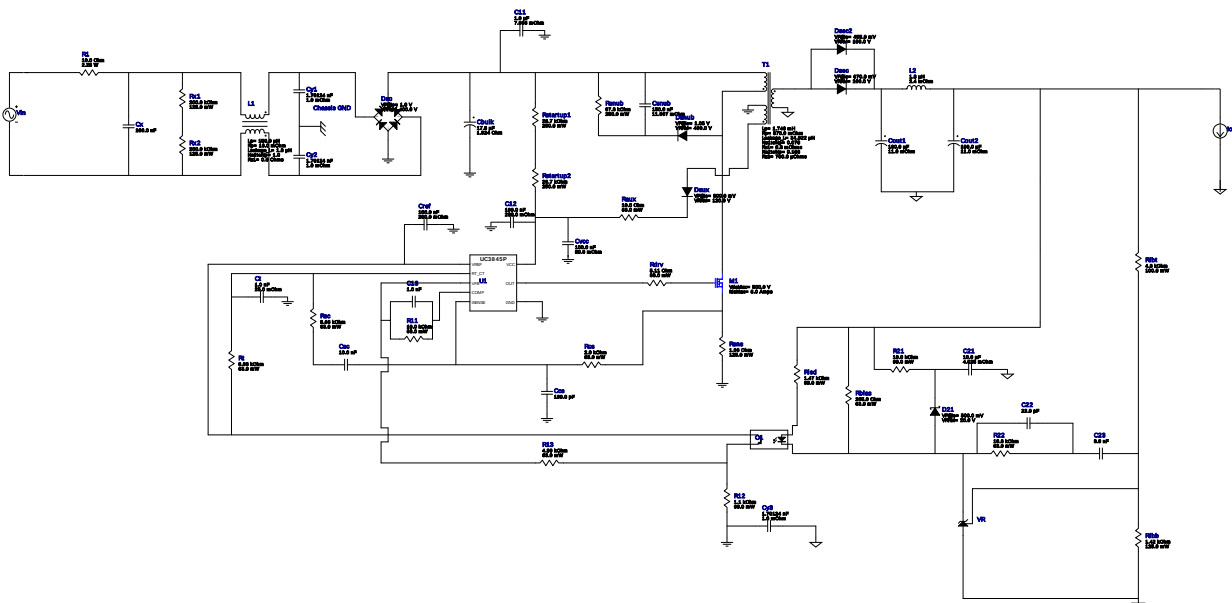


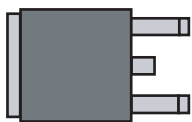
## WEBENCH® Design Report

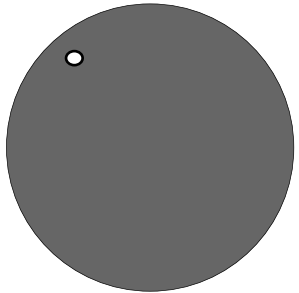
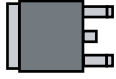
Design : 4764088/8 UC3845N  
UC3845N 110.0V-130.0V to 5.00V @ 2.0A


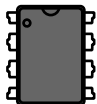
1. The EMI filter selected here contains the estimated values. The real numbers will depend on the attenuation needed at a particular frequency.

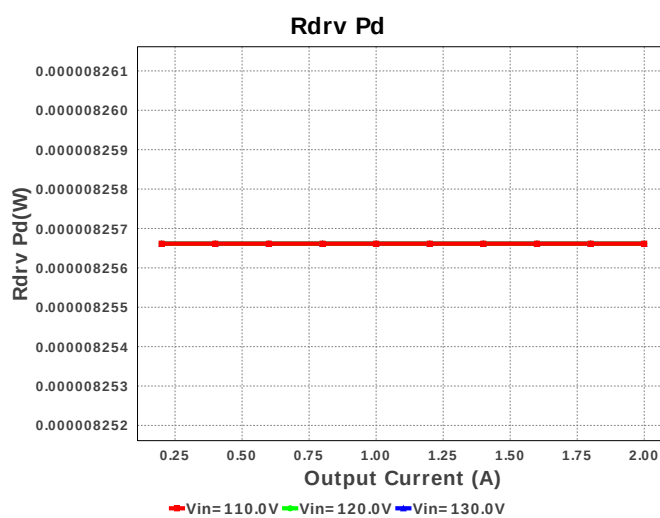
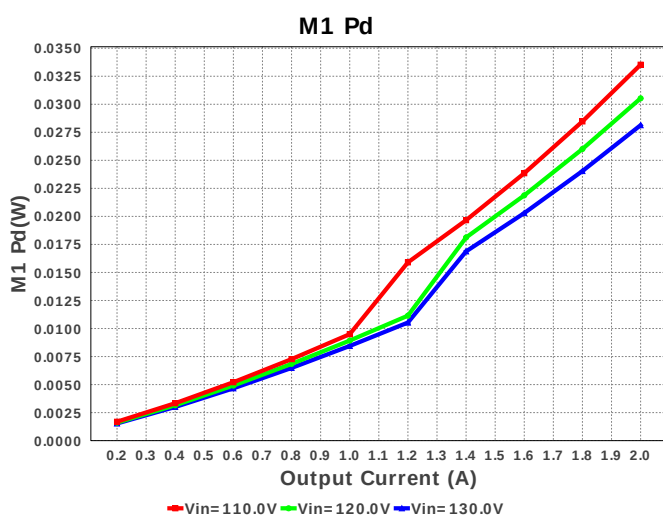
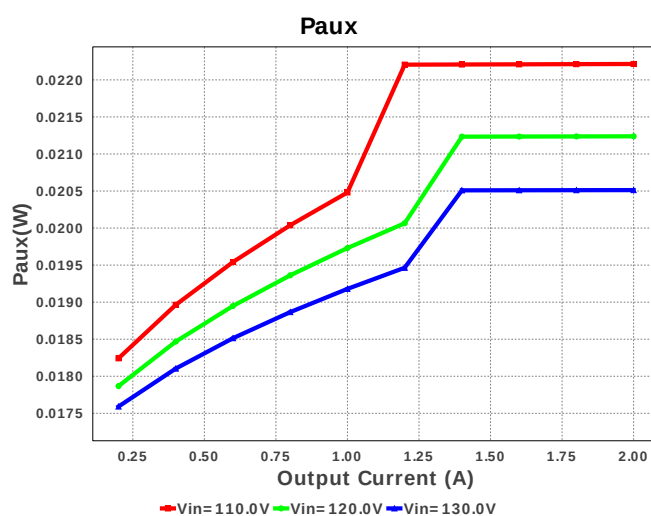
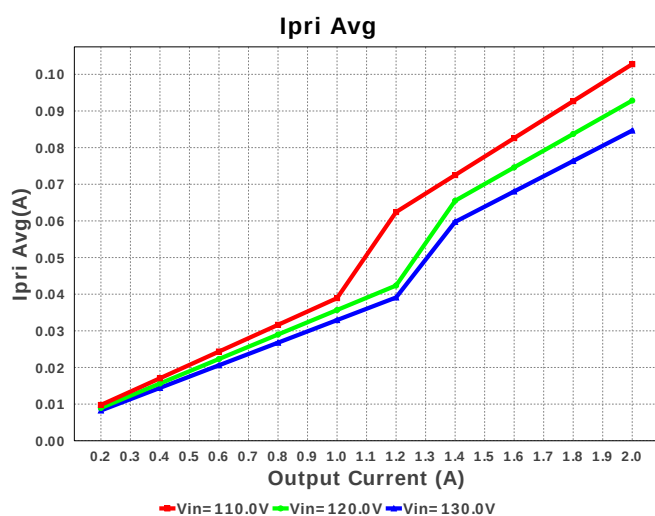
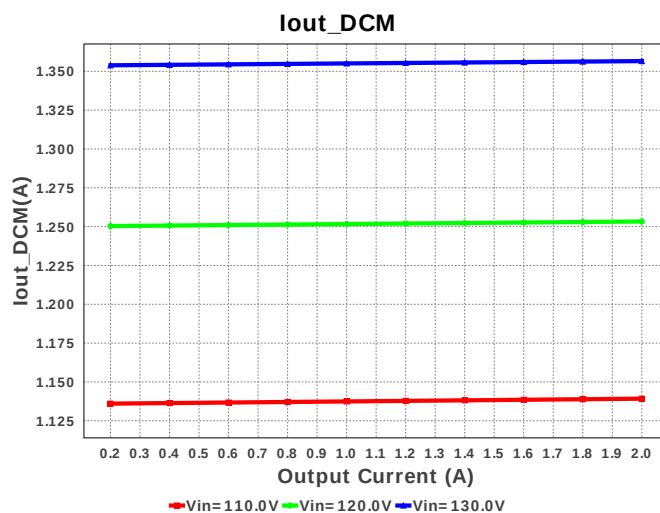
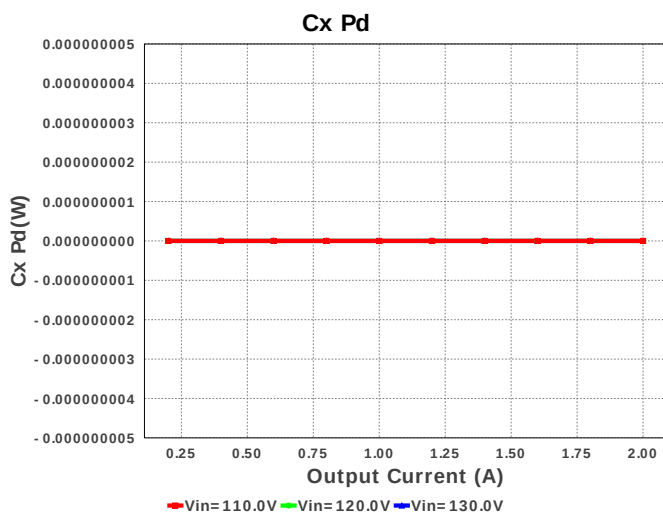
### Electrical BOM

