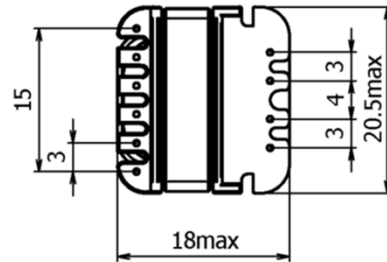
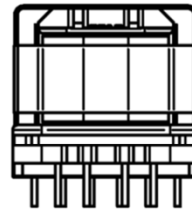
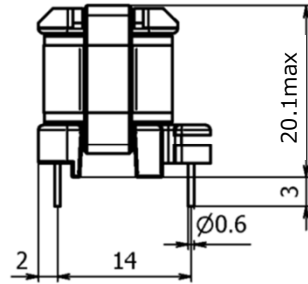
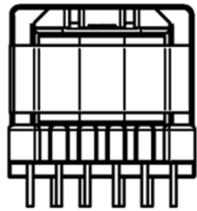
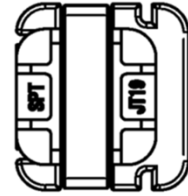
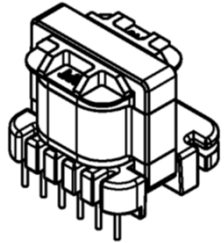


PN : JT1005N-2K

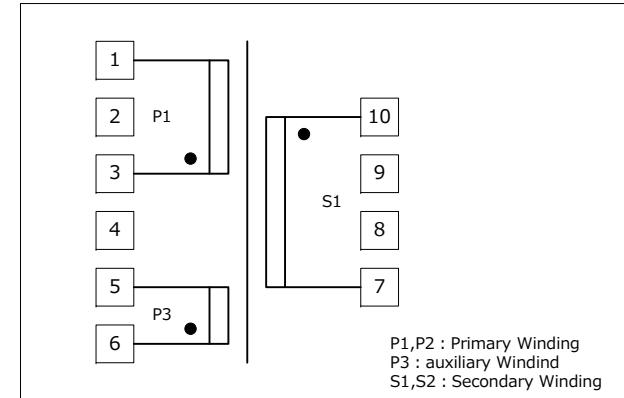


RoHS compliant

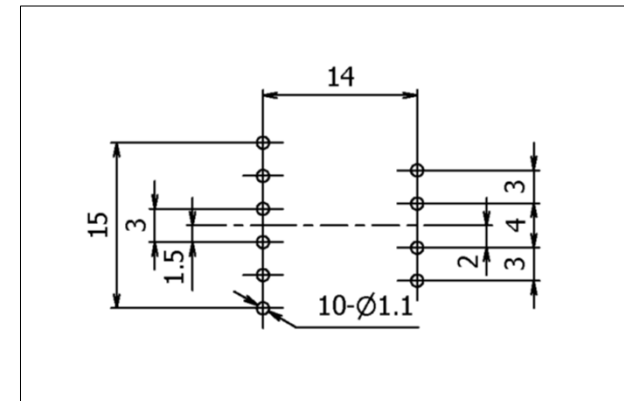


Bobbin : JT19
Ferrite core : EE19

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-JT1005N-2K
Design Number	PS1208A
Sheet Number	
Date	2017/9/27

Meet Safety Standards
IEC 60950 PSE

Specification

Trans type : JT19

IC name : MIP2K4 (Panasonic)

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

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

Output power : 10W

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

Output current : 2.0A

Ripple noise : 230mVp-p typ (AC100V) 260mVp-p typ (AC240V)

Standby power : 0.04W typ (AC100V) 0.07W typ (AC240V)

Efficiency : 80.3% (AC100V) 81.1% (AC240V)

Over load protect : Auto restart

Over voltage protect : Latch

Over temperature protect : 140°C (typ)

Operating temperature : -10°C ~ +50°C

Storage temperature : -30°C ~ +85°C

Hi-pot test : 3000V 1min.

Dimensions : 54.0 × 28.0 × 21.0 (mm)

Weight : 23.4g

Alphatrans co., ltd.

