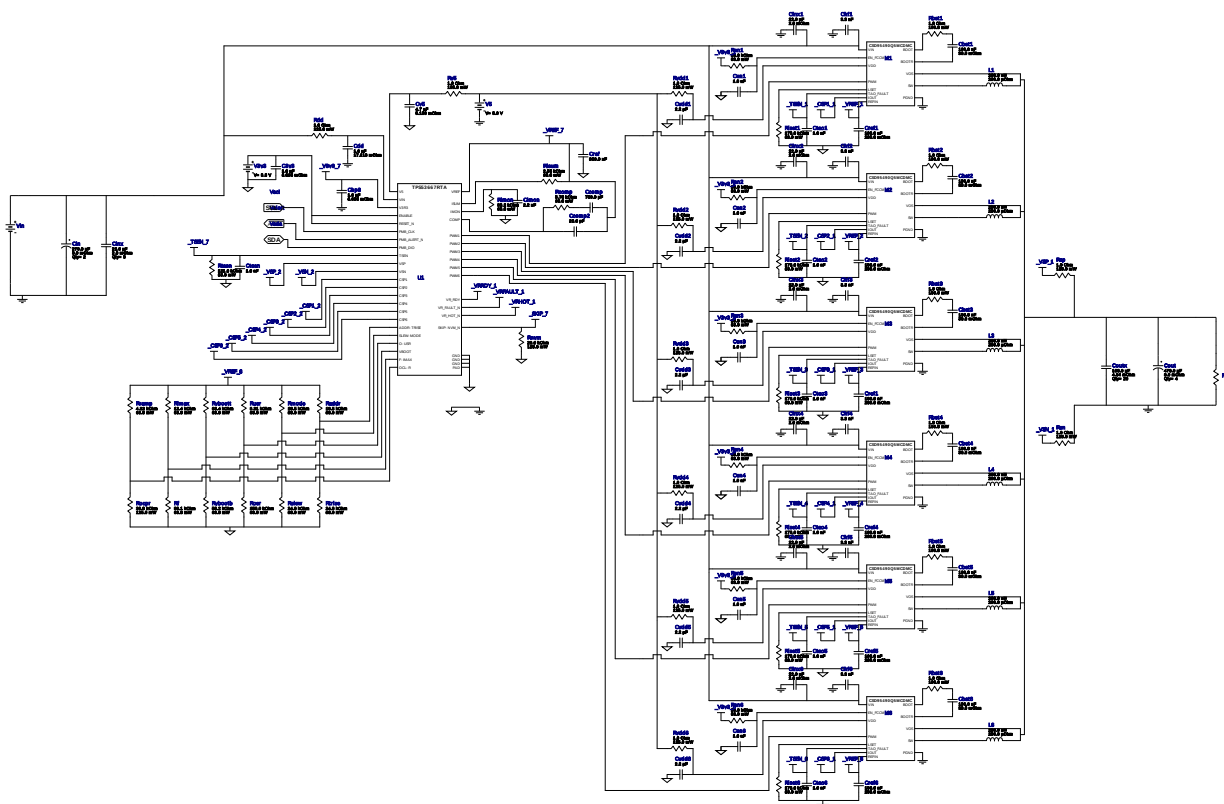


WEBENCH® Design Report

Design : 1617073/9 TPS53667RTAR
TPS53667RTAR 8.0V-14.0V to .85V @ 180.0A

VinMin = 8.0V
VinMax = 14.0V
Vout = 0.85V
Vout Sch = 0.85V
Iout = 180.0A

Device = TPS53667RTAR
Topology = Buck
Created = 2017-05-30 20:55:27.798
BOM Cost = \$0.00
BOM Count = 143
Total Pd = 17.81W



My Comments

No comments

Electrical BOM

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	C3v3	MuRata	GRM188R61A105KA61D Series= X5R	Cap= 1.0 uF ESR= 6.065 mOhm VDC= 10.0 V IRMS= 1.30675 A	1	\$0.01	0603 5 mm ²
2.	Cbp3	MuRata	GRM188R61A105KA61D Series= X5R	Cap= 1.0 uF ESR= 6.065 mOhm VDC= 10.0 V IRMS= 1.30675 A	1	\$0.01	0603 5 mm ²
3.	Cbst1	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²
4.	Cbst2	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²
5.	Cbst3	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
6.	Cbst4	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²
7.	Cbst5	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²
8.	Cbst6	MuRata	GRM188R71C104KA01D Series= X7R	Cap= 100.0 nF ESR= 30.0 mOhm VDC= 16.0 V IRMS= 1.7 A	1	\$0.01	0603 5 mm ²
9.	Ccomp	Samsung Electro-Mechanics	CL21C751JBCNNNC Series= C0G/NP0	Cap= 750.0 pF VDC= 50.0 V IRMS= 0.0 A	1	\$0.03	0805 7 mm ²
10.	Ccomp2	Samsung Electro-Mechanics	CL21C200JBANNNC Series= C0G/NP0	Cap= 20.0 pF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0805 7 mm ²
11.	Cdd	MuRata	GRM188R61E105KA12D Series= X5R	Cap= 1.0 uF ESR= 17.113 mOhm VDC= 25.0 V IRMS= 979.39 mA	1	\$0.01	0603 5 mm ²
12.	Cen1	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
13.	Cen2	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
14.	Cen3	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
15.	Cen4	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
16.	Cen5	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
17.	Cen6	MuRata	GRM188R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	0603 5 mm ²
18.	Chf1	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
19.	Chf2	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
20.	Chf3	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
21.	Chf4	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
22.	Chf5	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
23.	Chf6	MuRata	GRM155R71H332KA01D Series= X7R	Cap= 3.3 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	0402 3 mm ²
24.	Cimon	MuRata	GRM033R61A222KA01D Series= X5R	Cap= 2.2 nF VDC= 10.0 V IRMS= 0.0 A	1	\$0.01	0201 2 mm ²