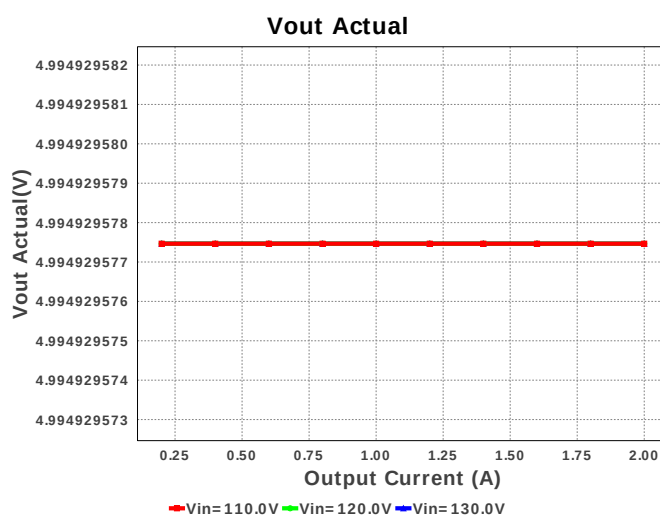
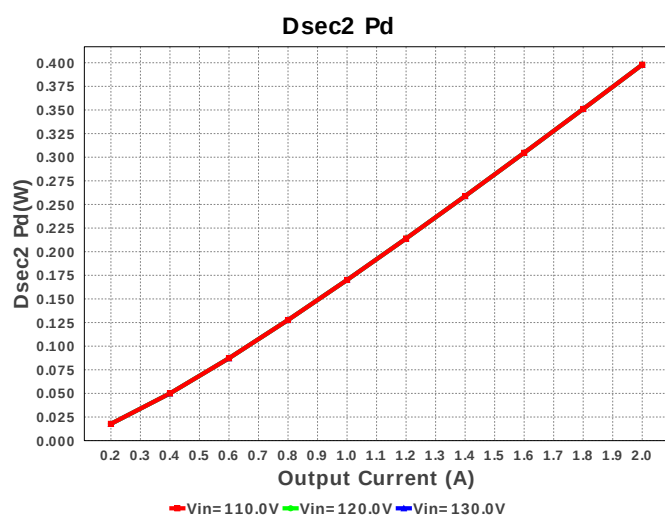
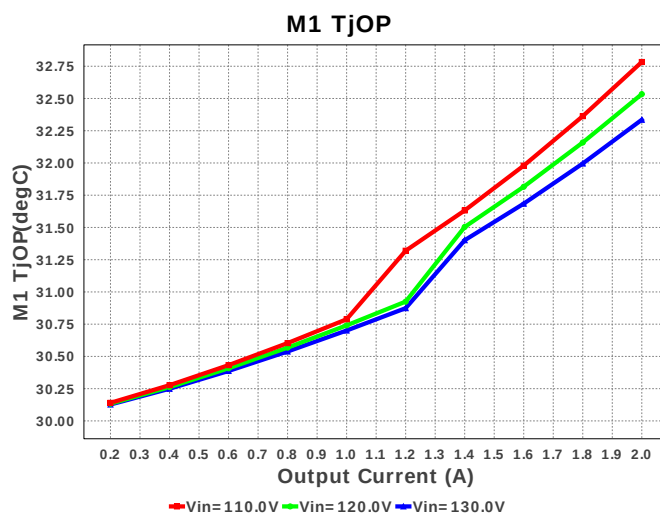
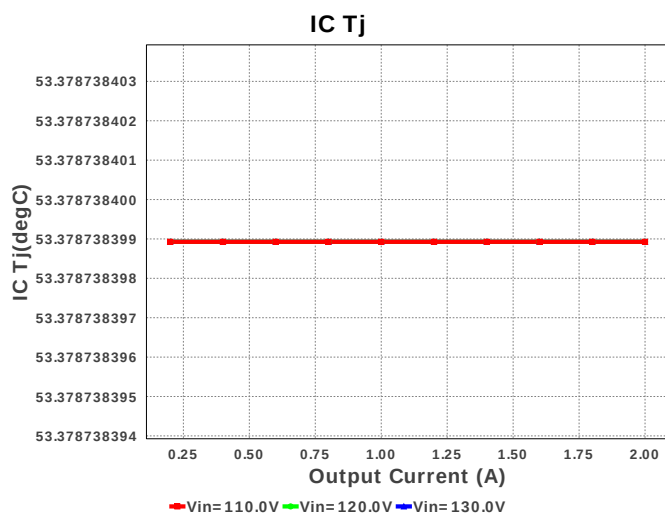
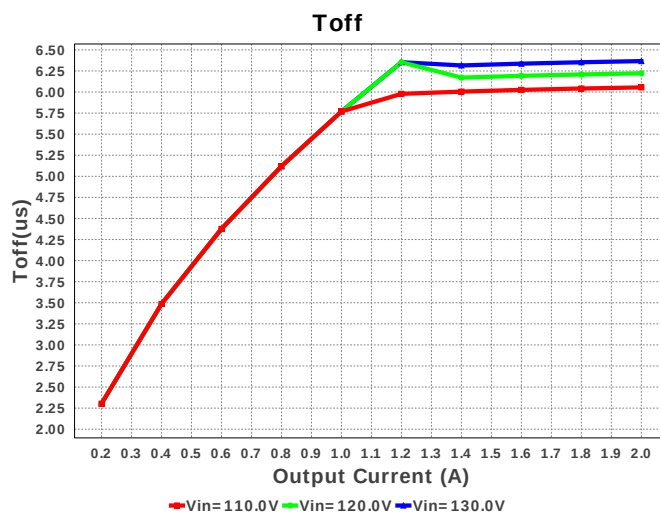
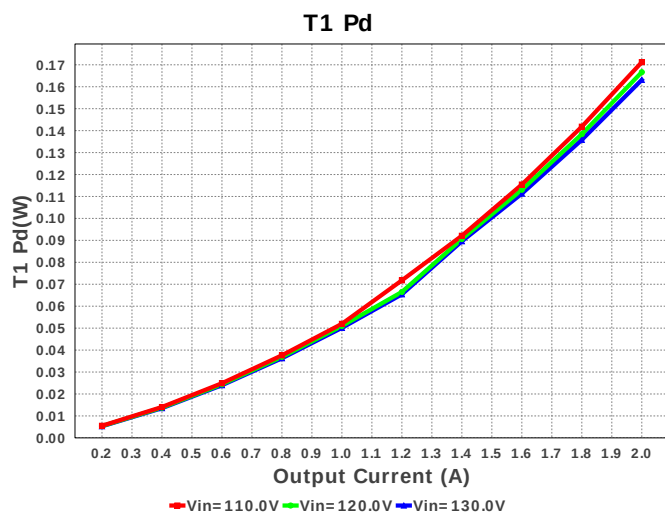
| #  | Name  | Manufacturer              | Part Number                         | Properties                                                        | Qty | Price  | Footprint                                                                                                            |
|----|-------|---------------------------|-------------------------------------|-------------------------------------------------------------------|-----|--------|----------------------------------------------------------------------------------------------------------------------|
| 1. | C11   | MuRata                    | GRM55DR72E105KW01L<br>Series= X7R   | Cap= 1.0 uF<br>ESR= 7.086 mOhm<br>VDC= 250.0 V<br>IRMS= 2.0605 A  | 1   | \$0.26 | <br>2220_200 54 mm <sup>2</sup> |
| 2. | C12   | AVX                       | 08053C104KAT2A<br>Series= X7R       | Cap= 100.0 nF<br>ESR= 280.0 mOhm<br>VDC= 25.0 V<br>IRMS= 0.0 A    | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>      |
| 3. | C13   | Samsung Electro-Mechanics | CL21C102JBCNFNC<br>Series= C0G/NP0  | Cap= 1.0 nF<br>VDC= 50.0 V<br>IRMS= 0.0 A                         | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>      |
| 4. | C21   | MuRata                    | GRM21BR61A106KE19L<br>Series= X5R   | Cap= 10.0 uF<br>ESR= 4.025 mOhm<br>VDC= 10.0 V<br>IRMS= 2.445 A   | 1   | \$0.03 | <br>0805 7 mm <sup>2</sup>      |
| 5. | C22   | Kemet                     | C0805C220K3GACTU<br>Series= C0G/NP0 | Cap= 22.0 pF<br>VDC= 25.0 V<br>IRMS= 0.0 A                        | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>      |
| 6. | C23   | Yageo America             | CC0805KRX7R9BB392<br>Series= X7R    | Cap= 3.9 nF<br>VDC= 50.0 V<br>IRMS= 0.0 A                         | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>      |
| 7. | Cbulk | CUSTOM                    | CUSTOM<br>Series= ?                 | Cap= 17.8 uF<br>ESR= 1.924 Ohm<br>VDC= 220.62 V<br>IRMS= 220.6 mA | 1   | NA     | CUSTOM 0 mm <sup>2</sup>                                                                                             |
| 8. | Ccs   | Kemet                     | C0805C181K5GACTU<br>Series= C0G/NP0 | Cap= 180.0 pF<br>VDC= 50.0 V<br>IRMS= 0.0 A                       | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>      |