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

541-0059 Japan

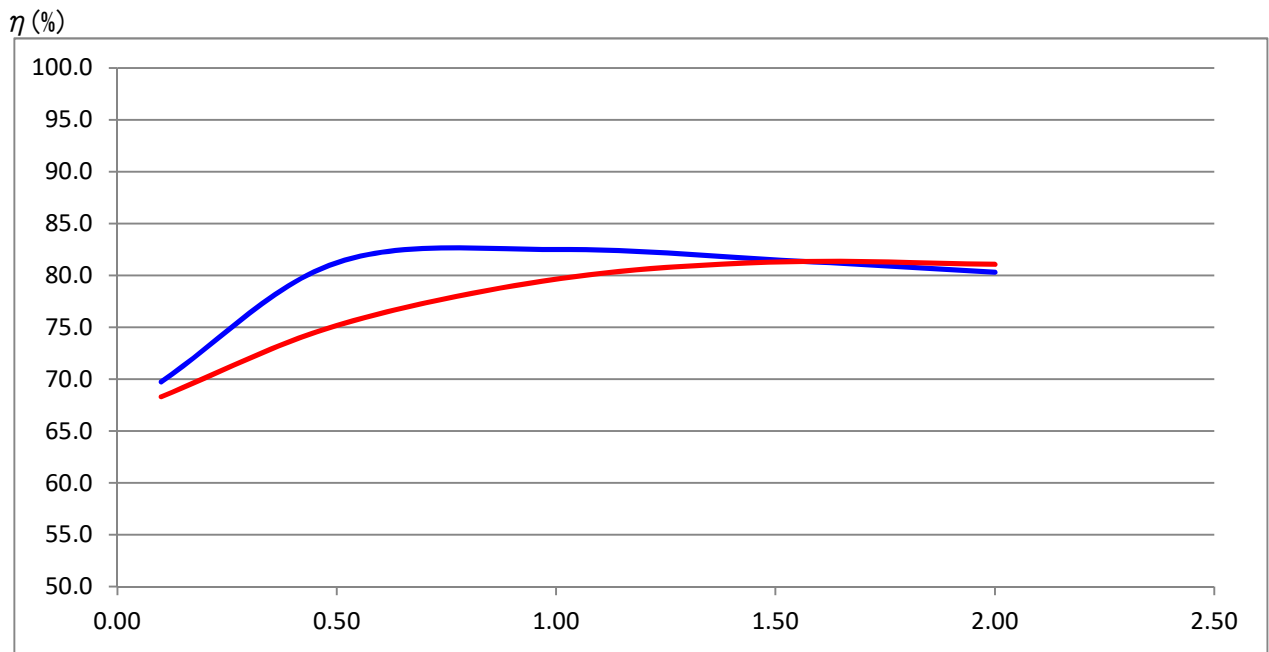
TEL (06) 6252-8839 FAX (06) 6252-3939

<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)	η (%)
100	4.980	0.00	9.87	1.30	0.036	0.00	0.04	0.0
100	4.979	0.10	11.77	26.16	0.714	0.50	0.22	69.7
100	4.979	0.50	12.20	79.76	3.065	2.49	0.58	81.2
100	4.979	1.00	12.81	137.14	6.035	4.98	1.06	82.5
100	4.978	1.50	13.51	190.65	9.161	7.47	1.69	81.5
100	4.977	2.00	14.19	244.10	12.396	9.95	2.44	80.3
240	4.980	0.00	9.87	0.76	0.067	0.00	0.07	0.0
240	4.979	0.10	11.90	12.34	0.729	0.50	0.23	68.3
240	4.979	0.50	12.13	55.70	3.312	2.49	0.82	75.2
240	4.979	1.00	12.54	88.66	6.252	4.98	1.27	79.6
240	4.978	1.50	13.06	116.92	9.186	7.47	1.72	81.3
240	4.977	2.00	13.66	149.15	12.280	9.95	2.33	81.1



(A)

