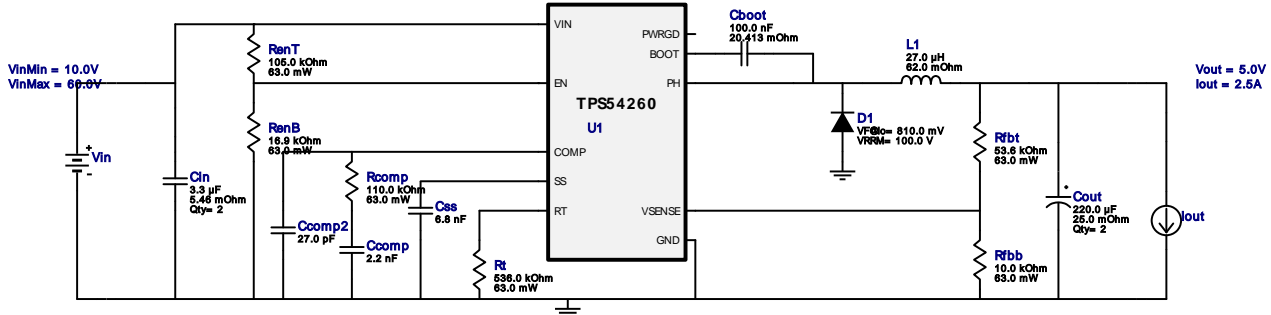
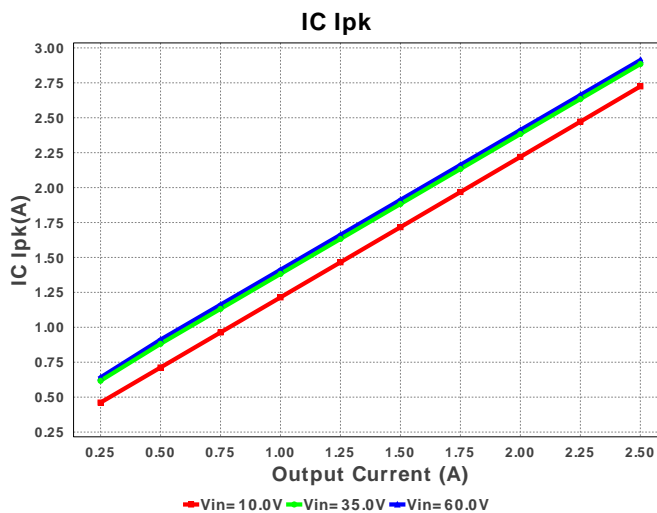
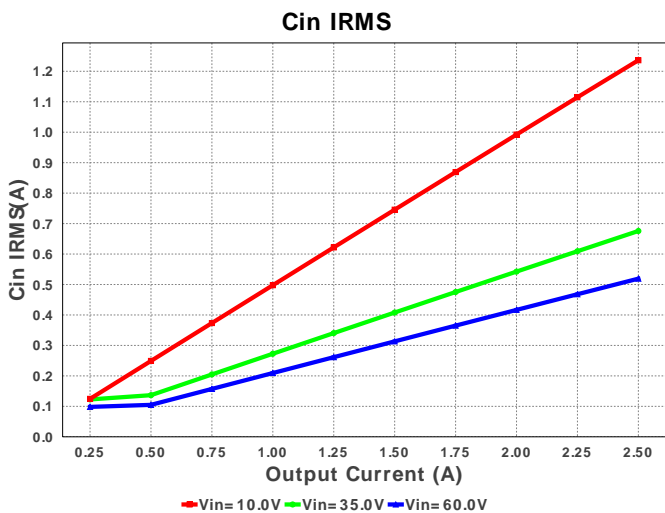
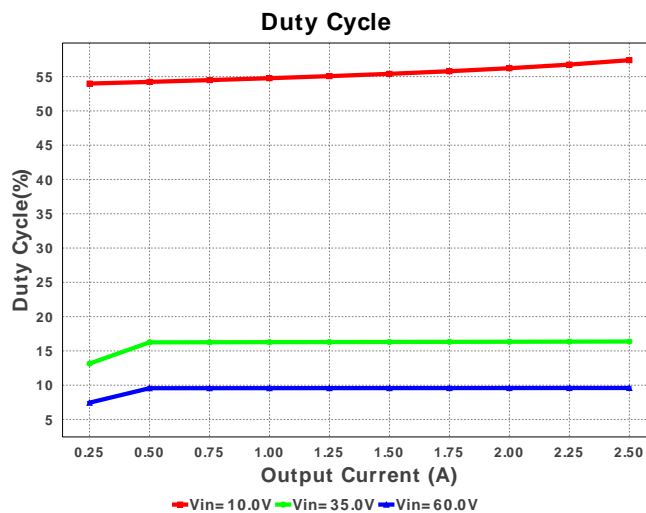
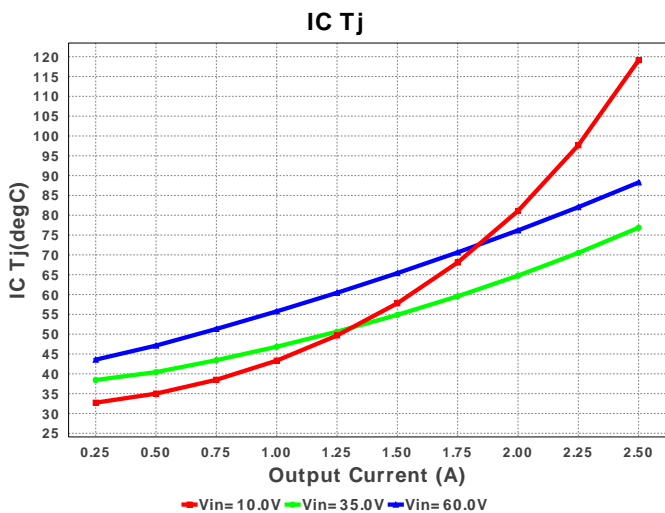


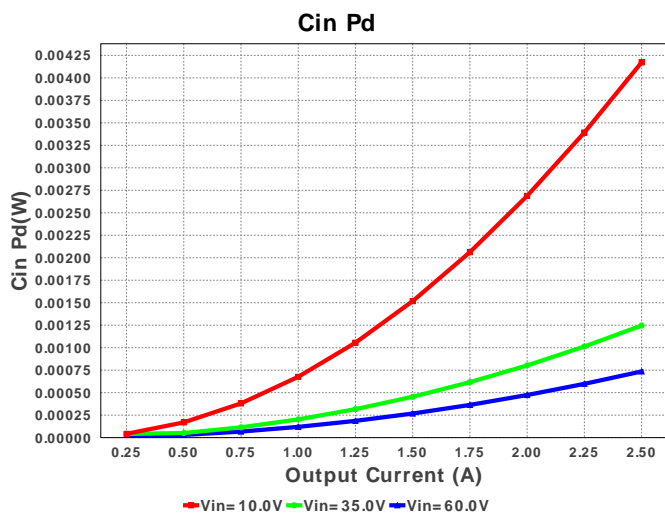
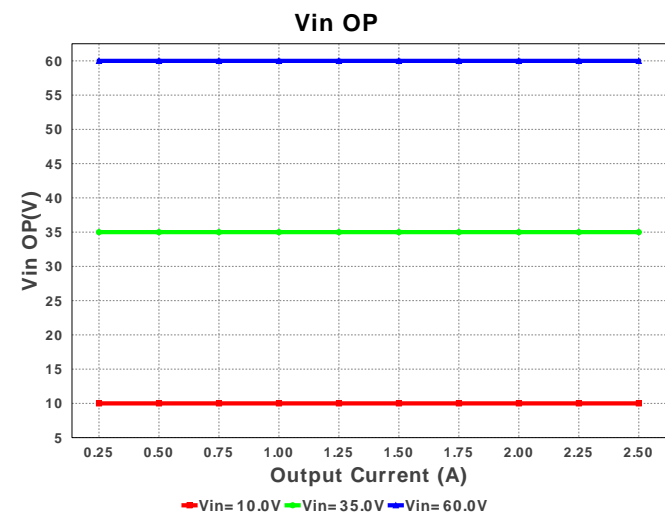
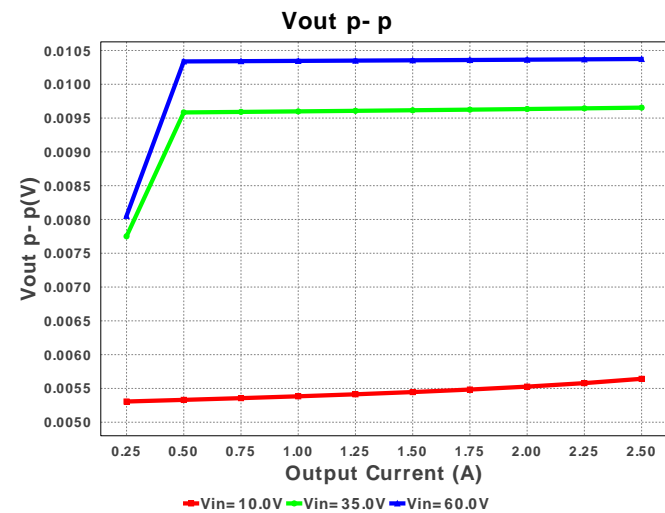
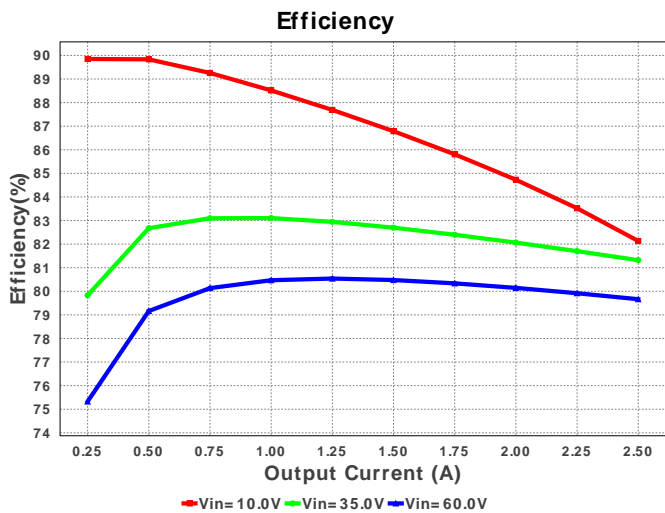
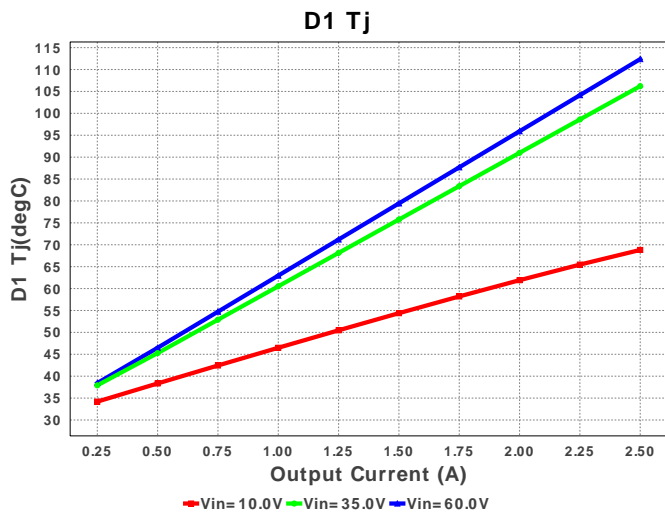
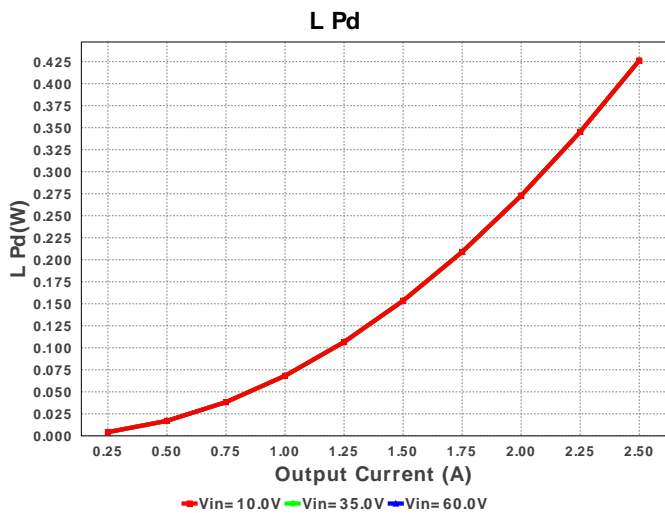
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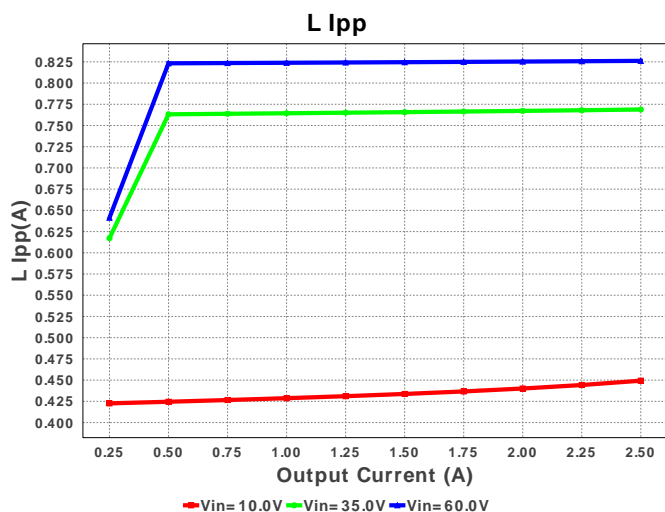
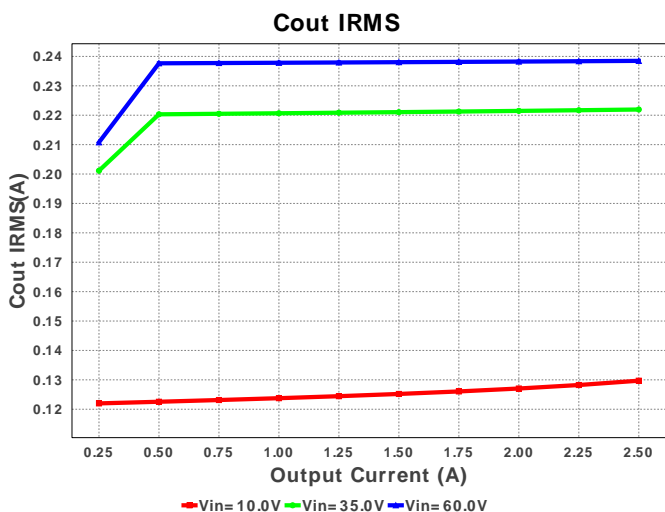
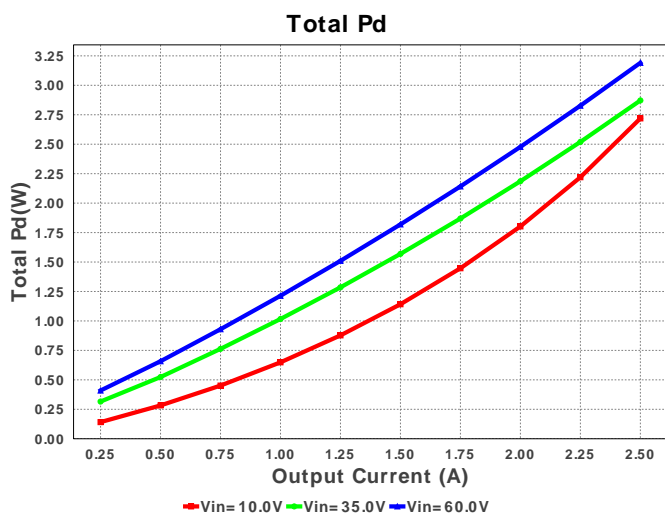
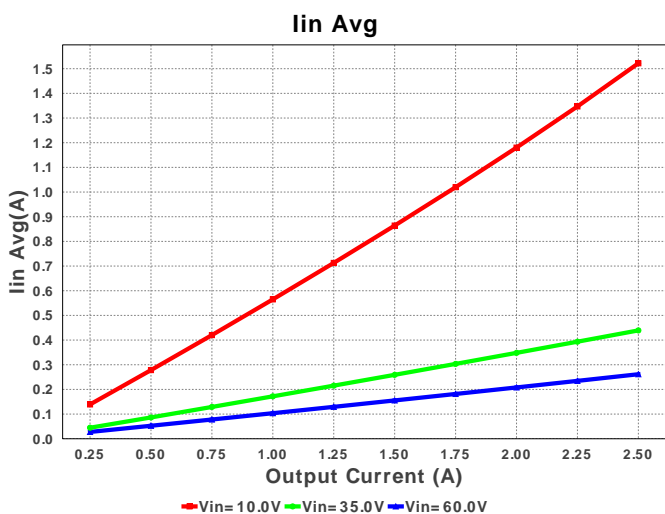
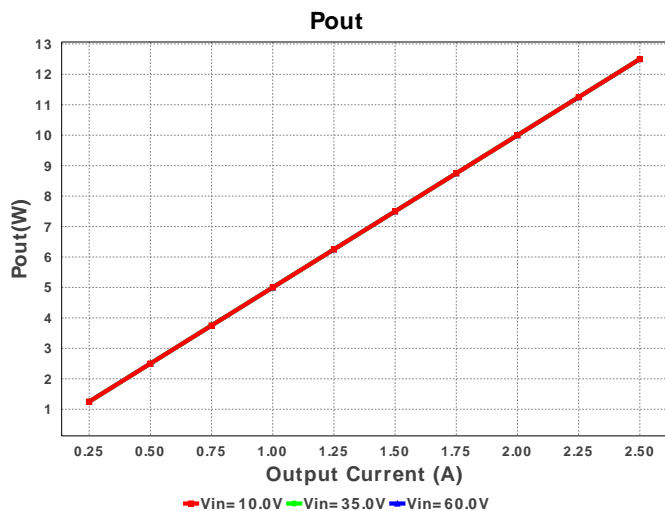