| #   | Name  | Manufacturer            | Part Number                         | Properties                                                          | Qty | Price  | Footprint                                                                                                                           |
|-----|-------|-------------------------|-------------------------------------|---------------------------------------------------------------------|-----|--------|-------------------------------------------------------------------------------------------------------------------------------------|
| 9.  | Cout1 | Panasonic               | 16SVPE180M<br>Series= SVPE          | Cap= 180.0 uF<br>ESR= 11.0 mOhm<br>VDC= 16.0 V<br>IRMS= 4.46 A      | 1   | \$0.49 | <br>CAPSMT_62_C10 74 mm <sup>2</sup>             |
| 10. | Cout2 | Panasonic               | 16SVPE180M<br>Series= SVPE          | Cap= 180.0 uF<br>ESR= 11.0 mOhm<br>VDC= 16.0 V<br>IRMS= 4.46 A      | 1   | \$0.49 | <br>CAPSMT_62_C10 74 mm <sup>2</sup>             |
| 11. | Cref  | AVX                     | 08053C104KAT2A<br>Series= X7R       | Cap= 100.0 nF<br>ESR= 280.0 mOhm<br>VDC= 25.0 V<br>IRMS= 0.0 A      | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>                       |
| 12. | Csc   | MuRata                  | GRM216R71H103KA01D<br>Series= X7R   | Cap= 10.0 nF<br>VDC= 50.0 V<br>IRMS= 0.0 A                          | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>                       |
| 13. | Csnub | TDK                     | C3225X7T2J154K<br>Series= X7T       | Cap= 150.0 nF<br>ESR= 11.907 mOhm<br>VDC= 630.0 V<br>IRMS= 0.0 A    | 1   | \$0.19 | <br>1210 15 mm <sup>2</sup>                      |
| 14. | Ct    | Kemet                   | C0805C102J5GACTU<br>Series= C0G/NP0 | Cap= 1.0 nF<br>ESR= 25.0 mOhm<br>VDC= 50.0 V<br>IRMS= 1.71 A        | 1   | \$0.01 | <br>0805 7 mm <sup>2</sup>                       |
| 15. | Cvcc  | MuRata                  | GRM188R71E104KA01D<br>Series= X7R   | Cap= 100.0 nF<br>ESR= 30.0 mOhm<br>VDC= 25.0 V<br>IRMS= 1.51 A      | 1   | \$0.01 | <br>0603 5 mm <sup>2</sup>                       |
| 16. | Cx    | TDK                     | B32913A5104M000<br>Series= 2231     | Cap= 100.0 nF<br>VDC= 1000.0 V<br>IRMS= 0.0 A                       | 1   | \$0.46 | <br>B32913_2650x600x1500<br>228 mm <sup>2</sup> |
| 17. | Cy1   | CUSTOM                  | CUSTOM<br>Series= ?                 | Cap= 1.70124 nF<br>ESR= 1.0 mOhm<br>VDC= 220.62 V<br>IRMS= 500.0 uA | 1   | NA     | CUSTOM 0 mm <sup>2</sup>                                                                                                            |
| 18. | Cy2   | CUSTOM                  | CUSTOM<br>Series= ?                 | Cap= 1.70124 nF<br>ESR= 1.0 mOhm<br>VDC= 220.62 V<br>IRMS= 500.0 uA | 1   | NA     | CUSTOM 0 mm <sup>2</sup>                                                                                                            |
| 19. | Cy3   | CUSTOM                  | CUSTOM<br>Series= ?                 | Cap= 1.70124 nF<br>ESR= 1.0 mOhm<br>VDC= 220.62 V<br>IRMS= 500.0 uA | 1   | NA     | CUSTOM 0 mm <sup>2</sup>                                                                                                            |
| 20. | D21   | Vishay-Semiconductor    | SS12-E3/61T                         | VF@Io= 500.0 mV<br>VRRM= 20.0 V                                     | 1   | \$0.08 | <br>SMA 37 mm <sup>2</sup>                     |
| 21. | Dac   | Diodes Inc.             | HD04-T                              | VF@Io= 1.0 V<br>VRRM= 400.0 V                                       | 1   | \$0.12 | <br>MiniDIP 62 mm <sup>2</sup>                 |
| 22. | Daux  | Fairchild Semiconductor | FSV10120V                           | VF@Io= 800.0 mV<br>VRRM= 120.0 V                                    | 1   | \$0.21 | <br>TO-277A 56 mm <sup>2</sup>                 |
| 23. | Dsec  | Fairchild Semiconductor | FSV8100V                            | VF@Io= 670.0 mV<br>VRRM= 100.0 V                                    | 1   | \$0.21 | <br>TO-277A 56 mm <sup>2</sup>                 |
| 24. | Dsec2 | STMicroelectronics      | STPS20M100SG-TR                     | VF@Io= 455.0 mV<br>VRRM= 100.0 V                                    | 1   | \$1.33 | <br>DDPAK 210 mm <sup>2</sup>                  |

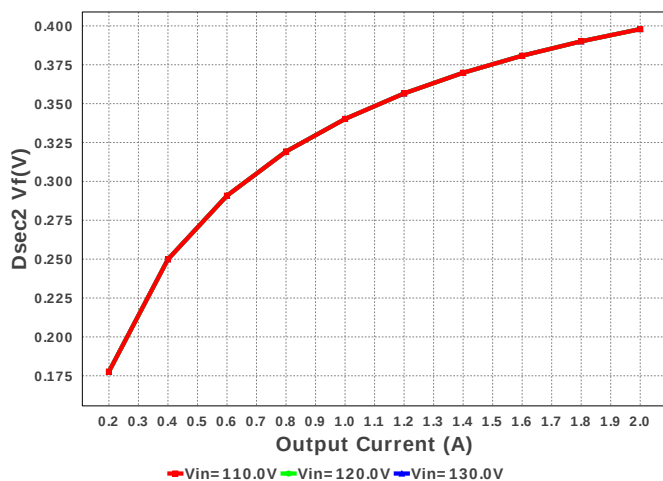
| #   | Name  | Manufacturer            | Part Number                           | Properties                                                                          | Qty | Price  | Footprint                                                                                                |
|-----|-------|-------------------------|---------------------------------------|-------------------------------------------------------------------------------------|-----|--------|----------------------------------------------------------------------------------------------------------|
| 25. | Dsnub | Bourns                  | CD1408-FU1400                         | VF@Io= 1.05 V<br>VRRM= 400.0 V                                                      | 1   | \$0.13 | <br>Diode_1408 13 mm² |
| 26. | L1    | API Delevan             | CM6296R-154                           | Lp= 150.0 µH<br>Rp= 16.0 mOhm<br>Leakage_L= 1.8 µH<br>Ns1toNp= 1.0<br>Rs1= 0.0 Ohms | 1   | \$5.95 | <br>CM6296 833 mm²    |
| 27. | L2    | Coilcraft               | SER1360-182KLB                        | L= 1.8 µH<br>DCR= 2.4 mOhm                                                          | 1   | \$0.72 | <br>SER1360 225 mm²   |
| 28. | M1    | Fairchild Semiconductor | FDD6N50TM                             | VdsMax= 500.0 V<br>IdsMax= 6.0 Amps                                                 | 1   | \$0.47 | <br>DPAK 102 mm²      |
| 29. | O1    | Vishay-Semiconductor    | TCMT1109                              | Optocoupler                                                                         | 1   | \$0.21 | <br>SOP-4 44 mm²      |
| 30. | R1    | Vishay-Dale             | AC03000001009JACCS<br>Series= F_RES   | Res= 10.0 Ohm<br>Power= 2.25 W<br>Tolerance= 5.0%                                   | 1   | \$0.30 | <br>AC03 158 mm²     |
| 31. | R11   | Vishay-Dale             | CRCW040210K0FKED<br>Series= CRCW..e3  | Res= 10.0 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0402 3 mm²      |
| 32. | R12   | Vishay-Dale             | CRCW04021K10FKED<br>Series= CRCW..e3  | Res= 1.1 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                  | 1   | \$0.01 | <br>0402 3 mm²      |
| 33. | R13   | Vishay-Dale             | CRCW04024K99FKED<br>Series= CRCW..e3  | Res= 4.99 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0402 3 mm²      |
| 34. | R21   | Vishay-Dale             | CRCW040210K0FKED<br>Series= CRCW..e3  | Res= 10.0 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0402 3 mm²      |
| 35. | R22   | Vishay-Dale             | CRCW040219K6FKED<br>Series= CRCW..e3  | Res= 19.6 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0402 3 mm²      |
| 36. | Raux  | Vishay-Dale             | CRCW040210R0FKED<br>Series= CRCW..e3  | Res= 10.0 Ohm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                  | 1   | \$0.01 | <br>0402 3 mm²      |
| 37. | Rbias | Vishay-Dale             | CRCW0402205RFBKED<br>Series= CRCW..e3 | Res= 205.0 Ohm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0402 3 mm²      |
| 38. | Rcs   | Vishay-Dale             | CRCW04022K00FKED<br>Series= CRCW..e3  | Res= 2.0 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                  | 1   | \$0.01 | <br>0402 3 mm²      |
| 39. | Rdrv  | Vishay-Dale             | CRCW04025R11FKED<br>Series= CRCW..e3  | Res= 5.11 Ohm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                  | 1   | \$0.01 | <br>0402 3 mm²      |
| 40. | Rfbb  | Yageo America           | RT0805BRD071K42L<br>Series= RT0805    | Res= 1.42 kOhm<br>Power= 125.0 mW<br>Tolerance= 0.1%                                | 1   | \$0.05 | <br>0805 7 mm²      |
| 41. | Rfbt  | Yageo America           | RC0603FR-074K3L<br>Series= ?          | Res= 4.3 kOhm<br>Power= 100.0 mW<br>Tolerance= 1.0%                                 | 1   | \$0.01 | <br>0603 5 mm²      |

| #   | Name      | Manufacturer      | Part Number                          | Properties                                                                                                                          | Qty | Price  | Footprint                                                                                                          |
|-----|-----------|-------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|-----|--------|--------------------------------------------------------------------------------------------------------------------|
| 42. | Rled      | Vishay-Dale       | CRCW04021K47FKED<br>Series= CRCW..e3 | Res= 1.47 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                                                                 | 1   | \$0.01 |  0402 3 mm <sup>2</sup>         |
| 43. | Rsc       | Vishay-Dale       | CRCW04028K66FKED<br>Series= CRCW..e3 | Res= 8.66 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                                                                 | 1   | \$0.01 |  0402 3 mm <sup>2</sup>         |
| 44. | Rsns      | Vishay-Dale       | CRCW08051R96FKEA<br>Series= CRCW..e3 | Res= 1.96 Ohm<br>Power= 125.0 mW<br>Tolerance= 1.0%                                                                                 | 1   | \$0.01 |  0805 7 mm <sup>2</sup>         |
| 45. | Rsnub     | Panasonic         | ERJ-8ENF9762V<br>Series= ERJ-8E      | Res= 97.6 kOhm<br>Power= 250.0 mW<br>Tolerance= 1.0%                                                                                | 1   | \$0.01 |  1206 11 mm <sup>2</sup>        |
| 46. | Rstartup1 | Panasonic         | ERJ-8ENF2672V<br>Series= ERJ-8E      | Res= 26.7 kOhm<br>Power= 250.0 mW<br>Tolerance= 1.0%                                                                                | 1   | \$0.01 |  1206 11 mm <sup>2</sup>        |
| 47. | Rstartup2 | Panasonic         | ERJ-8ENF2672V<br>Series= ERJ-8E      | Res= 26.7 kOhm<br>Power= 250.0 mW<br>Tolerance= 1.0%                                                                                | 1   | \$0.01 |  1206 11 mm <sup>2</sup>        |
| 48. | Rt        | Vishay-Dale       | CRCW04028K66FKED<br>Series= CRCW..e3 | Res= 8.66 kOhm<br>Power= 63.0 mW<br>Tolerance= 1.0%                                                                                 | 1   | \$0.01 |  0402 3 mm <sup>2</sup>         |
| 49. | Rx1       | Panasonic         | ERJ-6ENF2003V<br>Series= ERJ-6E      | Res= 200.0 kOhm<br>Power= 125.0 mW<br>Tolerance= 1.0%                                                                               | 1   | \$0.01 |  0805 7 mm <sup>2</sup>         |
| 50. | Rx2       | Panasonic         | ERJ-6ENF2003V<br>Series= ERJ-6E      | Res= 200.0 kOhm<br>Power= 125.0 mW<br>Tolerance= 1.0%                                                                               | 1   | \$0.01 |  0805 7 mm <sup>2</sup>         |
| 51. | T1        | CUSTOM            | CUSTOM                               | Lp= 1.746 mH<br>Rp= 870.0 mOhm<br>Leakage_L= 34.922<br>μH<br>Ns1toNp= 0.076<br>Rs1= 8.6 mOhms<br>Ns2toNp= 0.166<br>Rs2= 700.0 μOhms | 1   | NA     | CUSTOM 0 mm <sup>2</sup>                                                                                           |
| 52. | U1        | Texas Instruments | UC3845N                              | Switcher                                                                                                                            | 1   | \$0.56 |  P0008A 116 mm <sup>2</sup>   |
| 53. | VR        | Texas Instruments | LMV431CM5/NOPB                       | Voltage References                                                                                                                  | 1   | \$0.16 |  R-PDSO-G3 16 mm <sup>2</sup> |