Over Current Protection

AC100V: 3.7A

AC240V: 4.0A

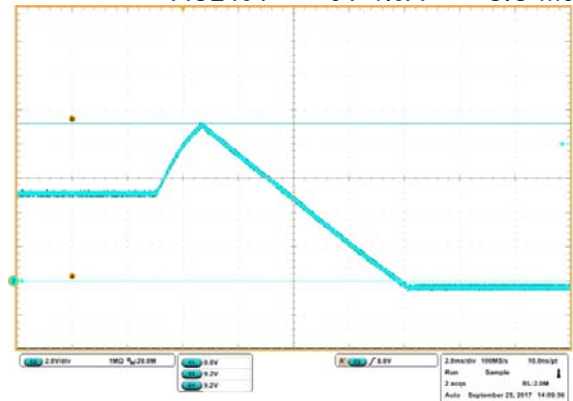
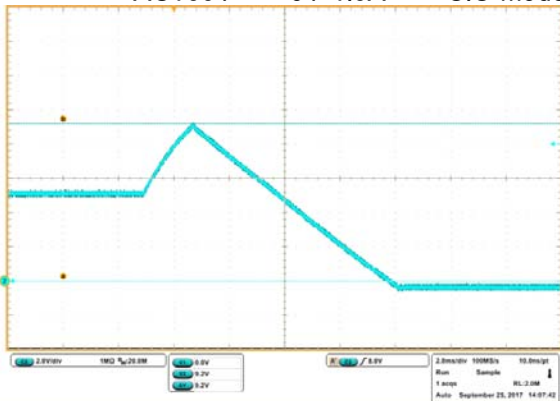
Over Voltage Protection

