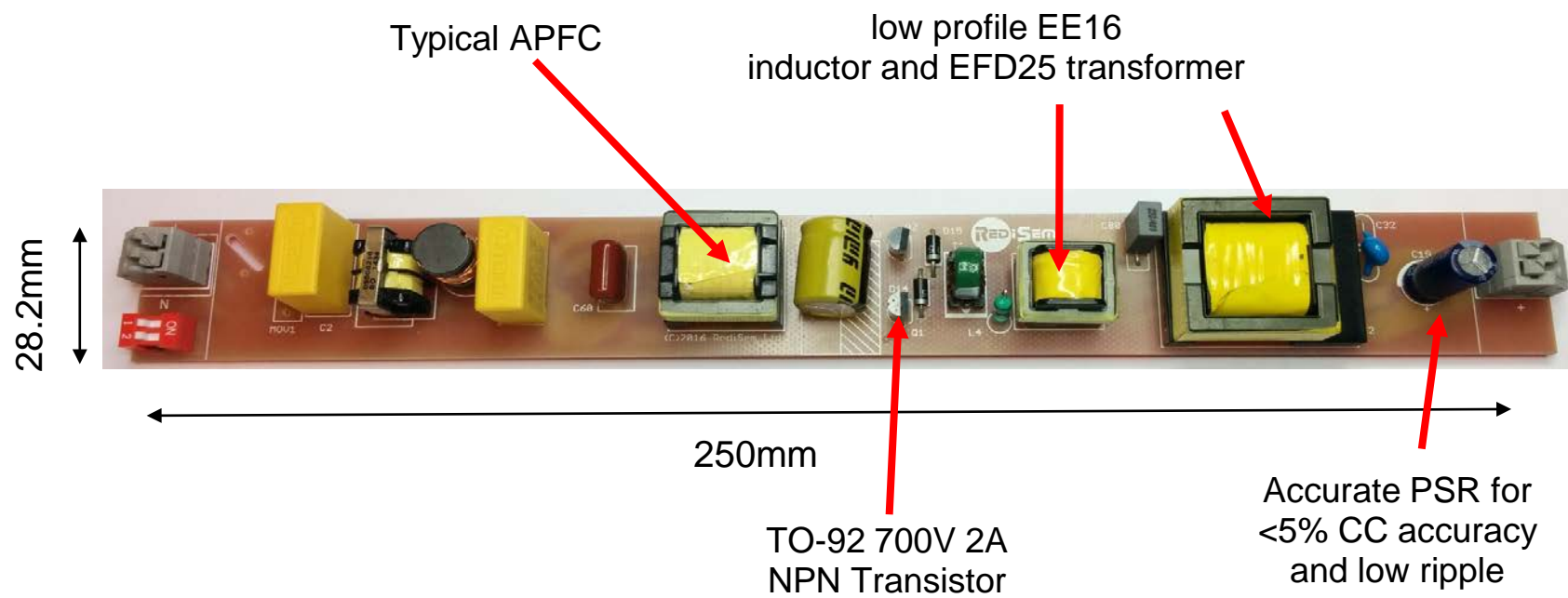




75W 27V~54V 1.4A Iset LED driver



RediSem IC	RED2601 SO8 LLC LED Driver IC
Output Power	75W
Output Current	1.4A Constant Current
Line regulation	0.1% (198 - 264VAC)
Load Regulation	0.1% (40 - 28V)
Output Voltage range	54 - 27V
Low Freq. Ripple	<1% @ 230V full load
Efficiency	92% @ 230V full load
Input	198-264VAC, 50Hz
Survive input range	170 - 320VAC
PF	0.97 @ 230V full load
THD	8.7% @ 230V full load
Time to Light	120ms
Size	250mm x 28.2mm x 24mm
Protection	Short circuit, Open Circuit, Over temperature, SELV
Converter	APFC LLC converter
Component Count	80



75W 27V~54V 1.4A Iset LED driver

Io = 1400mA (SW1 - OFF, SW2 - ON)

Input voltage	198V		220V		230V		240V		264V	
Input Power	43.00	83.26	42.88	82.81	42.82	82.70	42.77	82.43	42.69	82.13
Output Power	37.94	76.41	37.94	76.41	37.94	76.46	37.94	76.36	37.94	76.36
Output Voltage	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00
Output current	1405mA	1415mA	1405mA	1415mA	1405mA	1416mA	1405mA	1414mA	1405mA	1414mA
Efficiency	88.22%	91.77%	88.47%	92.27%	88.59%	92.46%	88.70%	92.63%	88.86%	92.97%
Power Factor			0.96	0.99	0.96	0.99	0.95	0.98		
THD										

Io = 1200mA (SW1 - ON, SW2 - OFF)