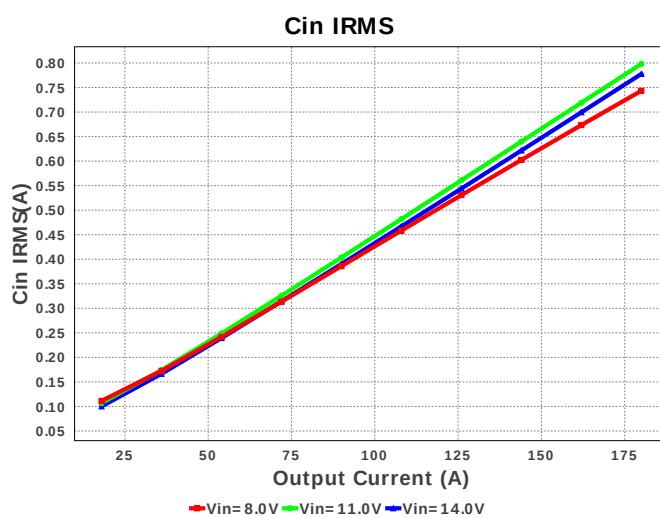
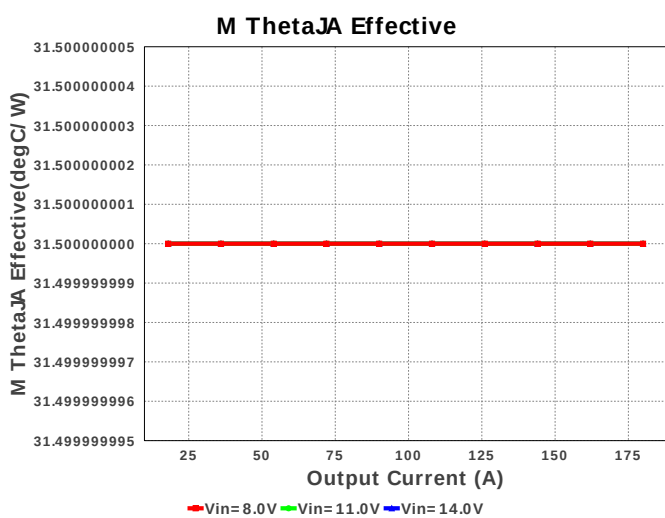
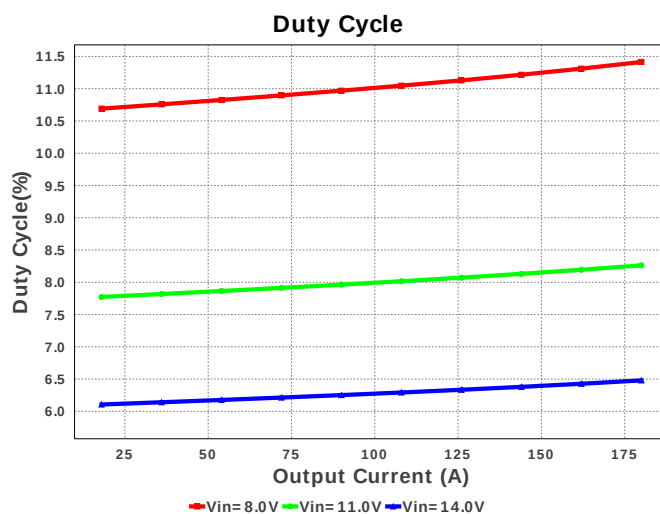
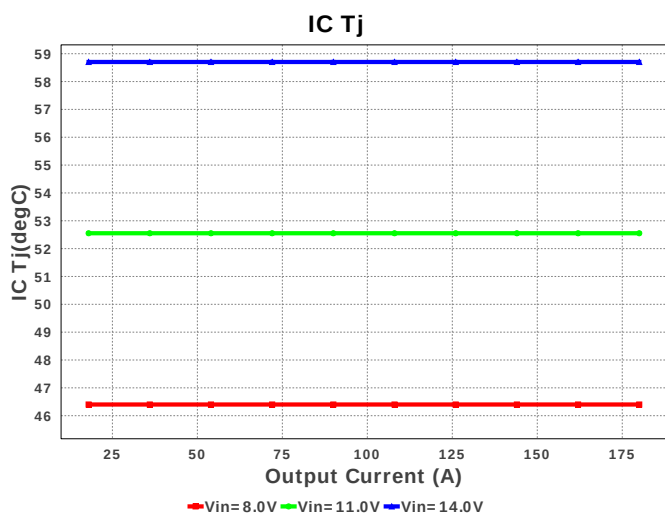
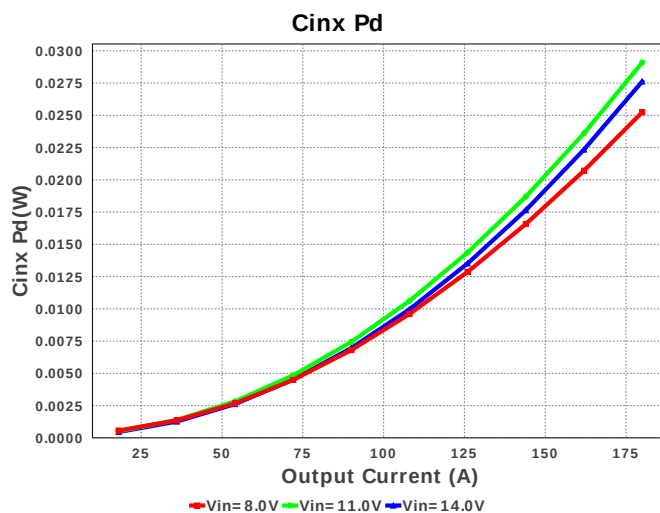
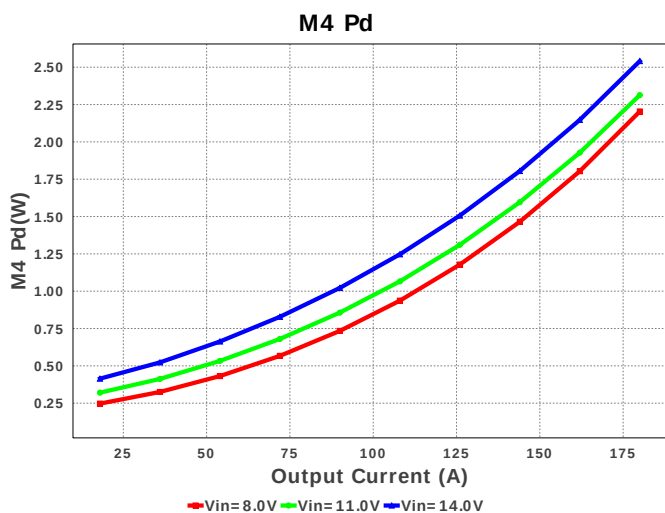
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25.	Cin	Panasonic	16SVPG270M Series= ?	Cap= 270.0 uF ESR= 8.0 mOhm VDC= 16.0 V IRMS= 5.8 A	2	\$0.68	 CAPSMT_62_C10 74 mm ²
26.	Cinx	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	8	\$0.17	 1210 15 mm ²
27.	Cinx1	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
28.	Cinx2	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
29.	Cinx3	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
30.	Cinx4	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
31.	Cinx5	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
32.	Cinx6	MuRata	GRM32ER61E226KE15L Series= X5R	Cap= 22.0 uF ESR= 2.0 mOhm VDC= 25.0 V IRMS= 3.67 A	1	\$0.17	 1210 15 mm ²
33.	Cout	Panasonic	EEFGX0E471R Series= GX	Cap= 470.0 uF ESR= 3.0 mOhm VDC= 2.5 V IRMS= 4.0 A	4	\$0.75	 7343-20 59 mm ²
34.	Coutx	MuRata	GRM31CD80G107ME39L Series= X6T	Cap= 100.0 uF ESR= 4.84 mOhm VDC= 4.0 V IRMS= 4.3381 A	20	\$0.14	 1206_190 11 mm ²
35.	Cref	MuRata	GRM155R61A334KE15D Series= X5R	Cap= 330.0 nF VDC= 10.0 V IRMS= 0.0 A	1	\$0.02	 0402 3 mm ²
36.	Cref1	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
37.	Cref1	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
38.	Cref2	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
39.	Cref3	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
40.	Cref4	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²