AC100V: 9.2V 1.8ms

AC240V: 9.2V 1.6ms

AC100V 5V 1.0A C.C mode

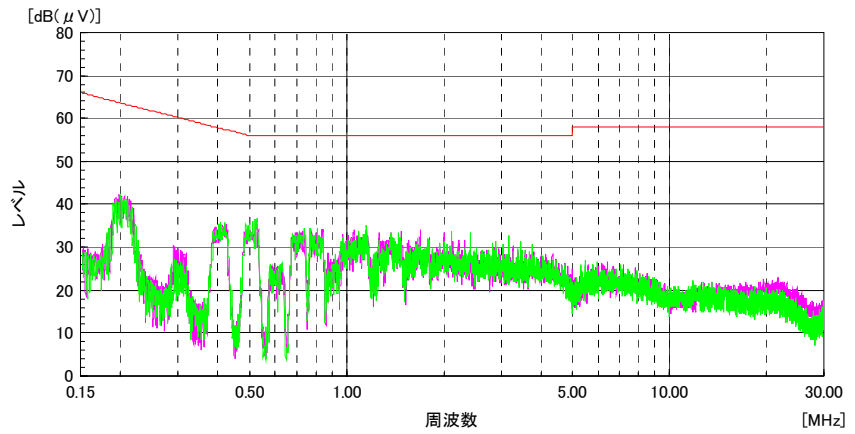
AC240V 5V 1.0A C.C mode



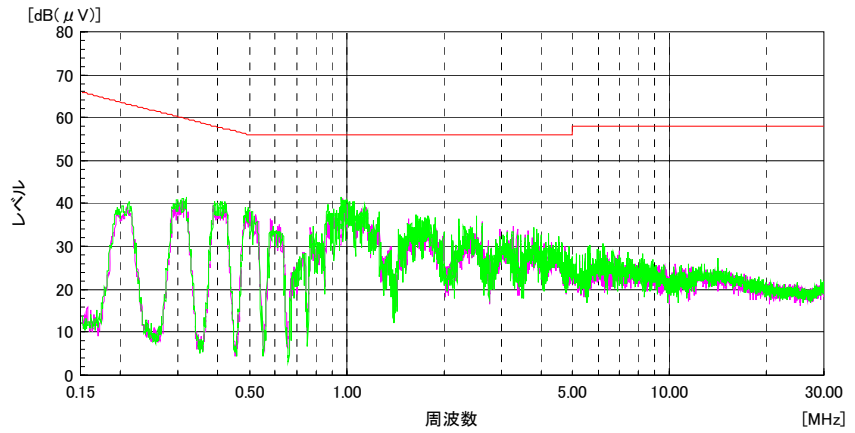
※U3 R-A short

Conducted EMI noise

input:
AC100V
output:
5V 2.0A

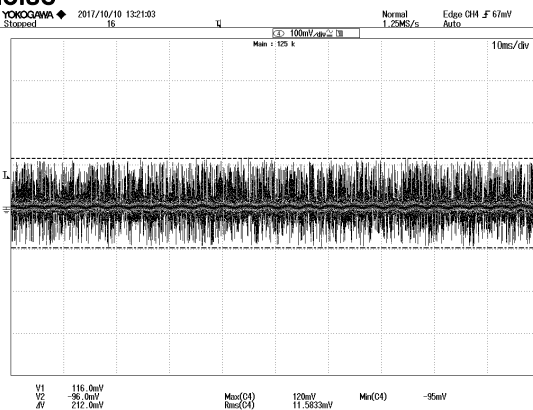


input:
AC240V
output:
5V 2.0A

