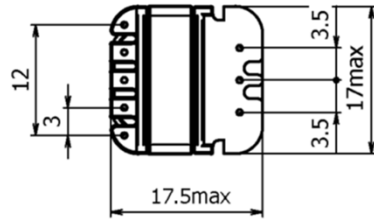
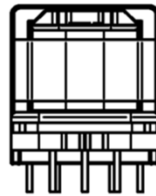
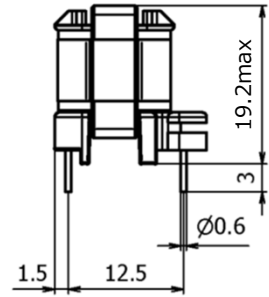
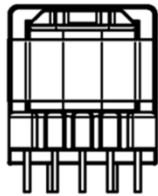
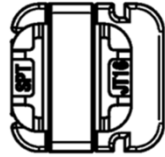
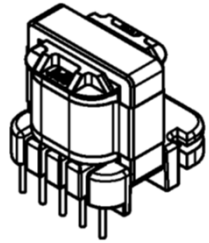


PN : JT0505R-2P

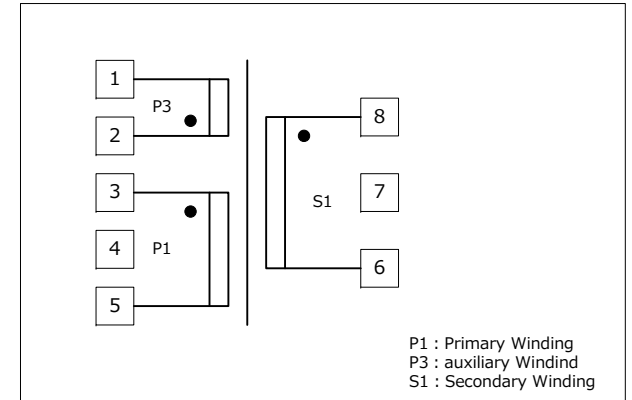


RoHS compliant

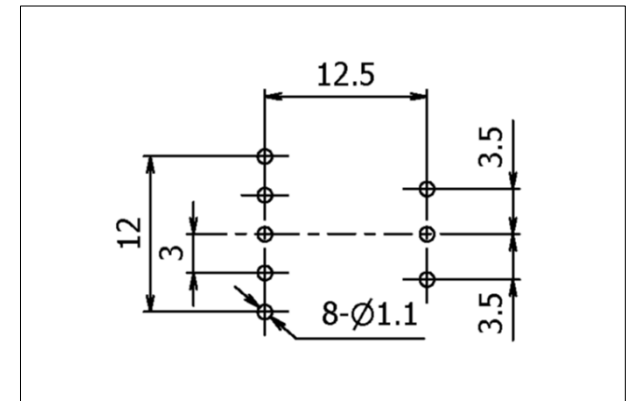


Bobbin : JT16
Ferrite core : EE16

Dimensions



Schematics (Top View)



Recommended PCB hole size (Bottom view)

1. Specifications are subject to change for improvement without notice.
2. Please request us detailed specification.



TEST REPORT

Product Name	Test Board
Product Number	EVA-JT0505R-2P
Design Number	PS1232A
Sheet Number	
Date	2017/9/21

Meet Safety Standards
IEC 60950 PSE

Specification

Trans type : JT16

IC name : BM2P093F (ROHM)

Input voltage : AC100V - 240V (85V ~ 264V)

Input frequency : 50Hz / 60Hz (47Hz ~ 63Hz)

Output power : 5W

Output voltage : 5V (4.75V ~ 5.25V)

Output current : 1.0A

Ripple noise : 400mVp-p typ (AC100V) 540mVp-p typ (AC240V)

Standby power : 0.02W typ (AC100V) 0.05W typ (AC240V)

Efficiency : 82.9% (AC100V) 82.3% (AC240V)

Over load protect : Auto restart

Over voltage protect : Latch

Over temperature protect : 145°C (typ)

Operating temperature : -10°C ~ +50°C

Storage temperature : -30°C ~ +85°C

Hi-pot test : 3000V 1min.