Input voltage	198V		220V		230V		240V		264V	
Input Power	38.17	73.64	38.10	73.32	38.06	73.17	38.04	73.07	37.98	72.88
Output Power	33.72	67.77	33.70	67.77	33.70	67.77	33.72	67.77	33.72	67.77
Output Voltage	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00
Output current	1249mA	1255mA	1248mA	1255mA	1248mA	1255mA	1249mA	1255mA	1249mA	1255mA
Efficiency	88.35%	92.03%	88.44%	92.43%	88.53%	92.62%	88.65%	92.75%	88.79%	92.99%
Power Factor			0.96	0.98	0.95	0.98	0.94	0.98		
THD										

Io = 1050mA (SW1 - OFF, SW2 - OFF)

Input voltage	198V		220V		230V		240V		264V	
Input Power	33.36	64.11	33.28	63.86	33.25	63.75	33.21	63.66	33.16	63.50
Output Power	29.40	59.02	29.38	59.02	29.40	59.02	29.38	59.02	29.38	59.02
Output Voltage	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00	27.00	54.00
Output current	1089mA	1093mA	1088mA	1093mA	1089mA	1093mA	1088mA	1093mA	1088mA	1093mA
Efficiency	88.14%	92.06%	88.27%	92.42%	88.43%	92.58%	88.46%	92.71%	88.59%	92.95%
Power Factor			0.94	0.98	0.93	0.98	0.92	0.97		
THD										

Test	Result	Condition
Peak no-load Voltage	62.00V	230VAC
Load Regulation 54 - 32V	-0.78%	230VAC
Time To light	190ms	230VAC

Line regulation

input voltage	198V	264V
output current regulation at 40V	-0.07%	-0.14%
output current regulation at 28V	0.00%	0.00%

Low Frequency Visible Current Ripple

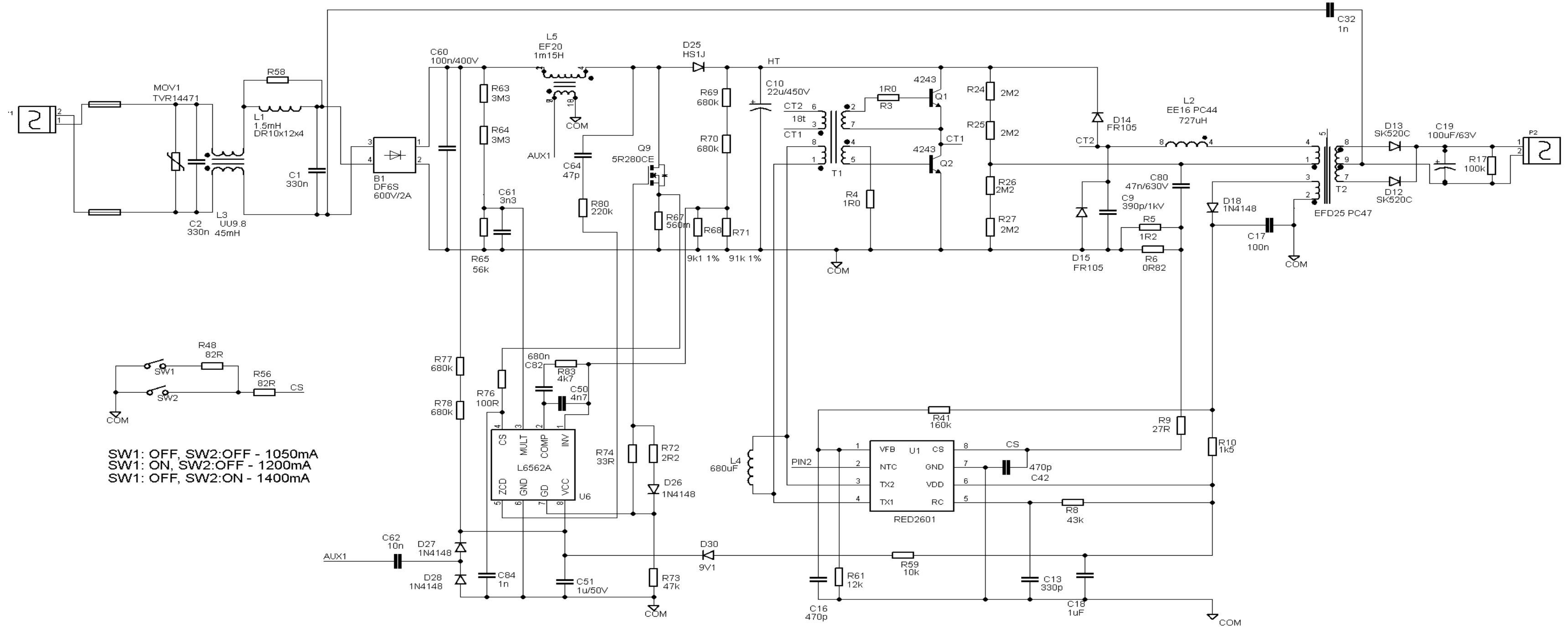
output voltage	27V	54V
output current (pk-pk)	8mA	15mA
output current ripple (pk-pk/avg)	0.28%	0.51%