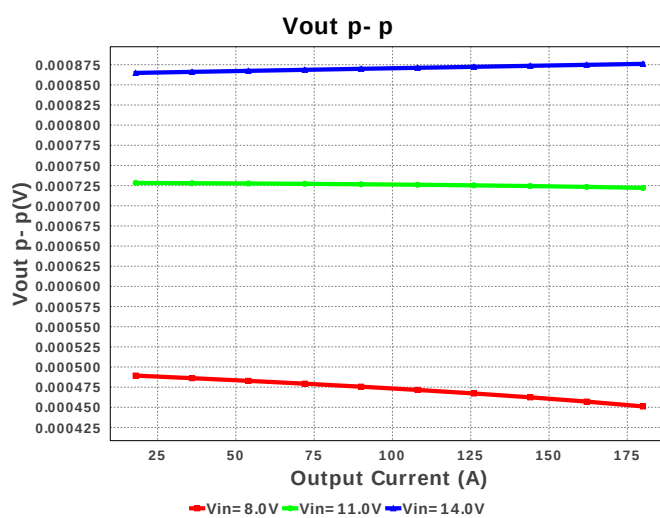
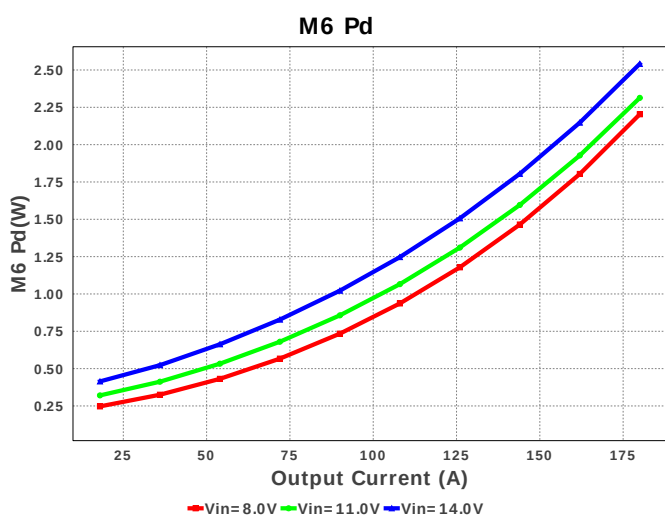
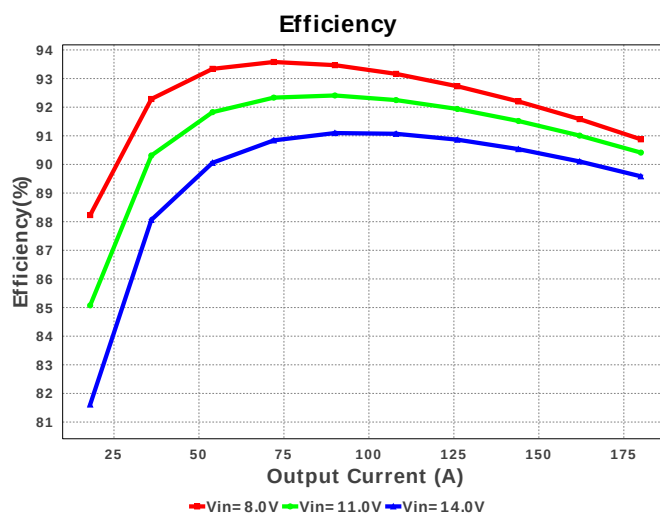
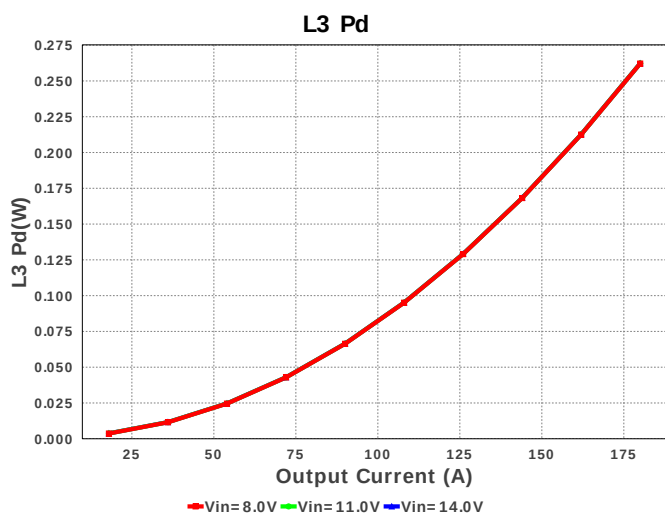
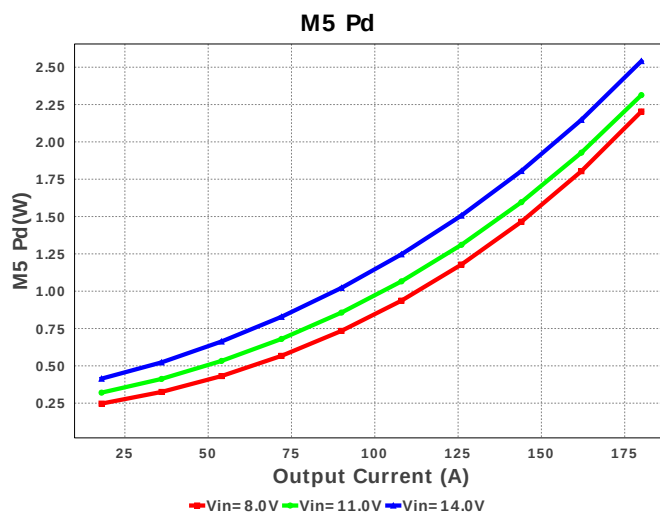
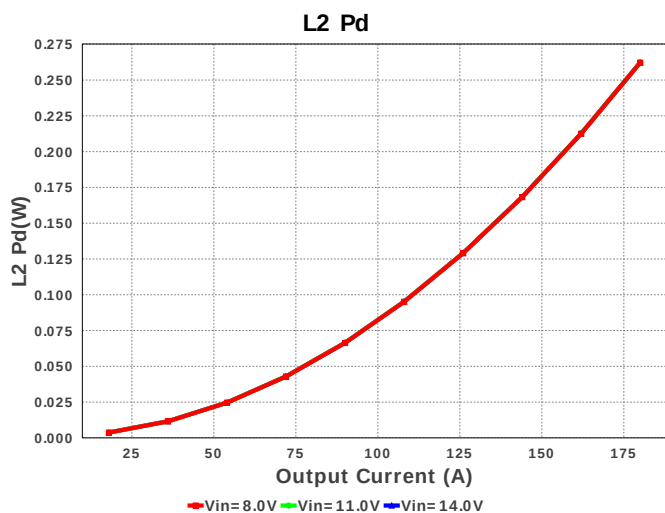
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
41.	Cref5	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
42.	Cref6	AVX	08053C104KAT2A Series= X7R	Cap= 100.0 nF ESR= 280.0 mOhm VDC= 25.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
43.	Ctao1	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
44.	Ctao2	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
45.	Ctao3	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
46.	Ctao4	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
47.	Ctao5	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
48.	Ctao6	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
49.	Ctsen	MuRata	GRM033R71C102KA01D Series= X7R	Cap= 1.0 nF VDC= 16.0 V IRMS= 0.0 A	1	\$0.01	 0201 2 mm ²
50.	Cv5	MuRata	GRM21BR61E475KA12L Series= X5R	Cap= 4.7 uF ESR= 5.189 mOhm VDC= 25.0 V IRMS= 2.03531 A	1	\$0.02	 0805 7 mm ²
51.	Cvdd1	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
52.	Cvdd2	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
53.	Cvdd3	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
54.	Cvdd4	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
55.	Cvdd5	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
56.	Cvdd6	Taiyo Yuden	EMK212BJ225KG-T Series= X5R	Cap= 2.2 uF VDC= 16.0 V IRMS= 0.0 A	1	\$0.02	 0805 7 mm ²
57.	L1	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 µOhm	1	\$0.84	 FP1107 120 mm ²
58.	L2	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 µOhm	1	\$0.84	 FP1107 120 mm ²