Dimensions : 38.0 × 25.0 × 18.0 (mm)

Weight : 15.3g

Alphatrans co., ltd.

4-4-11 Bakurou-machi, Chuo-ku, Osaka

541-0059 Japan

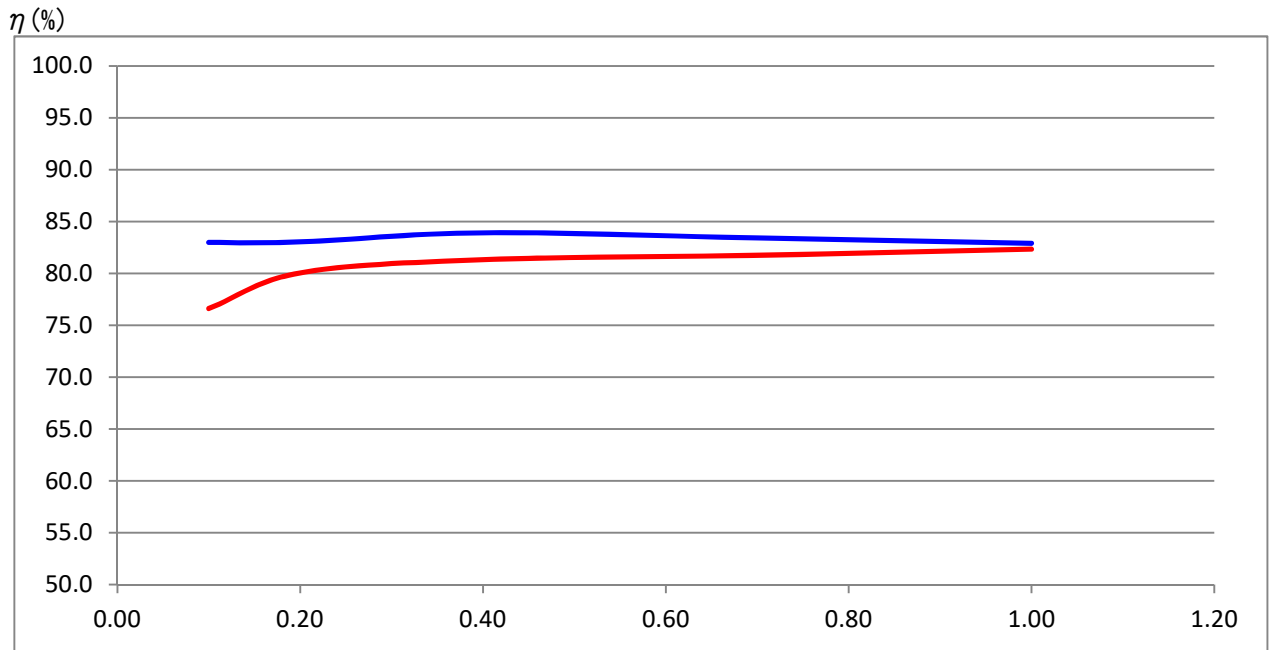
TEL (06) 6252-8839 FAX (06) 6252-3939

<http://www.alphatrans.jp/>

Approve	Check	Drawn
T.Hagimoto	E .Fujishita	M .Omori

Load Regulation

AC in (V)	5V (V)	5V (A)	Bias (V)	I in (mA)	P in (W)	P out (W)	P loss (W)	効率 (%)
100	4.996	0.00	15.30	0.63	0.018	0.000	0.018	0.0
100	4.995	0.10	17.57	20.13	0.602	0.500	0.103	83.0
100	4.994	0.20	17.65	34.84	1.203	0.999	0.204	83.0
100	4.993	0.40	17.80	59.20	2.380	1.997	0.383	83.9
100	4.992	0.70	17.96	92.02	4.189	3.494	0.695	83.4
100	4.991	1.00	18.17	123.28	6.020	4.991	1.029	82.9
240	4.996	0.00	14.15	0.40	0.046	0.000	0.046	0.0
240	4.995	0.10	18.03	11.66	0.652	0.500	0.153	76.6
240	4.995	0.20	18.13	23.23	1.248	0.999	0.249	80.0
240	4.993	0.40	18.15	40.56	2.456	1.997	0.459	81.3
240	4.991	0.70	18.16	58.06	4.274	3.494	0.780	81.7
240	4.989	1.00	18.21	76.62	6.060	4.989	1.071	82.3



