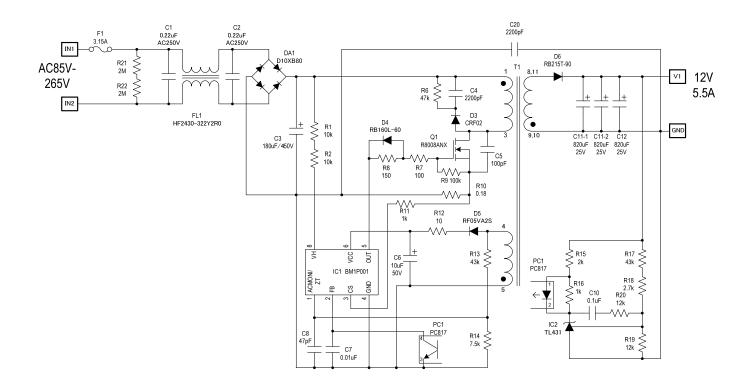


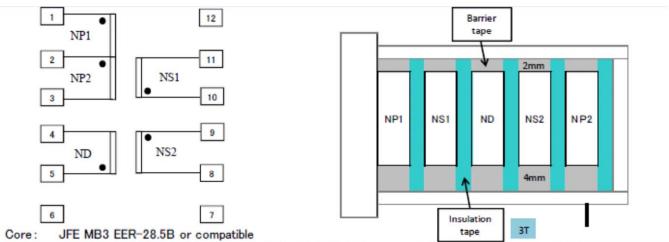
AC/DC Converter Controller Application Information

IC Product Name	BM1P061FJ		
Control Method	PWM		
Input	85 Vac to 265 Vac		
Output	12V 5.5A		
Туре	Isolation		
Document Number	W-I-1200550-0000-00		
Revision	001		

Reference Circuit



Transformer Specification



Bobbin: JFE BER28.5MP12 Vertical/Terminal Pins 6-6(12pins) or compatible

AL-Value: nH/N² 85.6 Inductance(1-3pin): 0.077 mH±15%

Coil	Terminal	Turns	Wire	Winding Method
NP1	1-2	15	2UEW 0.5 × 2	1 Layer FIT
NS1	10-11	15	2UEW 0.5 × 2	1 Layer FIT
ND	'5-4	10	2UEW 0.35 × 4	1 Layer FIT
NS2	'9-8	15	2UEW 0.5 × 2	1 Layer FIT
NP2	'2-3	15	2UEW 0.5 × 2	1 Layer FIT