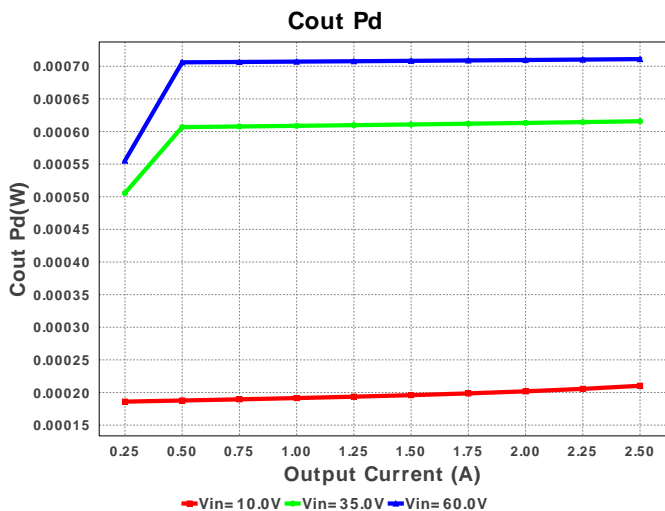
 Design : 1814038/9 TPS54260DGQR
 TPS54260DGQR 10.0V-60.0V to 5.00V @ 2.5A

Electrical BOM

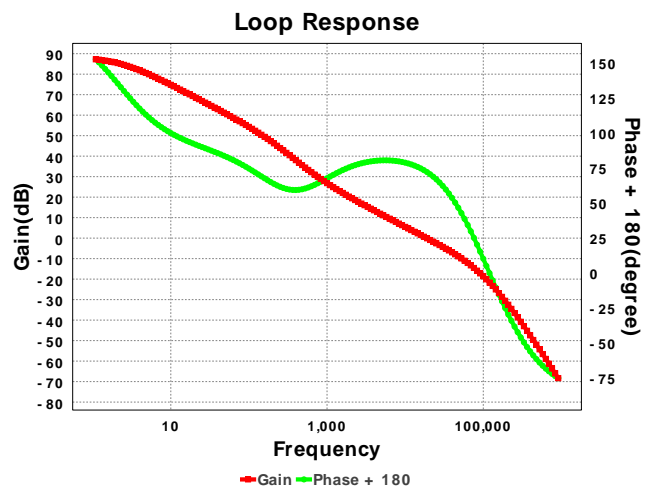
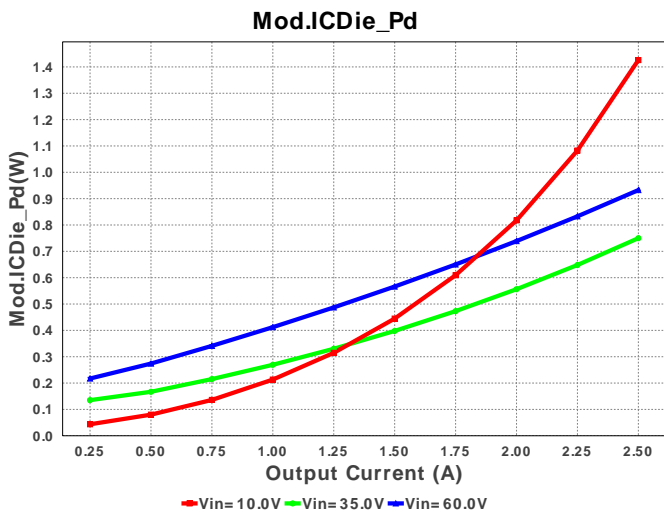
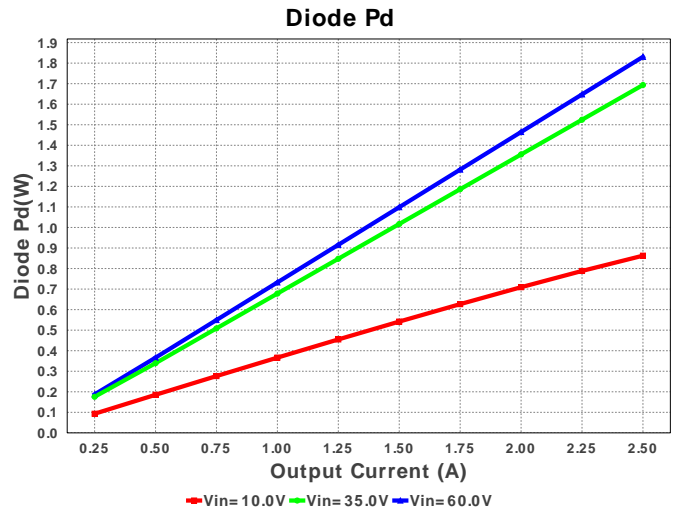
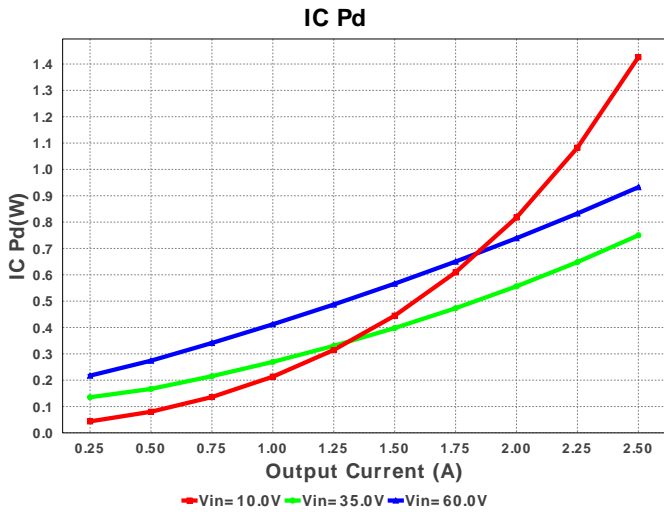
#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
1.	Cboot	TDK	C1005X5R1A104K Series= 285	Cap= 100.0 nF ESR= 20.413 mOhm VDC= 10.0 V IRMS= 0.0 A	1	\$0.01	 0402 3 mm ²
2.	Ccomp	Yageo America	CC0805KRX7R9BB222 Series= X7R	Cap= 2.2 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
3.	Ccomp2	Yageo America	CC0805JRNP09BN270 Series= C0G/NP0	Cap= 27.0 pF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