(A)

Over Current Protection

AC100V: 1.55A

AC240V: 1.80A

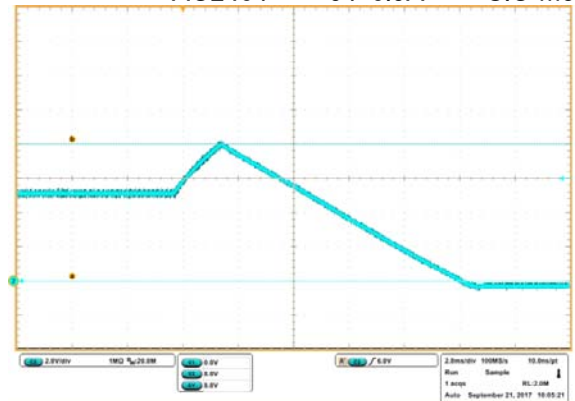
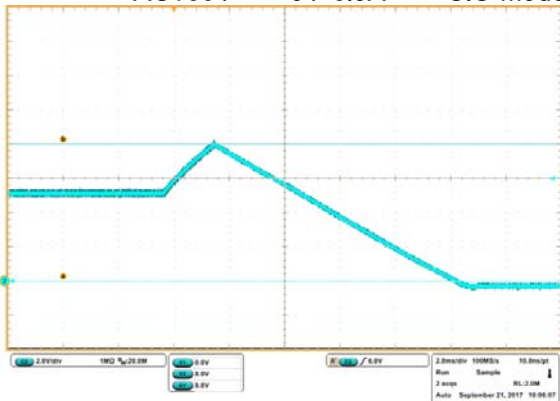
Over Voltage Protection