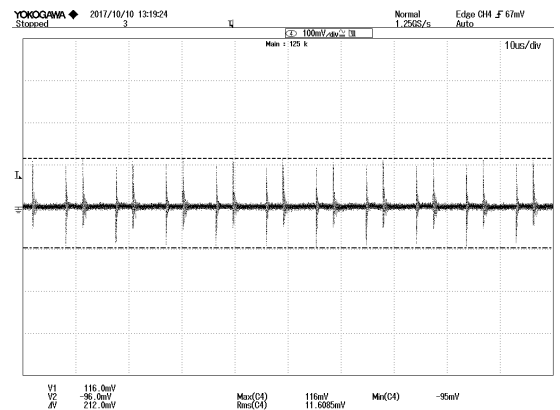


Output ripple noise

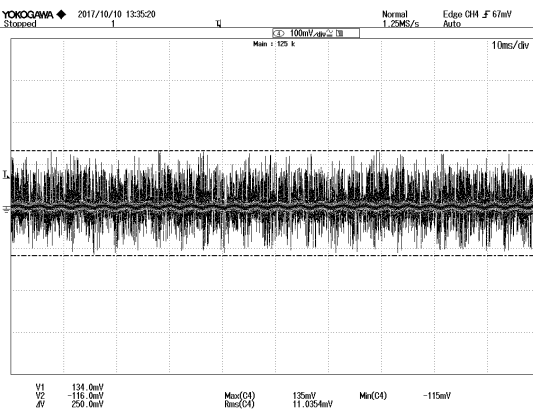
input:
AC100V
output:
5V 2.0A



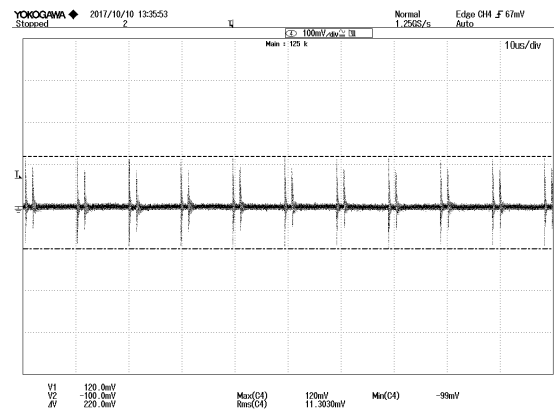
Ripple Noise:
212mVp-p



input:
AC240V
output:
5V 2.0A

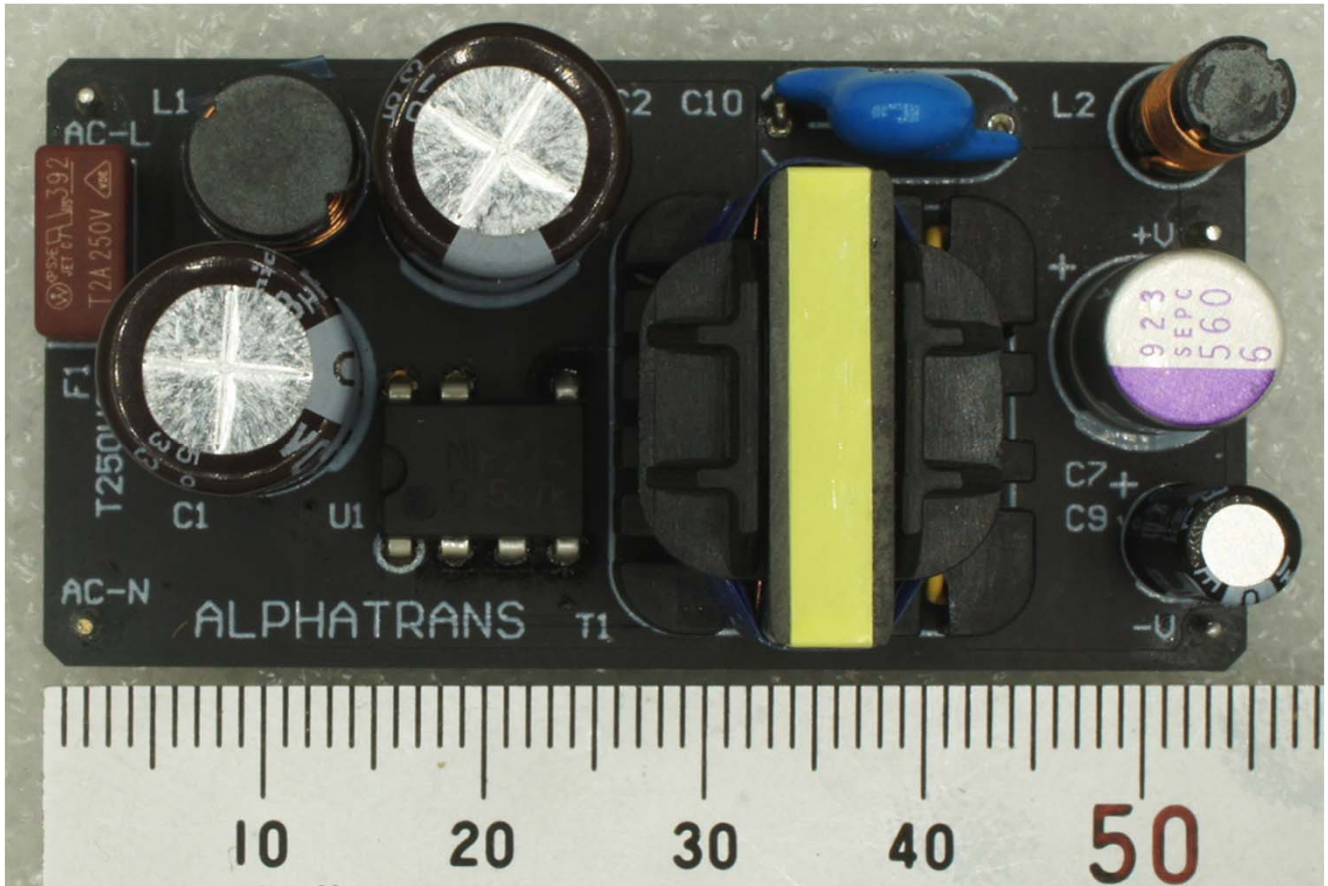


Ripple Noise:
250mVp-p



Differential Probe: (DP-100 Keisoku Giken)