4.	Cin	TDK	C3225X7S2A335K200AB Series= X7R	Cap= 3.3 uF ESR= 5.46 mOhm VDC= 100.0 V IRMS= 7.0356 A	2	\$0.24	 1210 15 mm ²
5.	Cout	Panasonic	10TPE220ML Series= 1281	Cap= 220.0 uF ESR= 25.0 mOhm VDC= 10.0 V IRMS= 2.4 A	2	\$0.73	 CAPSMT_6_D3L 3 mm ²
6.	Css	Yageo America	CC0805KRX7R9BB682 Series= X7R	Cap= 6.8 nF VDC= 50.0 V IRMS= 0.0 A	1	\$0.01	 0805 7 mm ²
7.	D1	Vishay-Semiconductor	30WQ10FNPBF	VF@Io= 810.0 mV VRRM= 100.0 V	1	\$0.37	 DPAK 102 mm ²
8.	L1	Bourns	SRR1208-270ML	L= 27.0 uH DCR= 62.0 mOhm	1	\$0.37	 SRR1208 216 mm ²
9.	Rcomp	Vishay-Dale	CRCW0402110KFKED Series= CRCW..e3	Res= 110.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
10.	RenB	Vishay-Dale	CRCW040216K9FKED Series= CRCW..e3	Res= 16.9 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