AC100V: 8.0V 1.8ms

AC240V: 8.0V 1.6ms

AC100V 5V 0.5A C.C mode

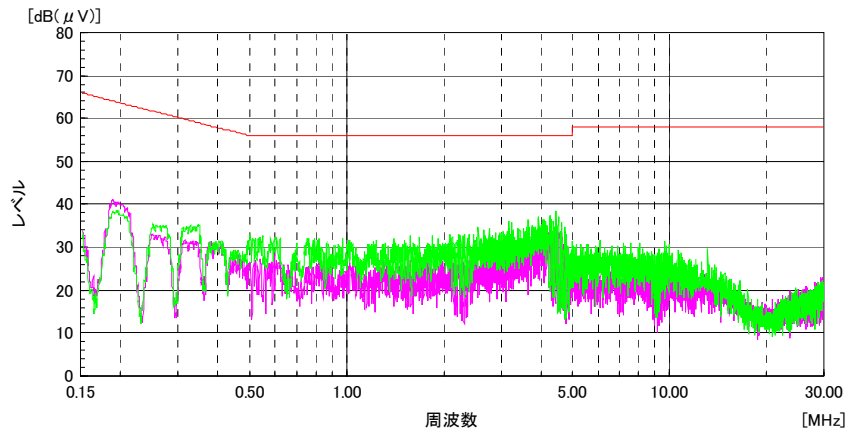
AC240V 5V 0.5A C.C mode



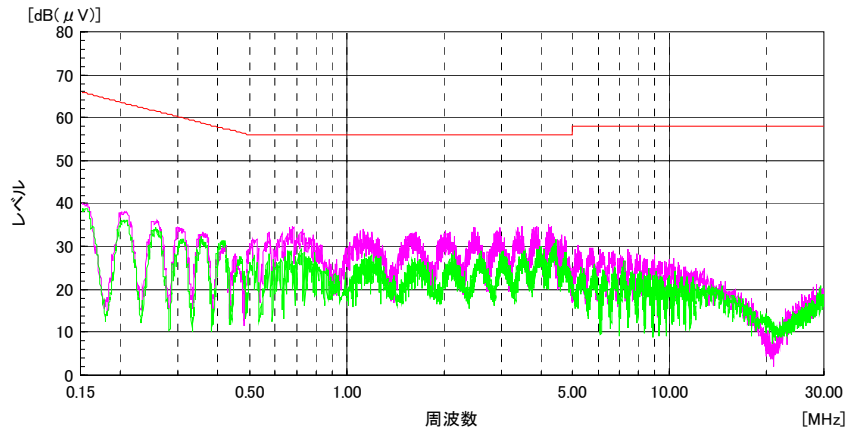
※U3 R-A short

Conducted EMI noise

input:
AC100V
output:
5V 1.0A

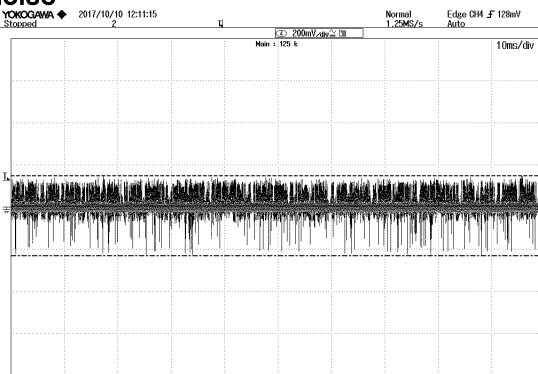


input:
AC240V
output:
5V 1.0A