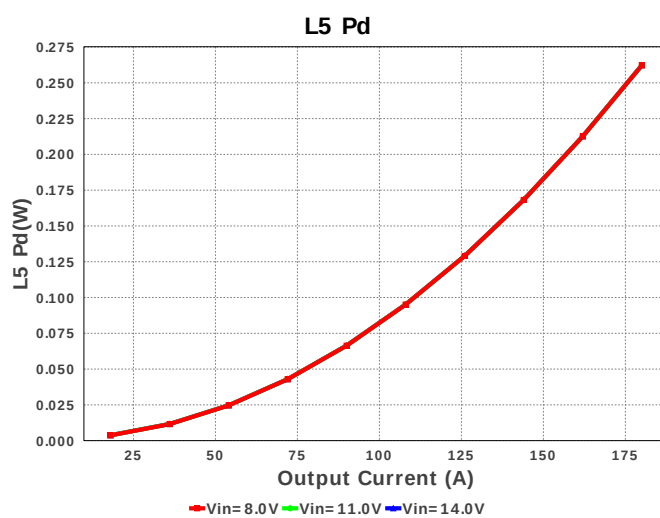
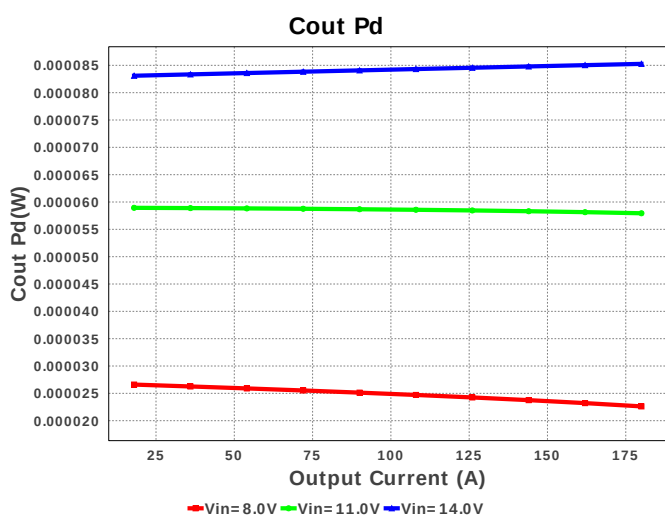
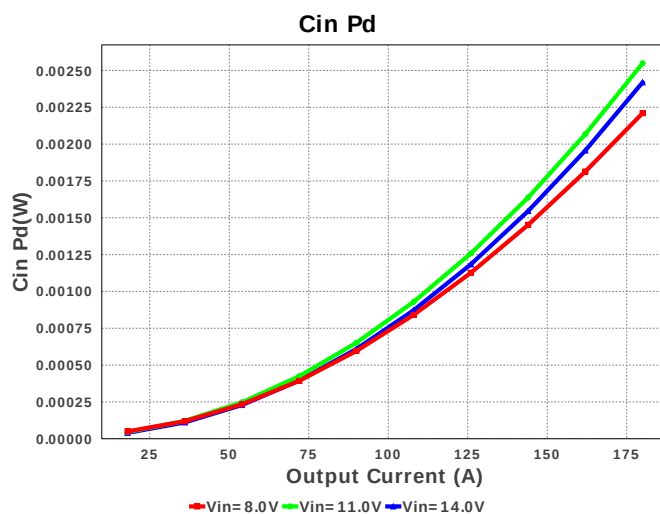
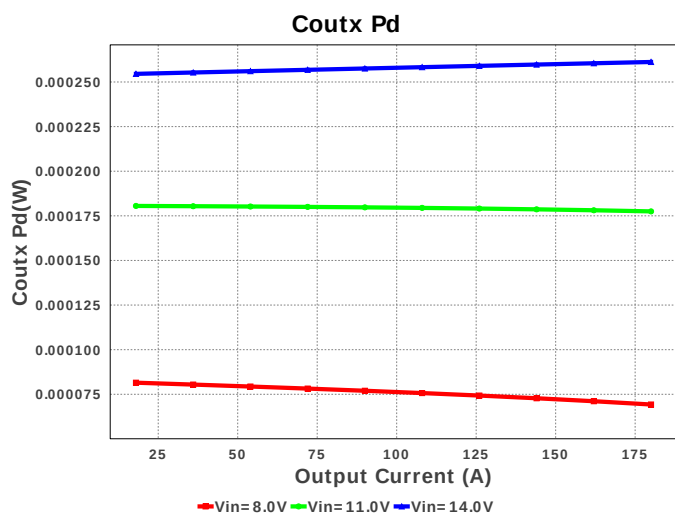
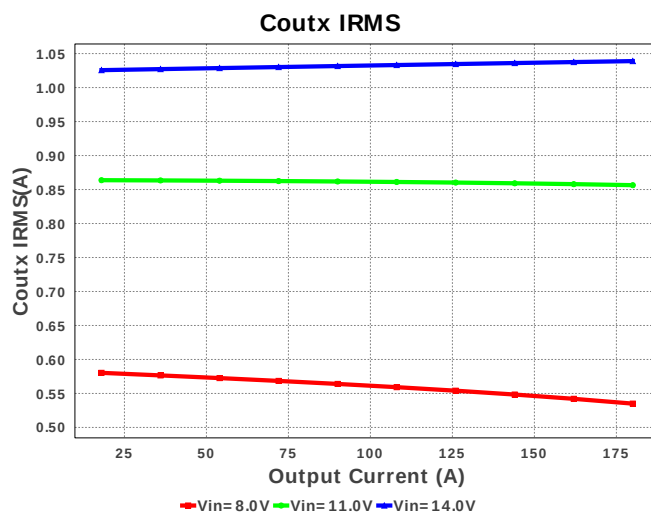
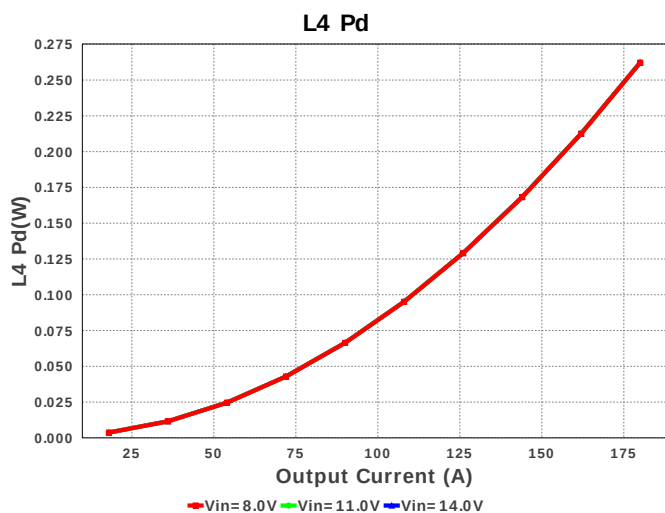
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
59.	L3	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 μ Ohm	1	\$0.84	 FP1107 120 mm ²
60.	L4	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 μ Ohm	1	\$0.84	 FP1107 120 mm ²
61.	L5	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 μ Ohm	1	\$0.84	 FP1107 120 mm ²
62.	L6	Coiltronics	FP1107R1-R23-R	L= 230.0 nH DCR= 290.0 μ Ohm	1	\$0.84	 FP1107 120 mm ²
63.	M1	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
64.	M2	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
65.	M3	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
66.	M4	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
67.	M5	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
68.	M6	Texas Instruments	CSD95490Q5MC	PowerStage	1	NA	 DMC0012A 56 mm ²
69.	Raddr	Vishay-Dale	CRCW040216K5FKED Series= CRCW..e3	Res= 16.5 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
70.	Rbst1	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²
71.	Rbst2	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²
72.	Rbst3	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²
73.	Rbst4	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²
74.	Rbst5	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²
75.	Rbst6	Vishay-Dale	CRCW06031R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 100.0 mW Tolerance= 1.0%	1	\$0.01	 0603 5 mm ²