11.	RenT	Vishay-Dale	CRCW0402105KFKED Series= CRCW..e3	Res= 105.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²

#	Name	Manufacturer	Part Number	Properties	Qty	Price	Footprint
12.	Rfbb	Vishay-Dale	CRCW040210K0FKED Series= CRCW..e3	Res= 10.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
13.	Rfbt	Vishay-Dale	CRCW040253K6FKED Series= CRCW..e3	Res= 53.6 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
14.	Rt	Vishay-Dale	CRCW0402536KFKED Series= CRCW..e3	Res= 536.0 kOhm Power= 63.0 mW Tolerance= 1.0%	1	\$0.01	 0402 3 mm ²
15.	U1	Texas Instruments	TPS54260DGQR	Switcher	1	\$1.86	 S-PDSO-G10 24 mm ²









Operating Values

#	Name	Value	Category	Description
1.	Cin IRMS	519.223 mA	Current	Input capacitor RMS ripple current
2.	Cout IRMS	236.305 mA	Current	Output capacitor RMS ripple current
3.	IC Ipk	2.5 A	Current	Peak switch current in IC
4.	Iin Avg	261.63 mA	Current	Average input current
5.	L Ipp	818.586 mA	Current	Peak-to-peak inductor ripple current
6.	BOM Count	17	General	Total Design BOM count
7.	FootPrint	418.0 mm ²	General	Total Foot Print Area of BOM components
8.	Frequency	238.757 kHz	General	Switching frequency
9.	Pout	12.5 W	General	Total output power
10.	Total BOM	\$4.64	General	Total BOM Cost
11.	D1 Tj	112.382 degC	Op_Point	D1 junction temperature
12.	Vout OP	5.0 V	Op_Point	Operational Output Voltage
13.	Cross Freq	18.837 kHz	Op_point	Bode plot crossover frequency