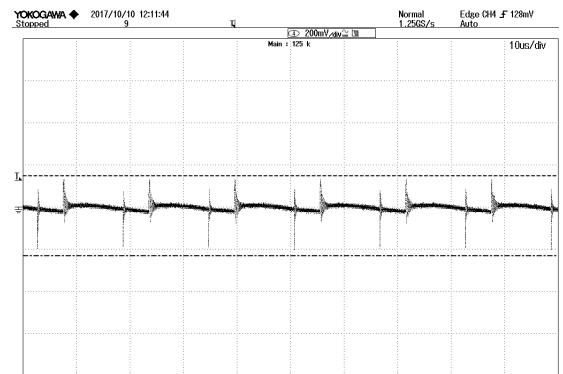


Output ripple noise

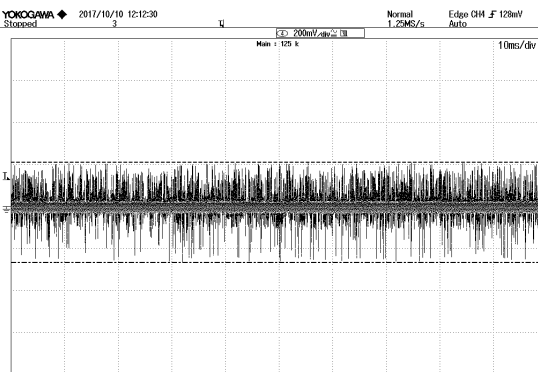
input:
AC100V
output:
5V 1.0A



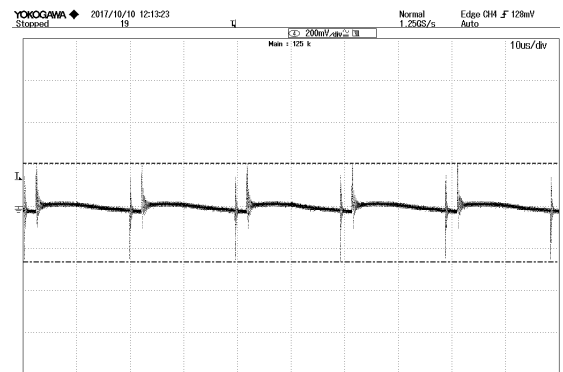
Ripple Noise:
380mVp-p



input:
AC240V
output:
5V 1.0A

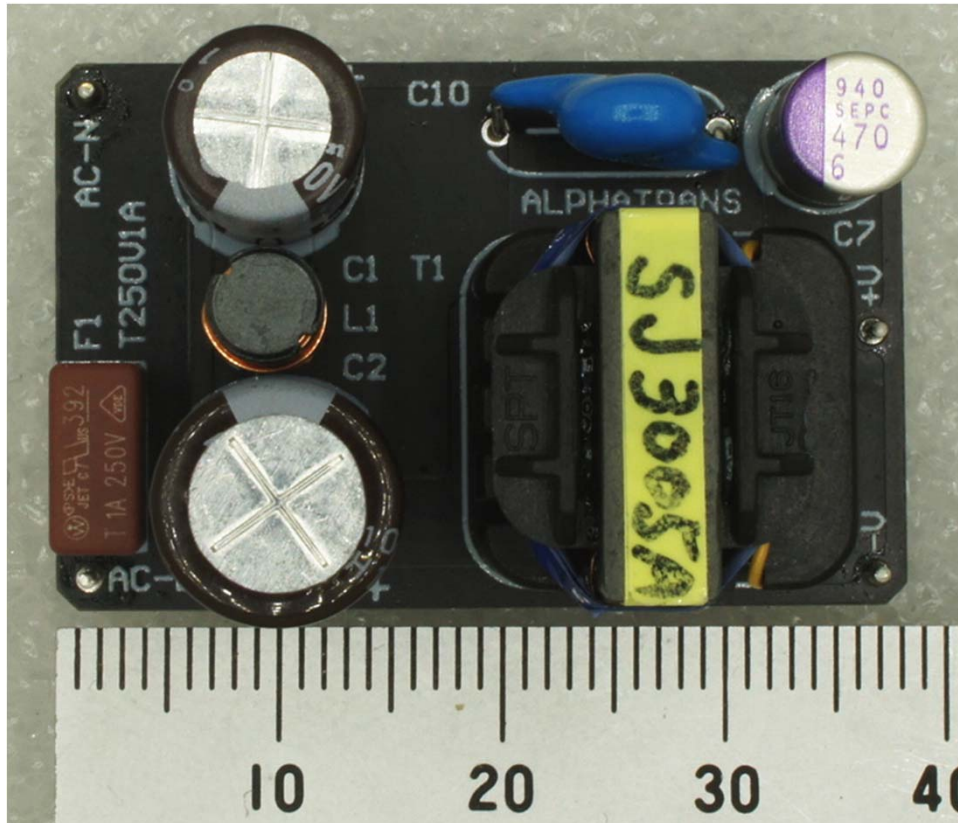


Ripple Noise:
476mVp-p



Differential Probe: (DP-100 Keisoku Giken)