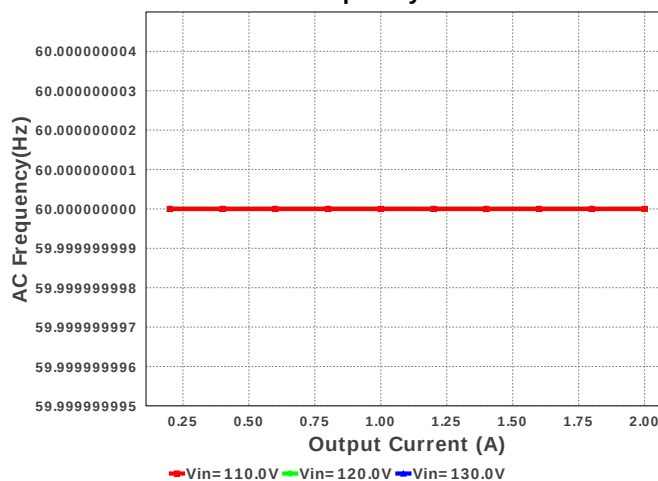




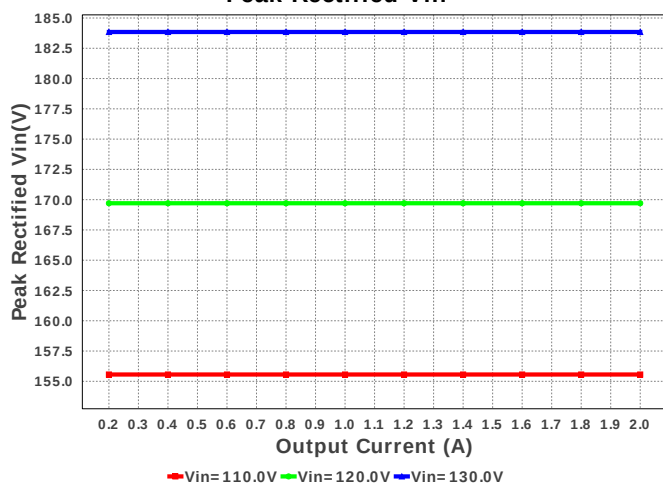
Dsec2 Vf



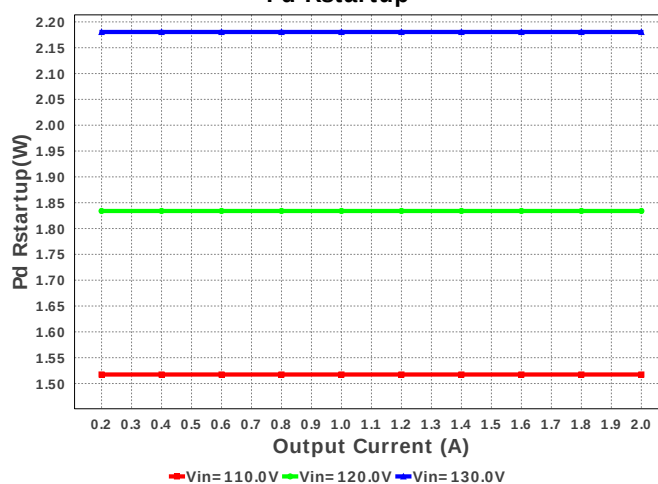
AC Frequency



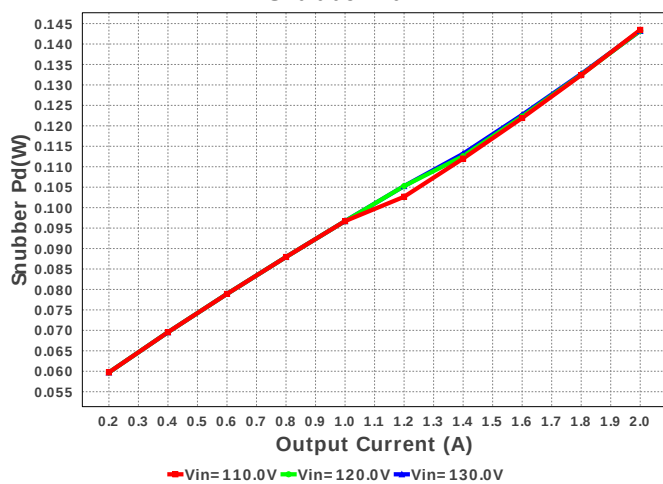
Peak Rectified Vin



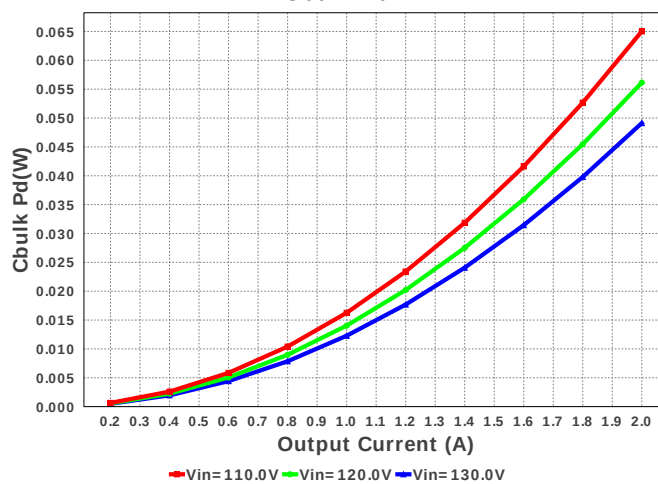
Pd Rstartup

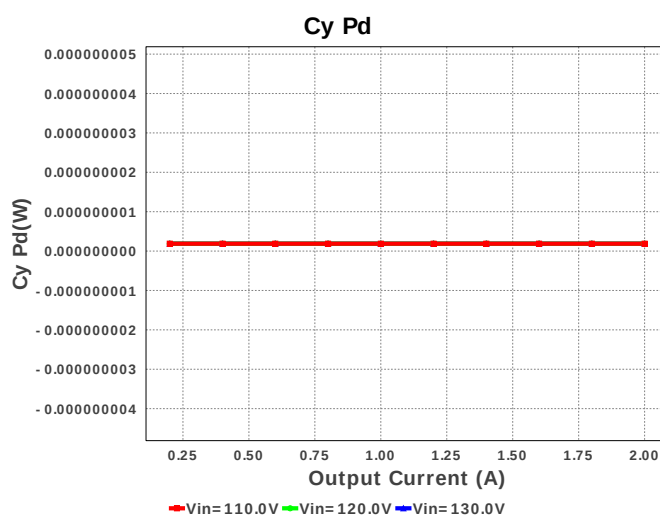
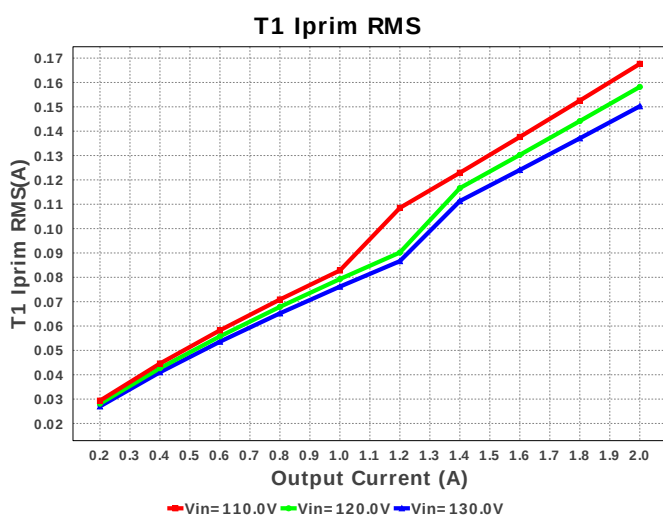
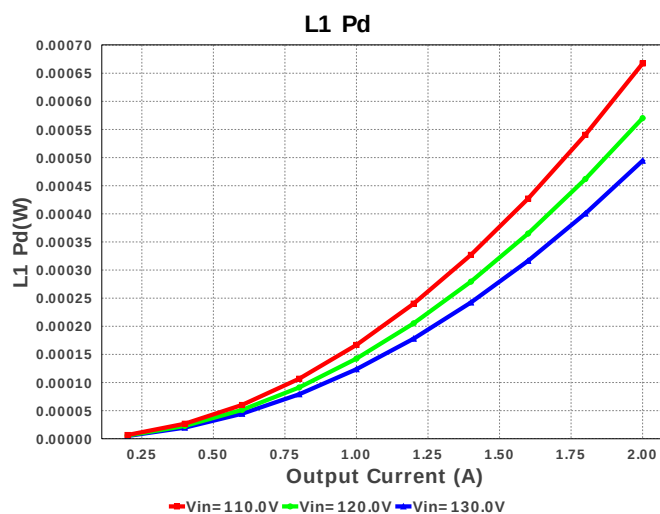
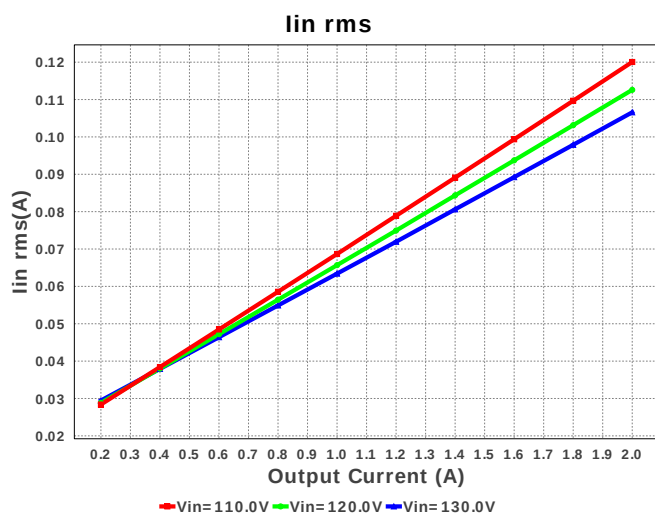
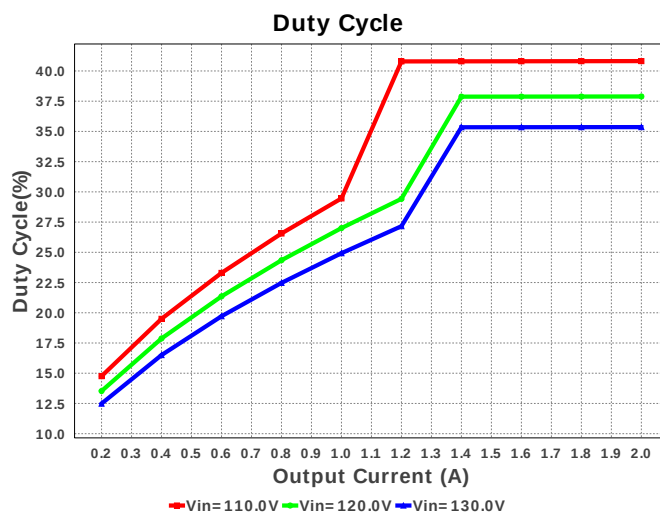
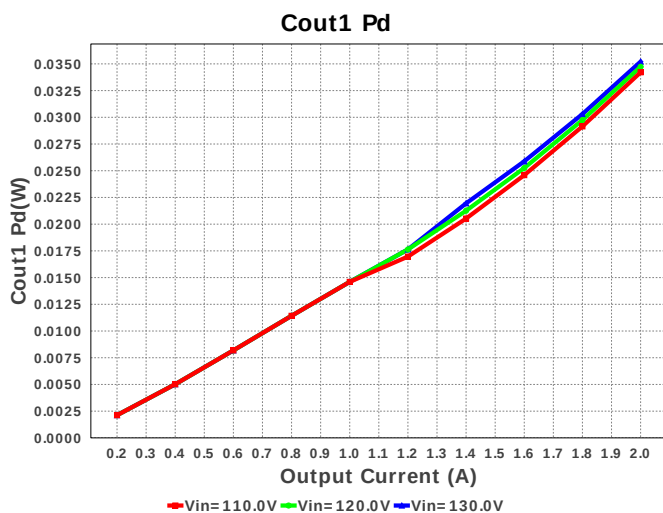