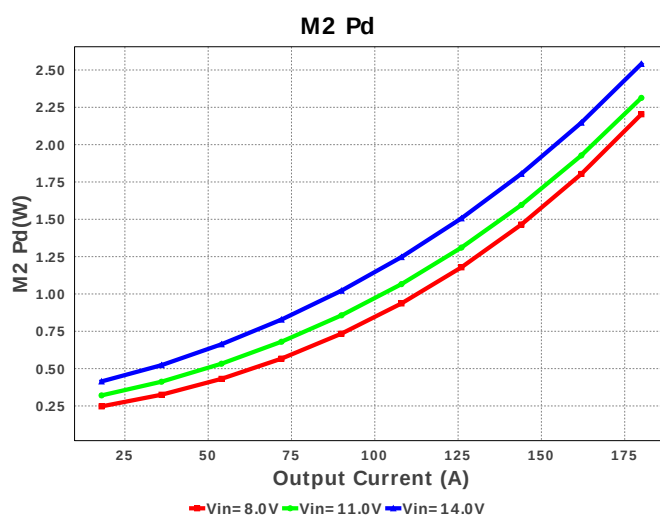
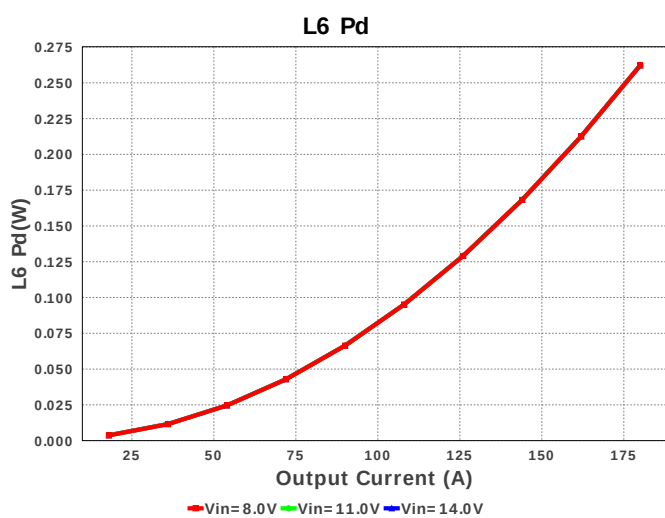
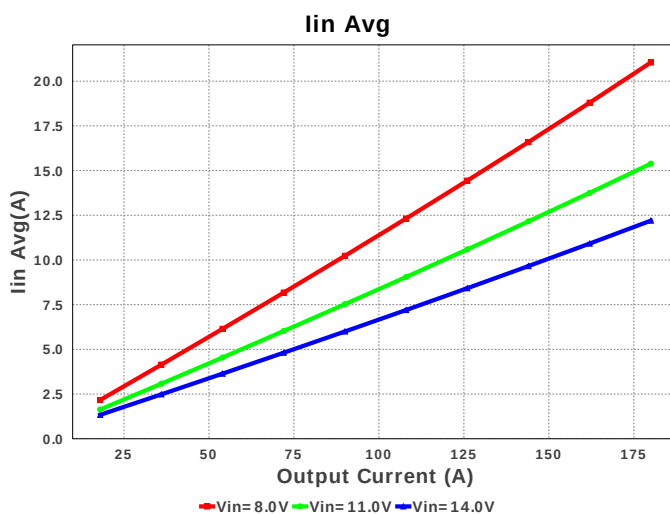
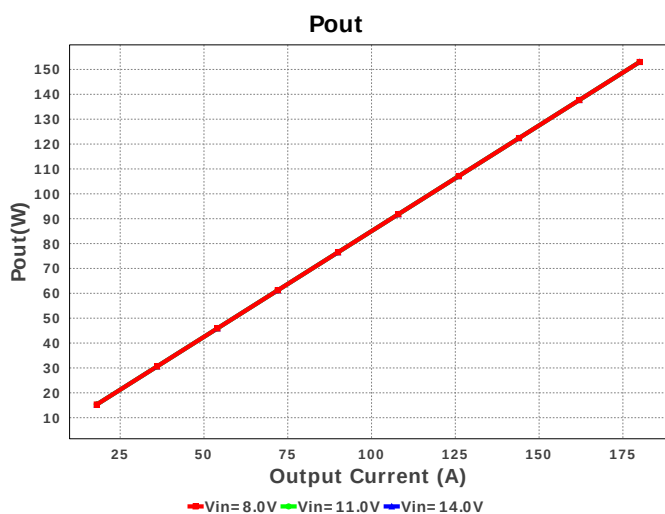
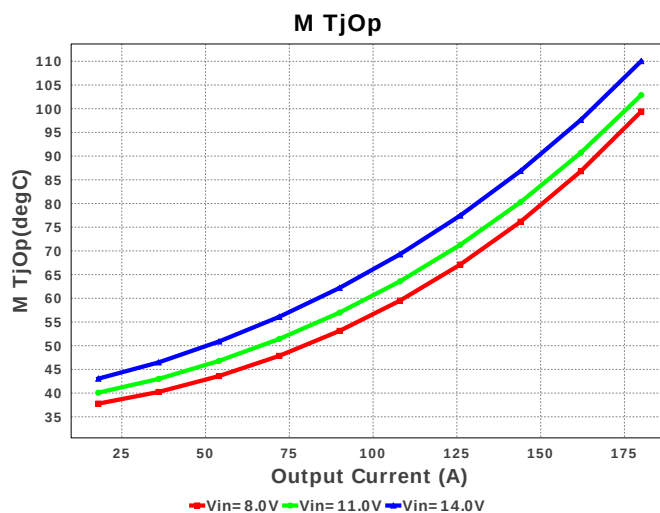
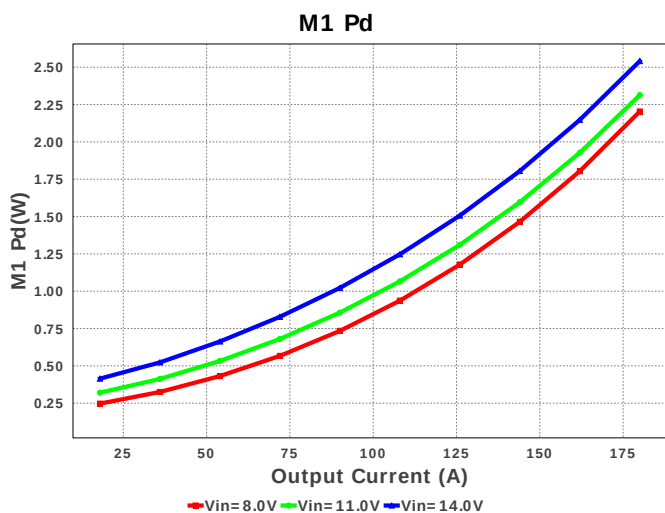
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
76.	Rcomp	Vishay-Dale	CRCW04025K76FKED Series= CRCW..e3	Res= 5.76 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
77.	Rdd	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm²
78.	Ren1	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
79.	Ren2	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
80.	Ren3	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
81.	Ren4	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
82.	Ren5	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
83.	Ren6	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
84.	Rf	Vishay-Dale	CRCW040230K1FKED Series= CRCW..e3	Res= 30.1 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
85.	Rimax	Vishay-Dale	CRCW040212K4FKED Series= CRCW..e3	Res= 12.4 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
86.	Rimon	Vishay-Dale	CRCW040233K2FKED Series= CRCW..e3	Res= 33.2 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
87.	Risum	Vishay-Dale	CRCW04022K55FKED Series= CRCW..e3	Res= 2.55 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
88.	RIset1	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
89.	RIset2	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
90.	RIset3	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
91.	RIset4	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
92.	RIset5	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
93.	RIset6	Vishay-Dale	CRCW0402178KFKED Series= CRCW..e3	Res= 178.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
94.	Rmode	Vishay-Dale	CRCW040216K5FKED Series= CRCW..e3	Res= 16.5 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm²
95.	Rnvm	Panasonic	ERJ-6ENF2002V Series= ERJ-6E	Res= 20.0 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm²
96.	Rocpr	Panasonic	ERJ-6ENF2002V Series= ERJ-6E	Res= 20.0 kOhm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm²