Test board image

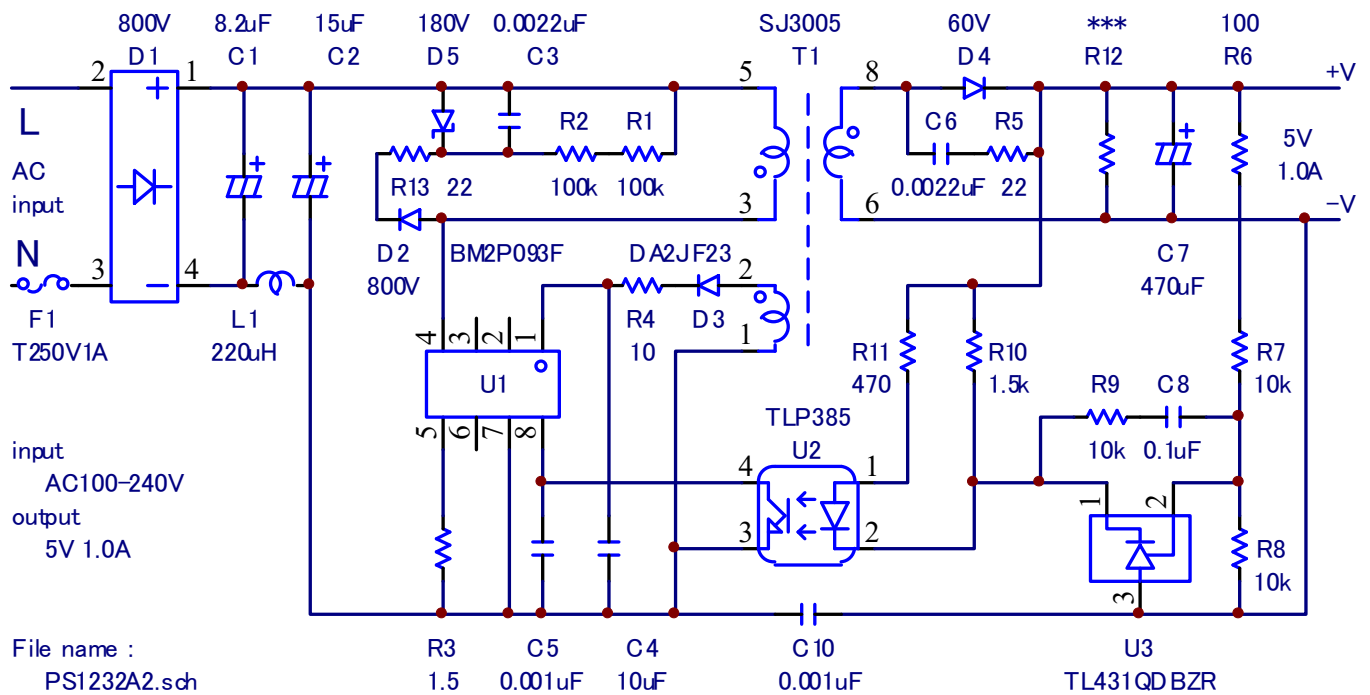


Temperature & Life

input: AC100~240V			
output: 5V 1.0A	C1	105 °C	UVC2G8R2MPD
mean temperature : 40 °C	C2	105 °C	UVC2G150MPD
max operating temperature: 50 °C	C7	105 °C	6SEPC470MW
			2000 (hour)
			2000 (hour)
			5000 (hour)

		input AC85V (°C)	input AC100V (ΔT)	input AC240V (°C)	input AC264V (ΔT)	limit temp (°C)	max temp (°C)	margin	mean temp	40°C	40°C	
										Life (hour)	Life (Year)	
①	Reference	(°C) 27.2	—	(°C) 27.5	—	(°C) 27.9	—	—	—	—	—	
②	D1	(°C) 45.0	17.8	(°C) 43.5	16.1	(°C) 39.4	11.5	39.7	11.4	150	67.8	82.3
③	C1	(°C) 41.1	13.9	(°C) 40.3	12.9	(°C) 38.6	10.8	38.6	10.3	105	63.9	41.2
④	L1	(°C) 44.3	17.1	(°C) 43.3	15.9	(°C) 41.0	13.2	41.5	13.1	120	67.1	53.0
⑤	C2	(°C) 42.6	15.4	(°C) 41.8	14.3	(°C) 39.6	11.8	40.5	12.1	105	65.4	39.7
⑥	D2	(°C) 50.0	22.8	(°C) 49.2	21.8	(°C) 47.1	19.2	48.2	19.8	150	72.8	77.3
⑦	D5	(°C) 47.6	20.4	(°C) 46.7	19.2	(°C) 43.0	15.1	44.1	15.8	150	70.4	79.6
⑧	R13	(°C) 47.9	20.7	(°C) 47.2	19.8	(°C) 44.4	16.6	45.6	17.2	150	70.7	79.3
⑨	U1	(°C) 53.3	26.1	(°C) 51.9	24.4	(°C) 49.4	21.5	50.5	22.1	105	76.1	29.0
⑩	T1 wire	(°C) 51.3	24.1	(°C) 51.4	23.9	(°C) 53.0	25.1	54.4	26.1	120	76.1	44.0
⑪	T1 core	(°C) 51.2	24.0	(°C) 51.2	23.8	(°C) 53.8	26.0	54.6	26.2	120	76.2	43.8
⑫	D4	(°C) 61.6	34.4	(°C) 62.1	34.6	(°C) 65.6	37.7	67.0	38.7	150	88.7	61.4
⑬	C7	(°C) 49.7	22.5	(°C) 49.8	22.3	(°C) 53.8	25.9	54.5	26.1	105	76.1	28.9
⑭	U3	(°C) 45.5	18.3	(°C) 46.1	18.6	(°C) 47.1	19.3	48.9	20.6	125	70.6	54.5
										66.1	74127	8.5