Snubber Pd

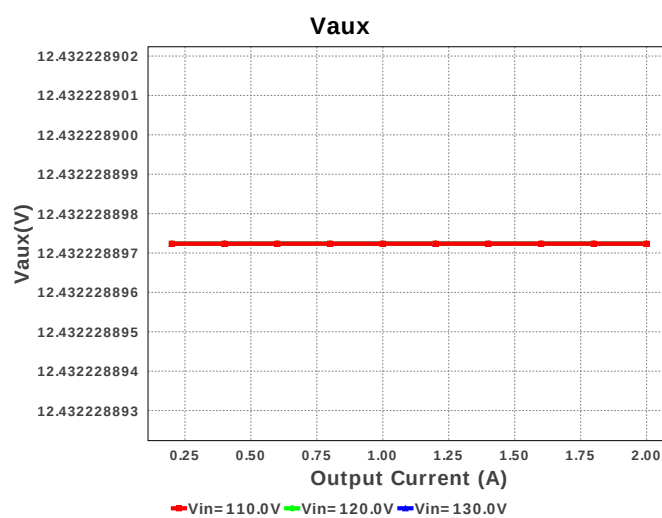
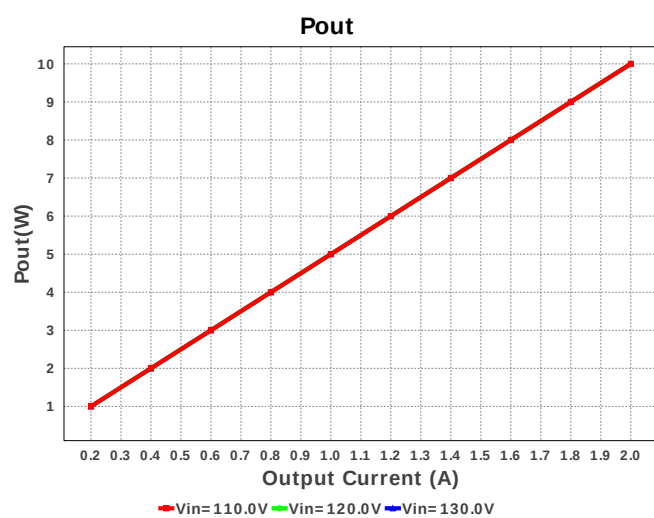
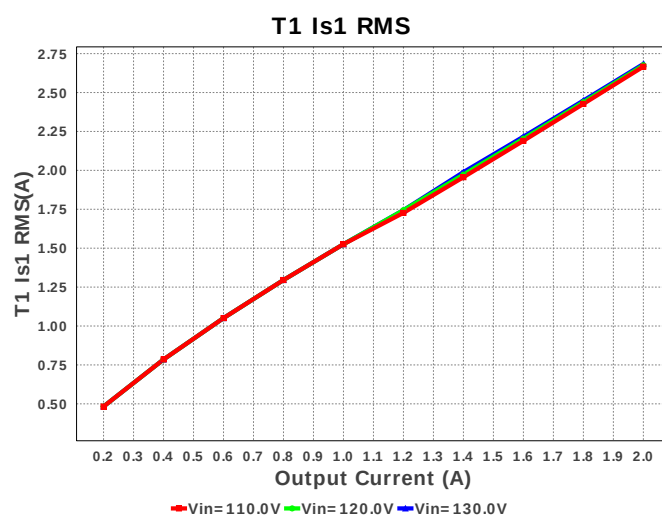
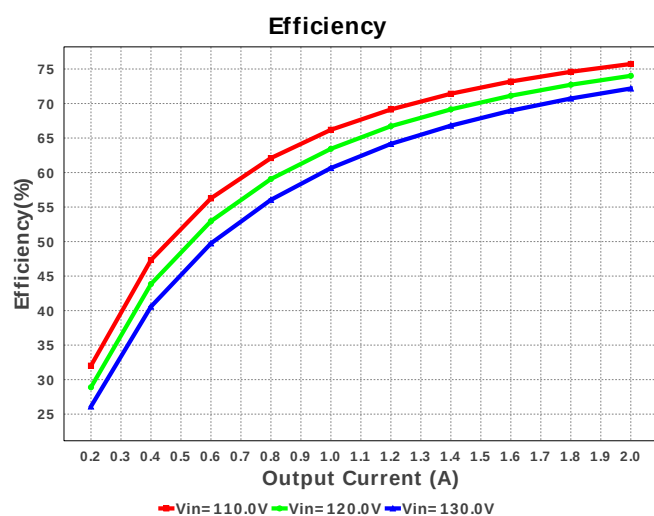
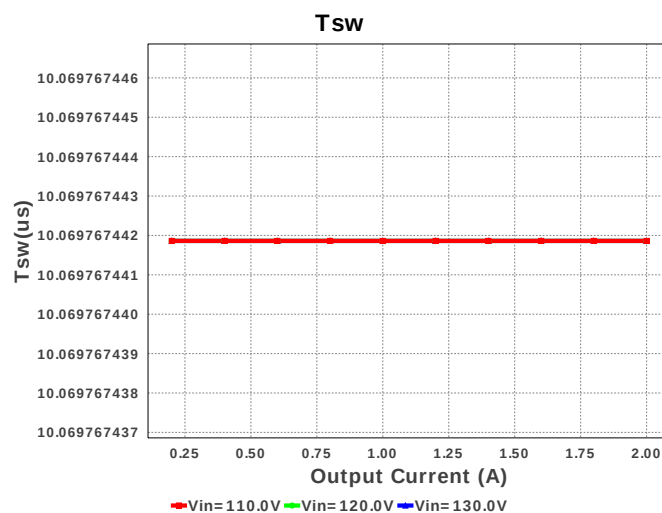
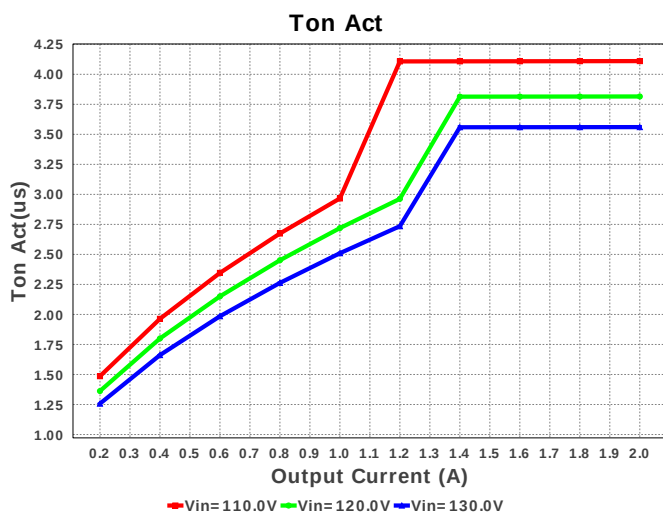