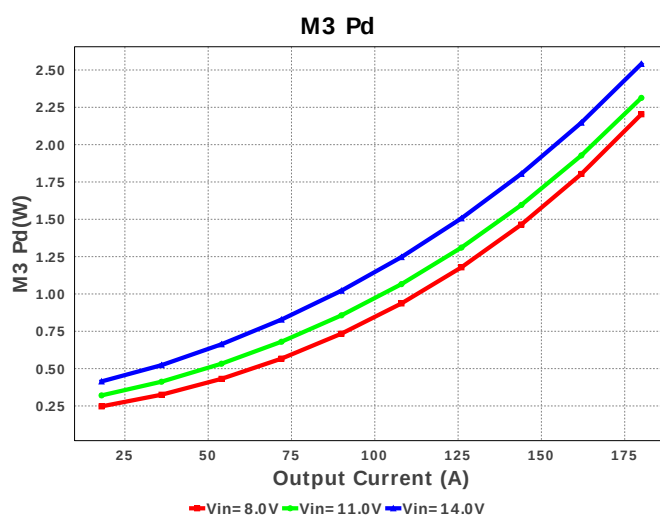
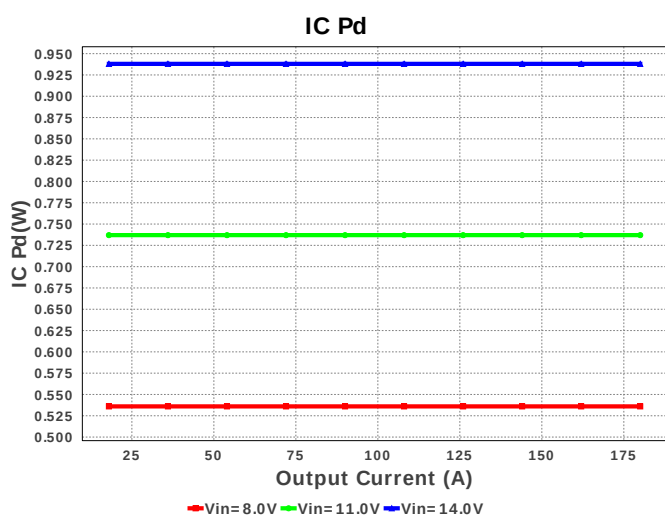
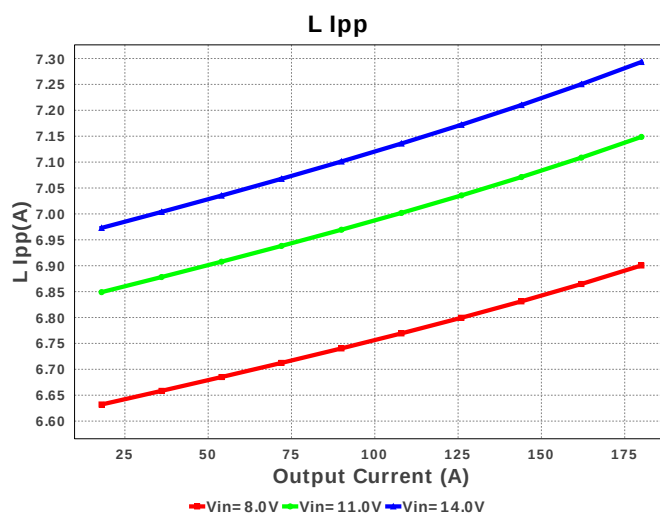
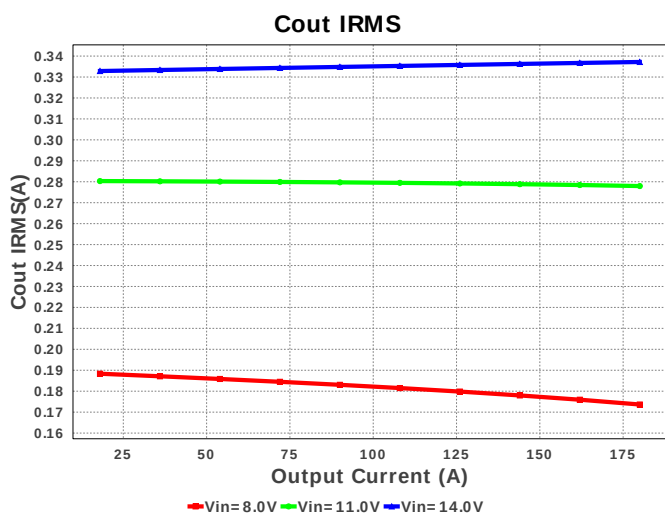
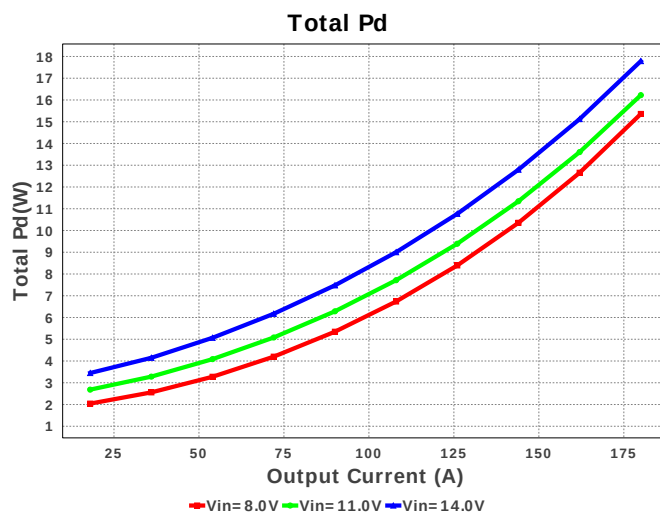
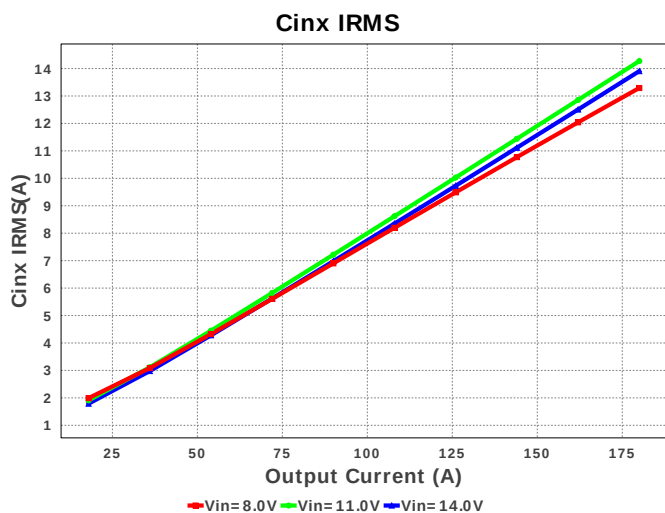
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
97.	Rosr	Vishay-Dale	CRCW0402150KFKED Series= CRCW..e3	Res= 150.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
98.	Rramp	Vishay-Dale	CRCW04024K32FKED Series= CRCW..e3	Res= 4.32 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
99.	Rslew	Vishay-Dale	CRCW040224K3FKED Series= CRCW..e3	Res= 24.3 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
100	Rsn	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
101	Rsp	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
102	Rtrise	Vishay-Dale	CRCW040224K3FKED Series= CRCW..e3	Res= 24.3 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
103	Rtsen	Vishay-Dale	CRCW0402121KFKED Series= CRCW..e3	Res= 121.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
104	Rusr	Vishay-Dale	CRCW04029K31FKED Series= CRCW..e3	Res= 9.31 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
105	Rv5	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
106	Rvbootb	Vishay-Dale	CRCW040256K2FKED Series= CRCW..e3	Res= 56.2 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
107	Rvboott	Vishay-Dale	CRCW040263K4FKED Series= CRCW..e3	Res= 63.4 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
108	Rvdd1	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
109	Rvdd2	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
110	Rvdd3	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
111	Rvdd4	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
112	Rvdd5	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
113	Rvdd6	Vishay-Dale	CRCW08051R00FKEA Series= CRCW..e3	Res= 1.0 Ohm Power= 125.0 mW Tolerance= 1.0%	1	\$0.01	 0805 7 mm ²
114	U1	Texas Instruments	TPS53667RTAR	Switcher	1	\$4.25	 RTA0040B 64 mm ²