Test board image

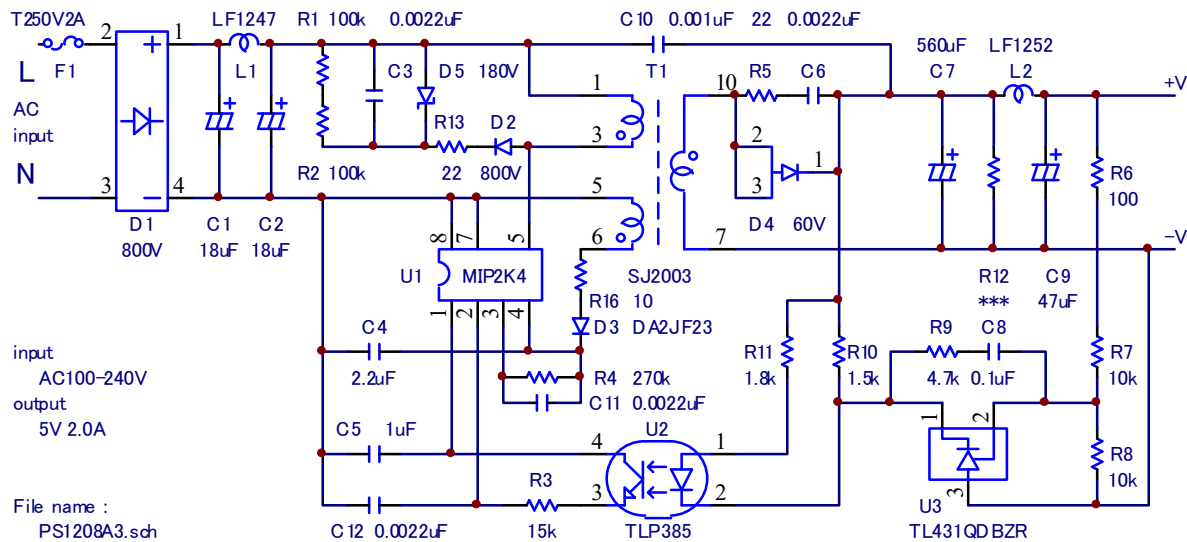


Temperature & Life

input: AC100~240V	C1	105 °C	UVC2G180MPD	2000 (hour)
output: 5V 2.0A	C2	105 °C	UVC2G180MPD	2000 (hour)
mean temperature : 40 °C	C7	105 °C	6SEPC560MX	5000 (hour)
max operating temperature: 50 °C	C9	105 °C	UHE1A101MDD	5000 (hour)

		input AC85V (°C)	input AC100V		input AC240V		input AC264V		limit temp (°C)	max temp (°C)	margin	mean temp	40°C Life (hour)	40°C Life (Year)		
			(°C)	(ΔT)	(°C)	(ΔT)	(°C)	(ΔT)							(°C)	(ΔT)
①	Reference	(°C)	28.5	—	29.1	—	29.1	—	—	—	—					
②	D1	(°C)	62.3	33.8	57.7	28.6	48.6	19.5	49.7	20.8	150	83.8	66.2			
③	C1	(°C)	54.4	25.9	50.7	21.6	46.5	17.4	47.3	18.4	105	75.9	29.1	65.9	30065	3.4
④	L1	(°C)	58.4	30.0	55.0	26.0	50.3	21.2	50.8	21.9	120	80.0	40.1			
⑤	C2	(°C)	59.6	31.1	55.9	26.9	51.7	22.6	52.5	23.6	105	81.1	23.9	62.6	37792	4.3
⑥	D5	(°C)	74.1	45.7	68.9	39.8	60.0	30.9	60.9	32.0	150	95.7	54.4			
⑦	U1	(°C)	76.5	48.1	71.0	41.9	64.3	35.2	67.5	38.6	130	98.1	32.0			
⑧	T1 wire	(°C)	73.5	45.1	70.7	41.6	69.7	40.6	71.4	42.5	120	95.1	25.0			
⑨	T1 core	(°C)	73.6	45.2	69.0	39.9	69.1	40.0	70.9	42.0	120	95.2	24.9			
⑩	D4	(°C)	79.0	50.5	75.8	46.8	77.1	48.0	80.7	51.8	175	101.8	73.2			
⑪	C7	(°C)	66.1	37.7	62.0	33.0	62.2	33.1	64.8	35.9	105	87.7	17.4	73.1	45789	5.2
⑫	L2	(°C)	68.2	39.8	63.5	34.4	63.2	34.1	66.3	37.4	120	89.8	30.3			
⑬	C9	(°C)	52.3	23.8	49.0	19.9	48.1	19.0	50.0	21.1	105	73.8	31.2	59.0	121678	13.9
⑭	U3	(°C)	59.5	31.0	56.2	27.2	55.7	26.6	58.4	29.5	125	81.0	44.0			
⑮																