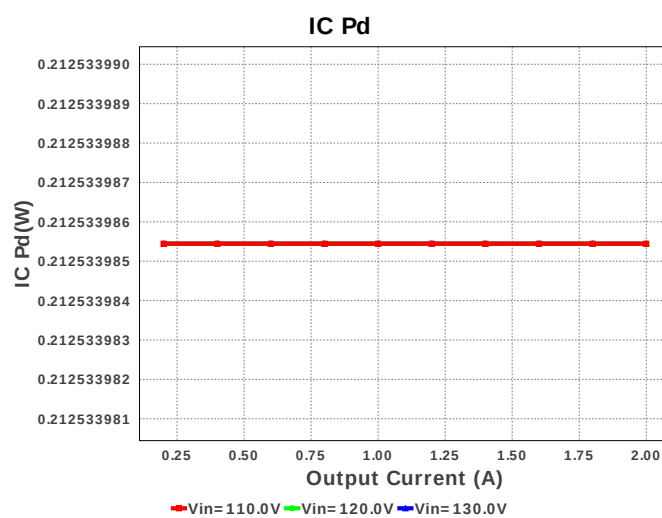
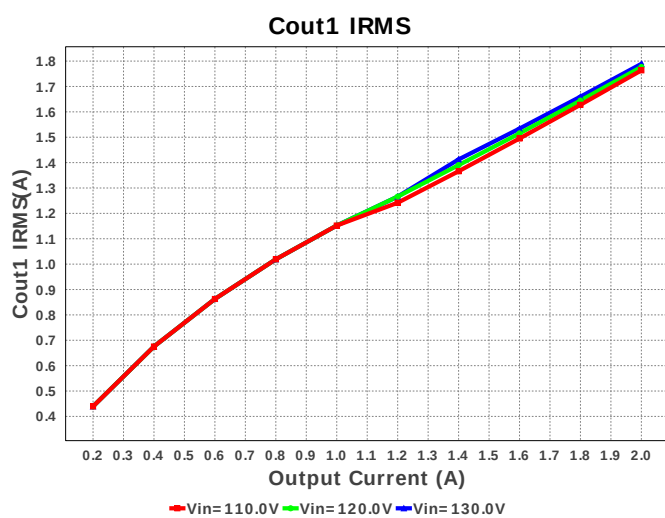
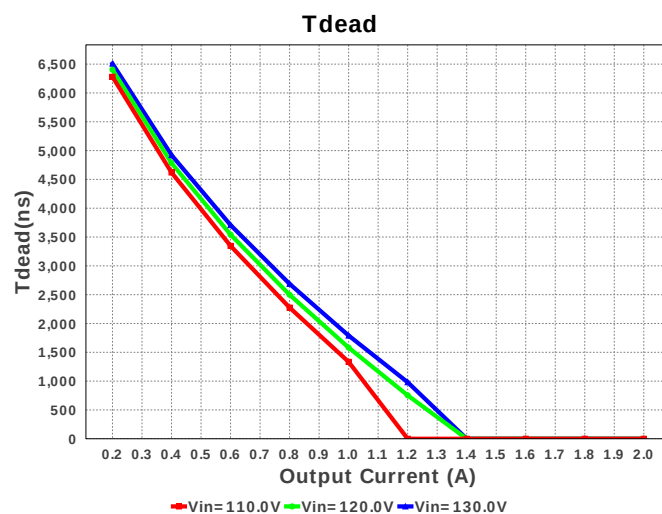
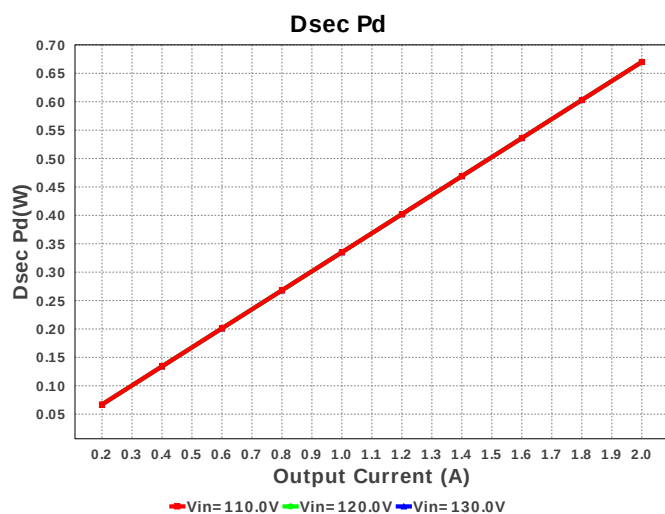
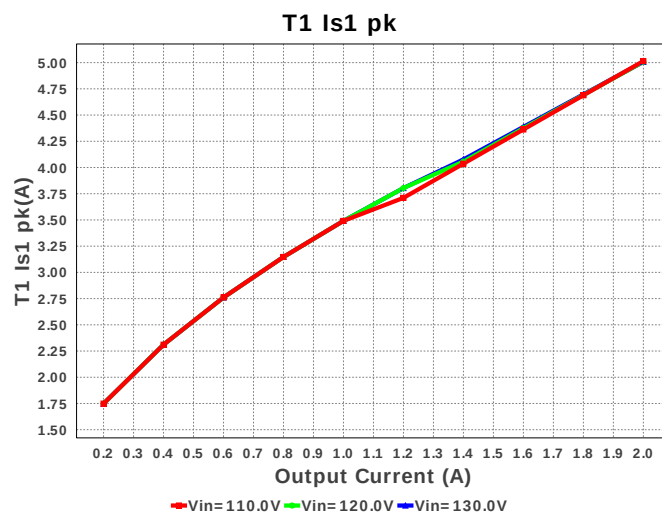
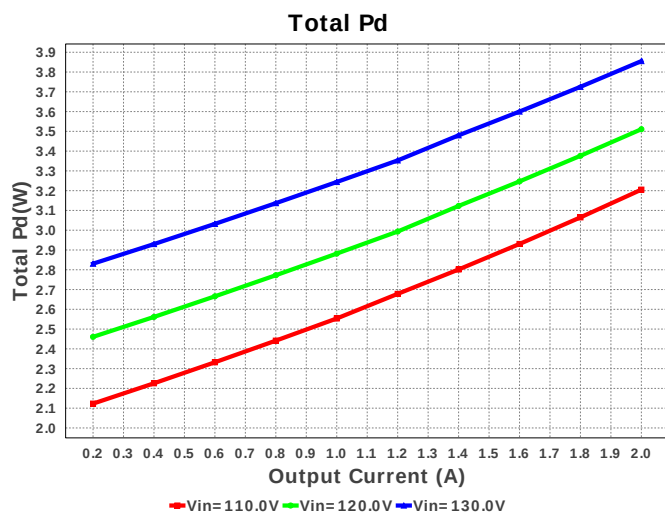
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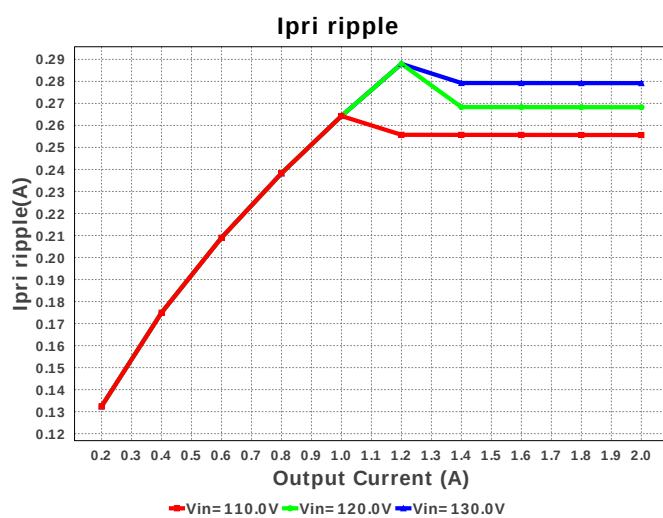
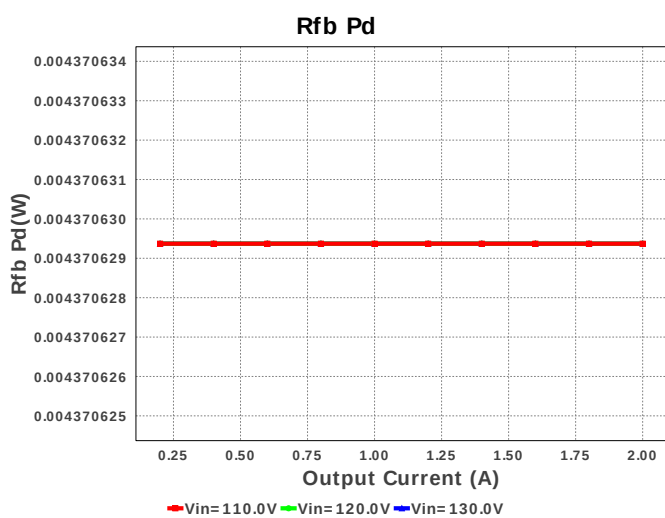
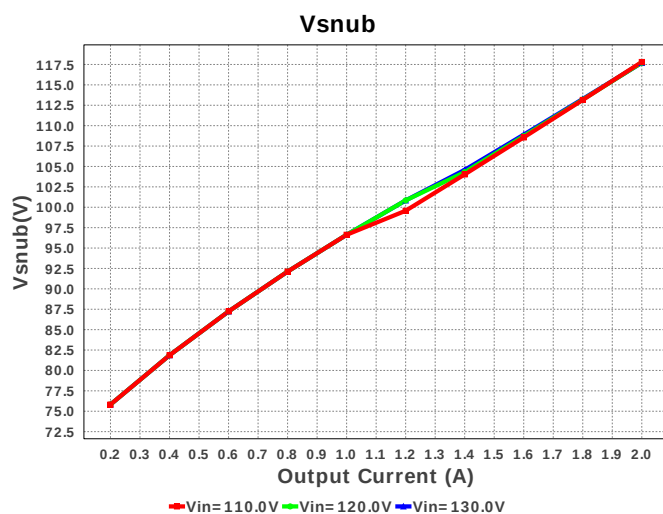
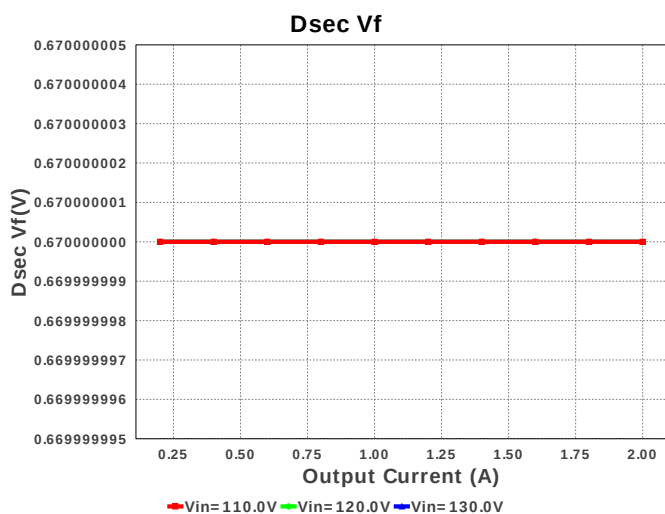
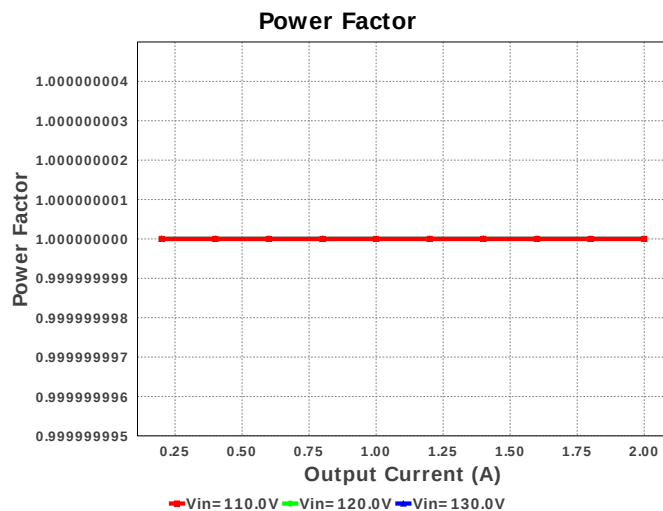
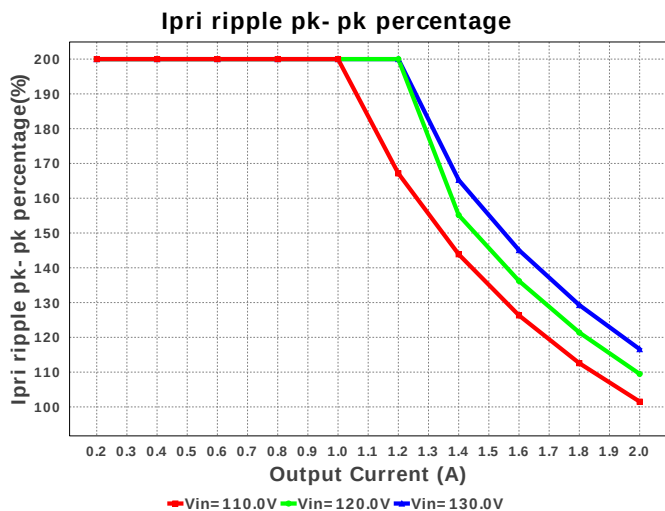