14.	Duty Cycle	9.594 %	Op_point	Duty cycle
15.	Efficiency	79.628 %	Op_point	Steady state efficiency
16.	IC Tj	88.72 degC	Op_point	IC junction temperature
17.	ICThetaJA	62.5 degC/W	Op_point	IC junction-to-ambient thermal resistance
18.	IOUT_OP	2.5 A	Op_point	Iout operating point
19.	Phase Marg	73.024 deg	Op_point	Bode Plot Phase Margin
20.	VIN_OP	60.0 V	Op_point	Vin operating point
21.	Vout p-p	10.279 mV	Op_point	Peak-to-peak output ripple voltage
22.	Cin Pd	735.987 μW	Power	Input capacitor power dissipation
23.	Cout Pd	698.003 μW	Power	Output capacitor power dissipation
24.	Diode Pd	1.831 W	Power	Diode power dissipation
25.	IC Pd	939.513 mW	Power	IC power dissipation
26.	L Pd	426.25 mW	Power	Inductor power dissipation
27.	Total Pd	3.198 W	Power	Total Power Dissipation

Design Inputs

#	Name	Value	Description
1.	Iout	2.5 A	Maximum Output Current
2.	Iout1	2.5 Amps	Output Current #1
3.	SoftStart	2.176 ms	Soft Start Time (ms)
4.	VinMax	60.0 V	Maximum input voltage
5.	VinMin	10.0 V	Minimum input voltage
6.	Vout	5.0 V	Output Voltage
7.	Vout1	5.0 Volt	Output Voltage #1
8.	base_pn	TPS54260	Texas Instruments Base Part Number
9.	source	DC	Input Source Type
10.	ta	30.0 degC	Ambient temperature
11.	userfs	238.758 kHz	Customer Selected Frequency

Design Assistance

1. TPS54260 Product Folder : <http://www.ti.com/product/tps54260> : contains the data sheet and other resources.

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