Schematic Diagram



Parts List

REF.No	Description	TYPE	Specification	Manufacture
C1	Electrol Capacitor	UVC2G8R2MPD	8.2uF 400V 2000H ϕ 8x16.0 P=3.5	Nichicon
C2	Electrol Capacitor	UVC2G150MPD	15uF 400V 2000H ϕ 10x16.0 P=5.0	Nichicon
C3	Ceramic Capacitor	GRM21AR72E222K	0.0022uF 250V X7R 2012	MURATA
C4	Ceramic Capacitor	GRM21BC8YA106K	10uF 35V X6S 2012	MURATA
C5	Ceramic Capacitor	GRM188R72E102K	0.001uF 50V X7R 1608	MURATA
C6	Ceramic Capacitor	GRM188R72E222K	0.0022uF 250V X7R 1608	MURATA
C7	Electrol Capacitor	6SEPC470MW	470uF 6.3V 5000H ϕ 6.3x9.0 P=2.5	Panasonic
C8	Ceramic Capacitor	GRM188B31H104K	0.1uF 50V B 1608	MURATA
C10	Ceramic Capacitor	CD45-E2GA102M-NKA	0.001uF AC250V ϕ 8.5x7 P=10.0	TDK
D1	Diode Bridge	D1UBA80-7062	800V 1A	Shindengen
D2	Diode	RFU02VSM8STR	800V 0.2A TUMD2SM D2014	ROHM
D3	Diode	DA2JF23	300V 0.3A SMini2-F5-B D1712	Panasonic
D4	Diode	RBR5L60A	60V 5A PMDS D4526	ROHM
D5	Zener Diode	DFLZ180	180V 1W D2818	MCC
F1	Fuse	39211000440	1A 250V T	Littelfuse
L1	Choke Coil	LF1244Y	220uH CH5011	Alphatrans
R1	Resistor	MCR10EZPJ104	100k 1/8W 150V 2012	ROHM
R2	Resistor	MCR10EZPJ104	100k 1/8W 150V 2012	ROHM
R3	Resistor	MCR10EZPJ1R5	1.5 1/8W 150V 2012	ROHM
R4	Resistor	MCR03EZPJ100	10 1/10W 50V 1608	ROHM
R5	Resistor	MCR10EZPJ220	22 1/8W 150V 2012	ROHM
R6	Resistor	MCR03EZPJ101	100 1/10W 50V 1608	ROHM
R7	Resistor	MCR03EZPFX1002	10k 1/10W 50V 1% 1608	ROHM
R8	Resistor	MCR03EZPFX1002	10k 1/10W 50V 1% 1608	ROHM
R9	Resistor	MCR03EZPJ103	10k 1/10W 50V 1608	ROHM
R10	Resistor	MCR03EZPJ152	1.5k 1/10W 50V 1608	ROHM
R11	Resistor	MCR03EZPJ471	470 1/10W 50V 1608	ROHM
R12	***	***	*** 3216	***
R13	Resistor	MCR10EZPJ220	22 1/8W 150V 2012	ROHM
T1	Transformer	JT0505R-2P	SJ3005A JT16	Alphatrans
U1	IC	BM2P093F	650V SOP8	ROHM
U2	Optical	TLP385 (GR)	5000V SOP4 8mm	Toshiba
U3	Shunt Reg.	TL431QDBZR	2.495V 2% SOT23-3	Texas Instruments
	PCB	PW1135A	FR-4 t=1.0	
	Terminal	DC-5		マックエイト