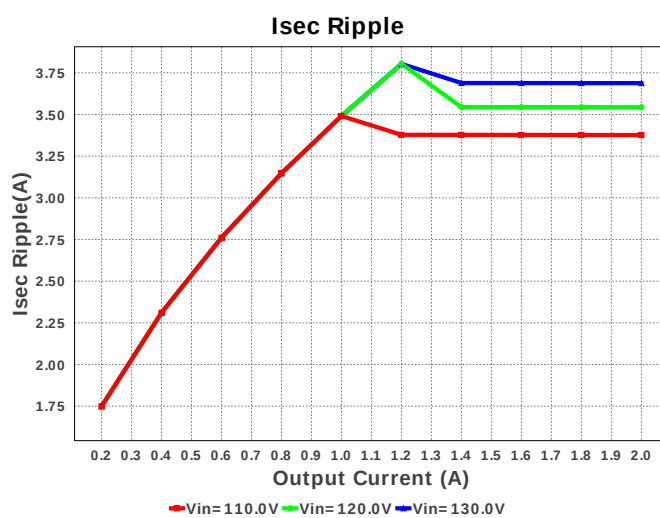
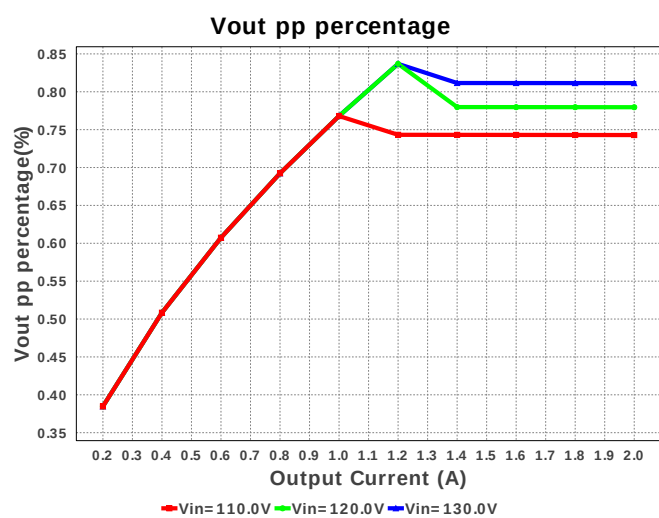
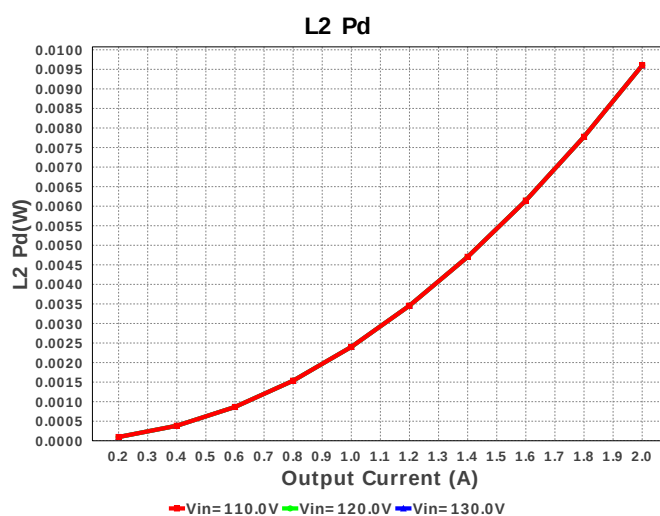
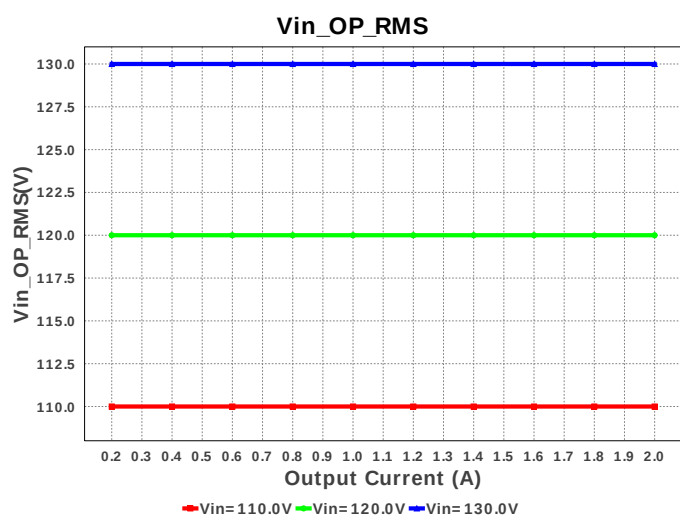
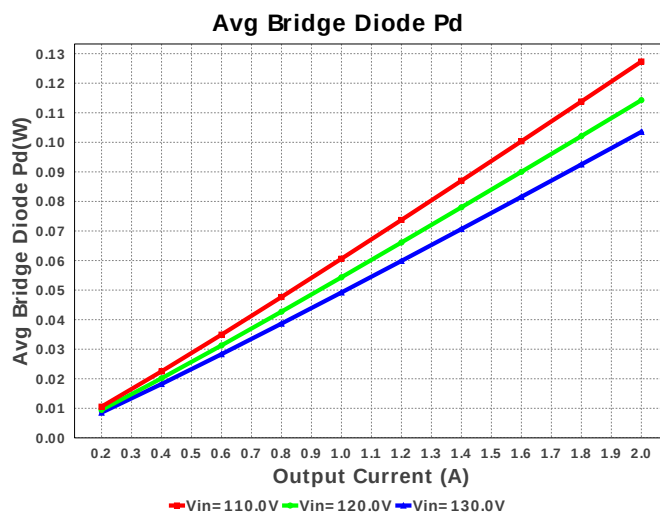
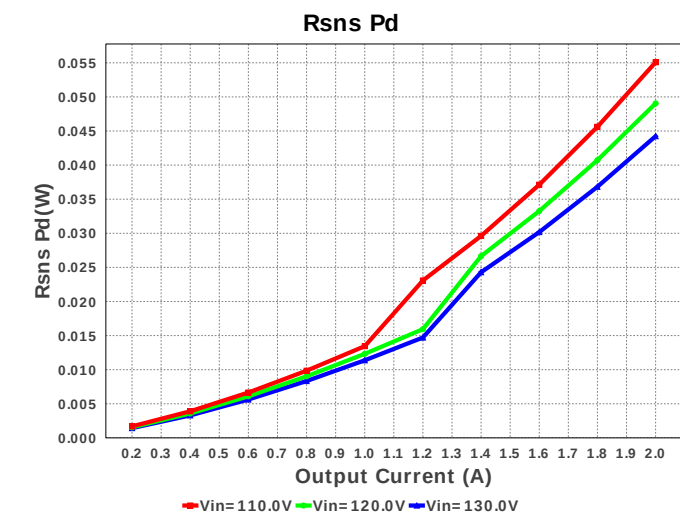