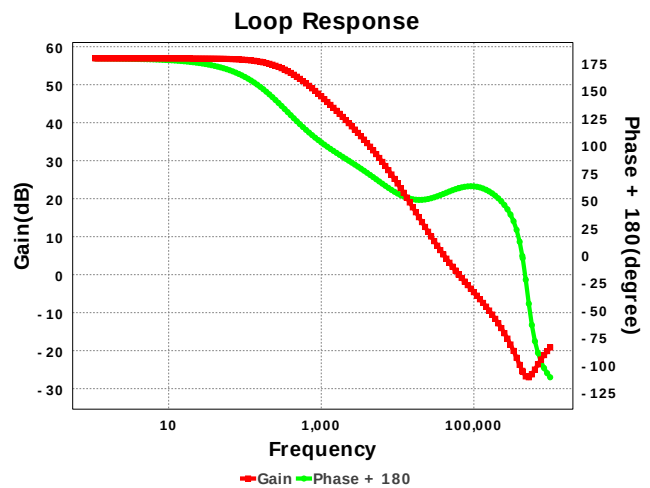
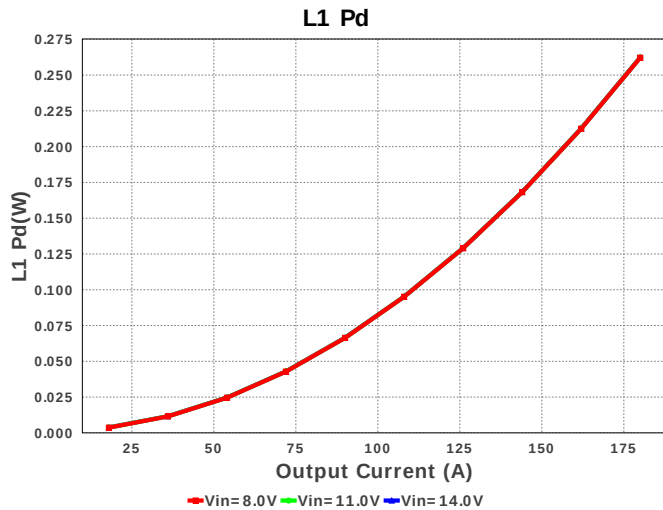












Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	1.309 A	Current	Input capacitor RMS ripple current
2.	Cinx IRMS	13.374 A	Current	Bulk capacitor RMS ripple current
3.	Cout IRMS	337.182 mA	Current	Output capacitor RMS ripple current
4.	Coutx IRMS	1.039 A	Current	Output capacitor_x RMS ripple current
5.	Iin Avg	12.201 A	Current	Average input current
6.	L Ipp	7.293 A	Current	Peak-to-peak inductor ripple current
7.	BOM Count	143	General	Total Design BOM count
8.	FootPrint	2.323 k mm ²	General	Total Foot Print Area of BOM components
9.	Frequency	500.0 kHz	General	Switching frequency
10.	Mode	CCM	General	Conduction Mode
11.	Pout	153.0 W	General	Total output power
12.	Total BOM	\$0.0	General	Total BOM Cost
13.	M ThetaJA Effective	31.5 degC/W	Op_Point	Effective Power Stage IC Junction-to-Ambient Thermal Resistance
14.	Vout OP	850.0 mV	Op_Point	Operational Output Voltage
15.	Vout Sch	850.0 mV	Op_Point	Output voltage selected
16.	Cross Freq	63.682 kHz	Op_point	Bode plot crossover frequency
17.	Duty Cycle	6.479 %	Op_point	Duty cycle
18.	Efficiency	89.573 %	Op_point	Steady state efficiency
19.	IC Tj	58.703 degC	Op_point	IC junction temperature
20.	ICThetaJA	30.6 degC/W	Op_point	IC junction-to-ambient thermal resistance
21.	IOUT_OP	180.0 A	Op_point	Iout operating point
22.	M TjOp	110.041 degC	Op_point	Power Stage IC junction temperature
23.	Phase Marg	61.745 deg	Op_point	Bode Plot Phase Margin
24.	VIN_OP	14.0 V	Op_point	Vin operating point
25.	Vout p-p	876.02 μV	Op_point	Peak-to-peak output ripple voltage
26.	PMBus Vout Command	121.0	PMBus	PMBus Vout Command
27.	Cin Pd	6.853 mW	Power	Input capacitor power dissipation
28.	Cinx Pd	44.714 mW	Power	Bulk capacitor power dissipation
29.	Cout Pd	85.269 μW	Power	Output capacitor power dissipation
30.	Coutx Pd	261.208 μW	Power	Output capacitor_x power loss
31.	IC Pd	938.0 mW	Power	IC power dissipation
32.	L1 Pd	262.285 mW	Power	Inductor power dissipation
33.	L2 Pd	262.285 mW	Power	Inductor power dissipation
34.	L3 Pd	262.285 mW	Power	Inductor power dissipation
35.	L4 Pd	262.285 mW	Power	Inductor power dissipation
36.	L5 Pd	262.285 mW	Power	Inductor power dissipation
37.	L6 Pd	262.285 mW	Power	Inductor power dissipation
38.	M1 Pd	2.541 W	Power	Power Stage power dissipation
39.	M2 Pd	2.541 W	Power	Power Stage power dissipation
40.	M3 Pd	2.541 W	Power	Power Stage power dissipation
41.	M4 Pd	2.541 W	Power	Power Stage power dissipation
42.	M5 Pd	2.541 W	Power	Power Stage power dissipation
43.	M6 Pd	2.541 W	Power	Power Stage power dissipation
44.	Total Pd	17.811 W	Power	Total Power Dissipation
45.	Vout Tolerance	941.18 m%		Vout Tolerance based on IC Tolerance (no load) and voltage divider resistors if applicable

Design Inputs

#	Name	Value	Description
1.	Iout	180.0	Maximum Output Current
2.	VinMax	14.0	Maximum input voltage

#	Name	Value	Description
3.	VinMin	8.0	Minimum input voltage
4.	Vout	850.0 m	Output Voltage
5.	base_pn	TPS53667	Base Product Number
6.	source	DC	Input Source Type
7.	Ta	30.0	Ambient temperature
1.	Vout Sch	850.0 m	Output voltage selected

Design Assistance

1. **TPS53667** Product Folder : <http://www.ti.com/product/TPS53667> : contains the data sheet and other resources.

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