Input power at 264Vac , Short circuit	<0.5W
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75W 27V~54V 1.4A Iset LED driver

Code	Value	Description	Qty	Supplier	Part no.
B1	DF6S	600V 2A Bridge rectifier	1		
C1, C2	330n	XCAP	2		
C9	390p	1206 NPO 5% 630VDC	1	Murata	
C10	22u	ELEC 20% 450VDC	1	Ymin	
C13	330p	0805 X7R 10% 25VDC	1	Murata	
C16	470p	0805 X7R 10% 25VDC	1		
C17	100n	0805 X7R 10% 50VDC	1		
C18	1uF	0805 X7R 10% 10VDC	1		
C19	82uF	ECAP 20% 63VDC	1	RZ Aishi	
C32	1N	Y-CAP	1		
C42	470p	0805 X7R 10% 50VDC	1		
C50	4n7	0805 X7R 10% 50VDC	1		
C51	1uF	0805 X7R 10% 50VDC	1		
C60	100n	MKP 5% 400VDC	1	Fara	
C61	3n3	0805 X7R 10% 50VDC	1		
C62	10n	0805 X7R 10% 50VDC	1		
C64	47p	1206 X7R 10% 1kVDC	1		
C80	47n	MKP 5% 630VDC	1	Fara	
C82	680n	0805 X7R 10% 50VDC	1		
C84	1n	0805 X7R 10% 50VDC	1		
D12 13	SK520C	200V 5A Diode	2	TSC	
D14 15	FR105	Fast Diode 600VDC	2	TSC/Vishay	
D18 26 27 28	1N4148	small signal schottky diode	4		
D25	HS1J	600V 1A Diode	1		
D30	9V1	zener diode	1		
L1	1m5H	Drum core 10 x 12 x 4	1		W10021
L2	727uH	main inductor EE16	1		W20045
L3	45mH	UU9.8	1		W30020
L4	680uH	0410 inductor	1		
L5	1m15H	APFC inductor EF20H	1		
MOV1	TVR14471	MOV	1		
P1 P2		terminal	2		
Q1 Q2	3DD4243DT	NPN transistor To-92 400V 2A	2	Jilin Huawei	
Q9	5R280CE	MOSFET 500V/8A DPAK	1		
R3 4	1R	0805 1% resistor	2		
R5	1R2	1206 1% resistor	1		
R6	0R82	1206 1% resistor	1		
R8	43k	0805 1% resistor	1		
R9	27R	0805 1% resistor	1		
R10	1k5	0805 1% resistor	1		
R17	100k	1206 1% resistor	1		
R24 25 26 27	2M2	1206 1% resistor	4		
R41	160k	0805 1% resistor	1		
R48 56	82R	0805 1% resistor	2		
R59	10k	0805 1% resistor	1		
R61	12k	0805 1% resistor	1		
R63 64	3M3	1206 1% resistor	2		
R65	56k	0805 1% resistor	1		
R67	0R56	1206 1% resistor	1		
R68	9K1	08051% resistor	1		
R69 70	680k	1206 1% resistor	2		
R71	91k	0805 1% resistor	1		
R72	2R2	0805 1% resistor	1		
R73	47k	0805 1% resistor	1		
R74	33R	0805 1% resistor	1		
R76	100R	0805 1% resistor	1		
R77 78	680k	1206 1% resistor	2		
R80	220k	1206 1% resistor	1		
R83	4k7	0805 1% resistor	1		
SW1		DIP switch	1		
T1		Base drive	1		
T2	EFD25	output Transformer	1		W40034
U1	RED2601	SO8 IC	1	RediSem	
U6	L6562A	APFC SO8 IC	1	ST	
		Total	80		



75W:					
APFC Inductor		Resonant Inductor		Transformer	
CoreType	EF20	CoreType	EE16	Core type	EFD25
Material	PC44	Material	PC44	Material	PC44
Value	1150uH	Value	727 uH	Pri	72t x 1s x 0.4mm ECW
Winding	W1: 200t X 10s x 0.10mm W2: 11t X 1s x 0.15mm	Winding	129t x 10s x 0.10mm	Aux	6t x 1s x 0.15mm ECW
				Sec1	22t x 1s x 0.5mm TEXE
				Sec2	22t x 1s x 0.5mm TEXE