Schematic Diagram



Parts List

REF.No	Description	TYPE	Specification				Manufacture
C1	Electrol Capacitor	UVC2G180MPD	18uF	400V	2000H	φ 10x20 P=5.0	Nichicon
C2	Electrol Capacitor	UVC2G180MPD	18uF	400V	2000H	φ 10x20 P=5.0	Nichicon
C3	Ceramic Capacitor	C3216JB2J222K	0.0022uF	630V	B	3216	TDK
C4	Ceramic Capacitor	C2012JB1H225K	2.2uF	50V	B	2012	TDK
C5	Ceramic Capacitor	C1608JB1H105K	1uF	50V	B	1608	TDK
C6	Ceramic Capacitor	GRM188R72E222K	0.0022uF	250V	X7R	1608	MURATA
C7	Electrol Capacitor	6SEPC560MX	560uF	6.3V	5000H	φ 8x9.0 P=3.5	Panasonic
C8	Ceramic Capacitor	C1608JB1H104K	0.1uF	50V	B	1608	TDK
C9	Electrol Capacitor	UHE1A101MDD	100uF	10V	5000H	φ 5x11 P=2.5	Nichicon
C10	Ceramic Capacitor	CD45-E2GA102M-NKA	0.001uF	AC250V		φ 8.5x7 P=10.0	TDK
C11	Ceramic Capacitor	C1608CH1H222K	0.0022uF	50V	CH	1608	TDK
C12	Ceramic Capacitor	C1608CH1H222K	0.0022uF	50V	CH	1608	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	V25PL60-M3	60V	25A		TO-277A	Vishay
D5	Zener Diode	DFLZ180	180V	1W		D2818	MCC
F1	Fuse	39212000000	2A	250V	T	8.5x4 P=5.08	Littelfuse
L1	Choke Coil	LF1247				DR8V	AlphaTrans
L2	Choke Coil	LF1252				DR5V	Alphatrans
R1	Resistor	MCR18EZPJ104	100k	1/4W	200V	3216	ROHM
R2	Resistor	MCR18EZPJ104	100k	1/4W	200V	3216	ROHM
R3	Resistor	MCR03EZPJ153	15k	1/10W	50V	1608	ROHM
R4	Resistor	MCR03EZPJ274	270k	1/10W	50V	1608	ROHM
R5	Resistor	MCR18EZPJ220	22	1/4W	200V	3216	ROHM
R6	Resistor	MCR03EZPJ101	100	1/10W	50V	1% 1608	ROHM
R7	Resistor	MCR03EZPFX1002	10k	1/10W	50V	1% 1608	ROHM
R8	Resistor	MCR03EZPFX1002	10k	1/10W	50V	1% 1608	ROHM
R9	Resistor	MCR03EZPJ472	4.7k	1/10W	50V	1608	ROHM
R10	Resistor	MCR03EZPJ152	1.5k	1/10W	50V	1608	ROHM
R11	Resistor	MCR18EZPJ182	1.8k	1/4W	200V	3216	ROHM
R12	***	***				3216	***
R13	Resistor	MCR18EZPJ220	22	1/4W	200V	3216	ROHM
R16	Resistor	MCR03EZPJ100	10	1/10W	50V	1608	ROHM
T1	Transformer	JT1005N-2K				JT19	Alphatrans
U1	IC	MIP2K4		700V		DIP8	Panasonic
U2	Optical	TLP385 (GR)		5000V		SOP4 8mm	Toshiba
U3	Shunt Reg.	TL431QDBZR		2.495V 2%		SOT23-3	Texas Instruments
	PCB	PW1132B		FR-4	t=1.0		
	Terminal	DC-5					マックエイト