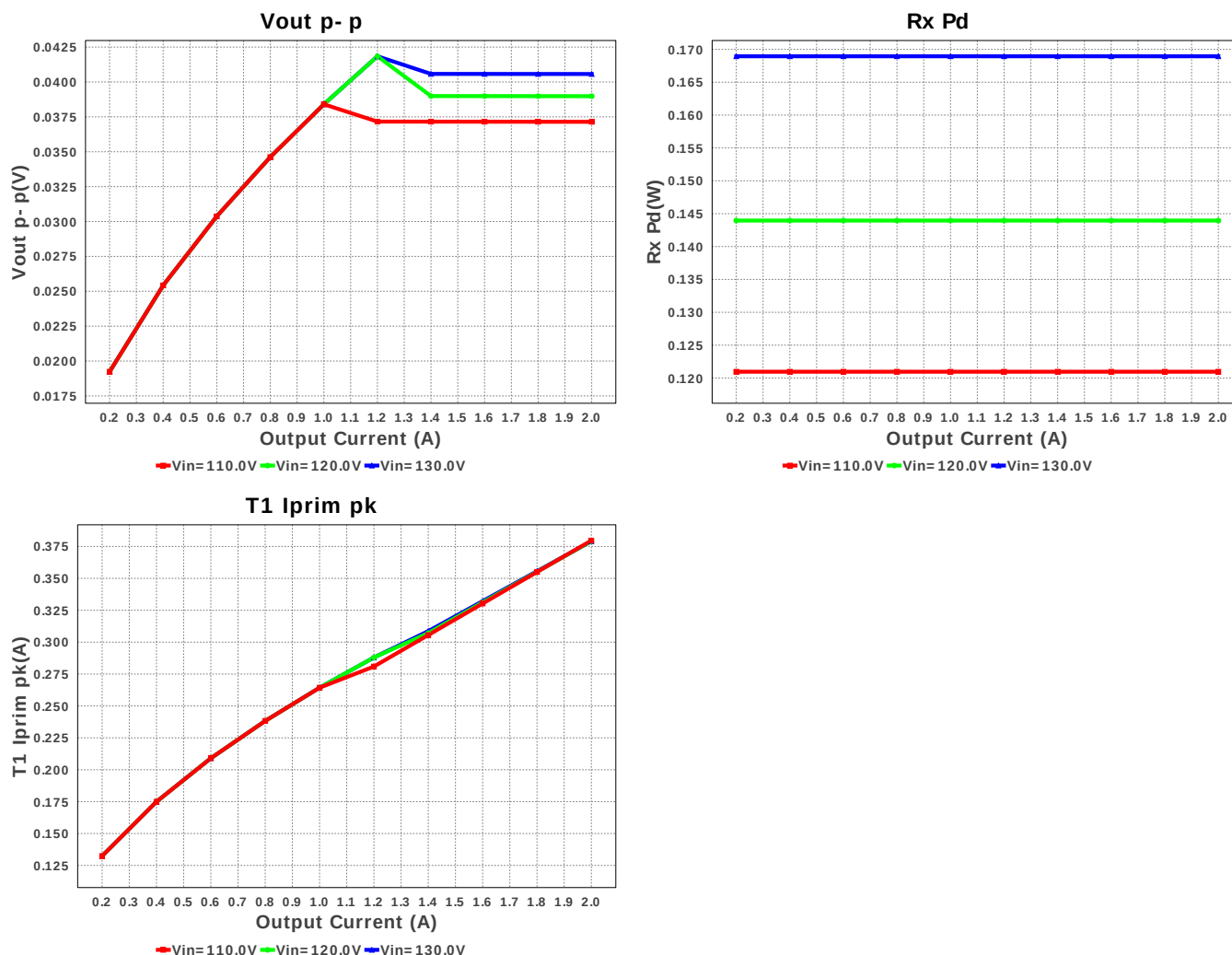












## Operating Values

| #   | Name                         | Value                   | Category | Description                                                           |
|-----|------------------------------|-------------------------|----------|-----------------------------------------------------------------------|
| 1.  | Cout1 IRMS                   | 1.764 A                 | Current  | Output capacitor1 RMS ripple current                                  |
| 2.  | Iin rms                      | 120.05 mA               | Current  | RMS Input Current                                                     |
| 3.  | Iout_DCM                     | 1.139 A                 | Current  | Approximate Current below which DCM mode of operation will begin      |
| 4.  | Ipri Avg                     | 102.776 mA              | Current  | Average Current in Primary Winding over the complete Switching Period |
| 5.  | Ipri ripple                  | 255.633 mA              | Current  | Ripple Current in the Primary Winding                                 |
| 6.  | Ipri ripple pk-pk percentage | 101.52 %                | Current  | Primary Current pk-pk ripple percentage(of Ipri avg during ton only)  |
| 7.  | Isec Ripple                  | 3.377 A                 | Current  | Ripple Current in the Secondary Winding                               |
| 8.  | T1 Iprim RMS                 | 167.637 mA              | Current  | Transformer Primary RMS Current                                       |
| 9.  | T1 Iprim pk                  | 379.621 mA              | Current  | Transformer Primary Peak Current                                      |
| 10. | T1 Is1 RMS                   | 2.666 A                 | Current  | Transformer Secondary1 RMS Current                                    |
| 11. | T1 Is1 pk                    | 5.015 A                 | Current  | Transformer Secondary1 Peak Current                                   |
| 12. | AC Frequency                 | 60.0 Hz                 | General  | Input AC frequency                                                    |
| 13. | BOM Count                    | 53                      | General  | Total Design BOM count                                                |
| 14. | Daux trr                     | 16.7 ns                 | General  | Auxiliary Diode Reverse Recovery Time                                 |
| 15. | Dsec Vf                      | 670.0 mV                | General  | Effective Forward Voltage Drop at the Operating Current               |
| 16. | Dsec trr                     | 19.64 ns                | General  | Output Diode Reverse Recovery Time                                    |
| 17. | Dsec2 Vf                     | 397.923 mV              | General  | Effective Forward Voltage Drop at the Operating Current               |
| 18. | Dsnub trr                    | 35.0 ns                 | General  | Snubber Diode Reverse Recovery Time                                   |
| 19. | FootPrint                    | 2.563 k mm <sup>2</sup> | General  | Total Foot Print Area of BOM components                               |
| 20. | Frequency                    | 99.307 kHz              | General  | Switching frequency                                                   |
| 21. | Mode                         | CCM                     | General  | Conduction Mode                                                       |
| 22. | Pout                         | 10.0 W                  | General  | Total output power                                                    |
| 23. | Power Factor                 | 1.0                     | General  | Assumed Power Factor for the Application                              |
| 24. | Tdead                        | 0.0 ns                  | General  | Approximate Dead Time of the Regulator                                |
| 25. | Toff                         | 6.055 us                | General  | Approximate Converter Off Time                                        |
| 26. | Ton Act                      | 4.11 us                 | General  | Approximate Converter On Time                                         |
| 27. | Total BOM                    | \$0.0                   | General  | Total BOM Cost                                                        |
| 28. | Tsw                          | 10.07 us                | General  | Switching Time Period                                                 |
| 29. | Vaux                         | 12.432 V                | General  | Auxiliary Voltage                                                     |

| #   | Name                | Value        | Category | Description                                                                                |
|-----|---------------------|--------------|----------|--------------------------------------------------------------------------------------------|
| 30. | Vsnub               | 117.805 V    | General  | Voltage Across the Snubber                                                                 |
| 31. | Vout Actual         | 4.995 V      | Op_Point | Vout Actual calculated based on selected voltage divider resistors                         |
| 32. | Vout OP             | 5.0 V        | Op_Point | Operational Output Voltage                                                                 |
| 33. | Duty Cycle          | 40.816 %     | Op_point | Duty cycle                                                                                 |
| 34. | Efficiency          | 75.728 %     | Op_point | Steady state efficiency                                                                    |
| 35. | IC Tj               | 53.379 degC  | Op_point | IC junction temperature                                                                    |
| 36. | ICThetaJA           | 110.0 degC/W | Op_point | IC junction-to-ambient thermal resistance                                                  |
| 37. | IOUT_OP             | 2.0 A        | Op_point | Iout operating point                                                                       |
| 38. | M1 TJOP             | 32.783 degC  | Op_point | M1 MOSFET junction temperature                                                             |
| 39. | Peak Rectified Vin  | 155.562 V    | Op_point | Peak voltage seen at rectified input                                                       |
| 40. | Vin_OP_RMS          | 110.0 V      | Op_point | AC Input RMS Voltage                                                                       |
| 41. | Vout p-p            | 37.144 mV    | Op_point | Peak-to-peak output ripple voltage                                                         |
| 42. | Avg Bridge Diode Pd | 127.336 mW   | Power    | Average Power Dissipation in the Bridge Diode over the AC Line Period                      |
| 43. | Cbulk Pd            | 65.017 mW    | Power    | Bulk capacitor power dissipation                                                           |
| 44. | Cout1 Pd            | 34.211 mW    | Power    | Output capacitor1 power dissipation                                                        |
| 45. | Cx Pd               | 0.0 W        | Power    | X-cap Power Dissipation                                                                    |
| 46. | Cy Pd               | 187.5 pW     | Power    | Y-caps Power Dissipation                                                                   |
| 47. | Dsec Pd             | 670.0 mW     | Power    | Secondary Diode Power Dissipation                                                          |
| 48. | Dsec2 Pd            | 397.923 mW   | Power    | Secondary Diode Power Dissipation                                                          |
| 49. | IC Pd               | 212.534 mW   | Power    | IC power dissipation                                                                       |
| 50. | L1 Pd               | 667.353 μW   | Power    | Power Dissipation in the Inductor                                                          |
| 51. | L2 Pd               | 9.6 mW       | Power    | Average Power Dissipation in the Inductor Over the AC Line Period                          |
| 52. | M1 Pd               | 33.531 mW    | Power    | M1 MOSFET total power dissipation                                                          |
| 53. | Paux                | 22.215 mW    | Power    | Power Dissipation in Raux and Daux                                                         |
| 54. | Pd Rstartup         | 1.517 W      | Power    | Power Dissipation in Rstartup1 and Rstartup2                                               |
| 55. | Rdrv Pd             | 8.257 μW     | Power    | Power Dissipation in Gate Drive Resistor                                                   |
| 56. | Rfb Pd              | 4.371 mW     | Power    | Rfb Power Dissipation                                                                      |
| 57. | Rsns Pd             | 55.08 mW     | Power    | Current Limit Sense Resistor Power Dissipation                                             |
| 58. | Rx Pd               | 120.961 mW   | Power    | Total Power Dissipation in Rx1 and Rx2                                                     |
| 59. | Snubber Pd          | 143.459 mW   | Power    | Snubber Power Dissipation                                                                  |
| 60. | T1 Pd               | 171.192 mW   | Power    | Estimated Losses in Transformer                                                            |
| 61. | Total Pd            | 3.205 W      | Power    | Total Power Dissipation                                                                    |
| 62. | Vout Tolerance      | 1.478 %      |          | Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable |
| 63. | Vout pp percentage  | 742.879 m%   |          | Output Voltage ripple percentage                                                           |

## Design Inputs

| #  | Name     | Value  | Description            |
|----|----------|--------|------------------------|
| 1. | Iout     | 2.0    | Maximum Output Current |
| 2. | VinMax   | 130.0  | Maximum input voltage  |
| 3. | VinMin   | 110.0  | Minimum input voltage  |
| 4. | Vout     | 5.0    | Output Voltage         |
| 5. | line_fsw | 60.0   | Light Output in Lumen  |
| 6. | base_pn  | UC3845 | Base Product Number    |
| 7. | source   | AC     | Input Source Type      |
| 8. | Ta       | 30.0   | Ambient temperature    |

## Design Assistance

1. **UC3845** Product Folder : <http://www.ti.com/product/UC3845> : contains the data sheet and other resources.

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