: AC3. OKVrms 1MIN. 2mA or AC3. 6kVrms 1s 2mA 巻始め:パリアテープ固定

PS-CORE: AC1. 5KVrms 1MIN. 2mA or AC1. 8kVrms 1s 2mA 巻終り:直角引き出し挟み込み処理

IR : P-S, PS-CORE 100 MQ MIN. at DC 500V 巻方向 : 統一

Bill of Materials

C1 0.22μF/AC250V X-Cap LE224 Okaya C2 0.22μF/AC250V X-Cap LE224 Okaya C3 180μF/450V KXJ 180μF 450V Nippon Chemi-con C4 2200pF/500V CK45-B3AD222KY*N TDK C5 100pF/500V CC45SL3AD101JY*N TDK C6 33μF/50V PJ 33μF 50V Nichicon C7 1000pF/16V GRM219B711H102K Murata C8 47pF/16V GRM219B711H470K Murata C10 0.1μF/50V GRM21BB11H104KA01B Murata C11 470μF/35V Low-Z HD 470μF 35V Nichicon C12 470μF/35V Low-Z HD 470μF 35V Nichicon C20 2200pF/1kV CS11-E2GA222MYNS TDK DA1 400V/10A D10XB80 Shindengen D1 400V/1A 1N4007 Nohm D2 400V/1A 1N4007 Rohm D3 FRD 600V/0.5A RF05VA25/RF05VAM2S Rohm D4 60V/1A RB160L-60	Item	Cnon	Parts name	Maker
C2 0.22μF/AC250V X-Cap LE224 Okaya C3 180μF/450V KXJ 180μF 450V Nippon Chemi-con C4 2200pF/500V CK45-B3AD22KY*N TDK C5 100pF/500V CC45SL3AD101JY*N TDK C6 33μF/50V PJ 33μF 50V Nichicon C7 1000pF/16V GRM219B711H102K Murata C8 47pF/16V GRM219B711H470K Murata C10 0.1μF/50V GRM219B71H470K Murata C11 470μF/35V Low-Z HD 470μF 35V Nichicon C12 470μF/35V Low-Z HD 470μF 35V Nichicon C20 2200pF/1kV CS11-E2GA222MYNS TDK DA1 400V/10A D10XB80 Shindengen D1 400V/1A 1N4007 D2 D2 400V/1A 1N4007 RD D3 FRD 600V/0.5A RFN1L6S Rohm D4 60V/1A RB160L-60 Rohm D5 FRD 200V/0.5A RF05VA2S/RF05VAM2S Ro	-	Spec		
C3 180μF/450V KXJ 180μF 450V Nippon Chemi-con C4 2200pF/500V CK45-B3AD222KY*N TDK C5 100pF/500V CC45SL3AD101JY*N TDK C6 33µF/50V PJ 33µF 50V Nichicon C7 1000pF/16V GRM219B711H102K Murata C8 47pF/16V GRM219B711H470K Murata C10 0.1µF/50V GRM219B711H470K Murata C11 470µF/35V Low-Z HD 470µF 35V Nichicon C12 470µF/35V Low-Z HD 470µF 35V Nichicon C20 2200pF/1kV CS11-E2GA222MYNS TDK DA1 400V/10A D10XB80 Shindengen D1 400V/10A D10XB80 Shindengen D1 400V/1A 1N4007 RD10XB80 Shindengen D2 400V/1A 1N4007 RD10XB80 Shindengen D3 FRD 600V/0.5A RFN1L6S Rohm D4 60V/1A RB160L-60 Rohm D5 FRD				
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PC1 PC817 SHARP Q1 500V/13A ZDX130N50/R6011ENX Rohm R3 10kΩ MCR18EZPJ104 Rohm R4 3.9MΩ/0.25W MCR18EZPJ395 Rohm R5 39kΩ MCR10EZPJ393 Rohm R6 200kΩ/2W MCR18EZPJ220 Rohm R7 22Ω/0.25W MCR18EZPJ151 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 100kΩ MCR10EZPJ104 Rohm R10 0.1Ω/1W Rohm Rohm R11 1kΩ MCR10EZPJ102 Rohm R12 10Ω/0.25W MCR18EZPJ100 Rohm R15 2kΩ MCR10EZPJ202 Rohm R16 1kΩ MCR10EZPJ102 Rohm R16 1kΩ MCR10EZPF1203 Rohm	IC1		BM1P061FJ	Rohm
Q1 500V/13A ZDX130N50/R6011ENX Rohm R3 10kΩ MCR18EZPJ104 Rohm R4 3.9MΩ/0.25W MCR18EZPJ395 Rohm R5 39kΩ MCR10EZPJ393 Rohm R6 200kΩ/2W R Rohm R7 22Ω/0.25W MCR18EZPJ220 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 100kΩ MCR10EZPJ104 Rohm R10 0.1Ω/1W Rohm R11 1kΩ MCR10EZPJ102 Rohm R12 10Ω/0.25W MCR18EZPJ100 Rohm R15 2kΩ MCR10EZPJ202 Rohm R16 1kΩ MCR10EZPJ102 Rohm R17 120kΩ MCR10EZPF1203 Rohm	IC2		TL431	
R3 $10k\Omega$ MCR18EZPJ104 Rohm R4 $3.9M\Omega/0.25W$ MCR18EZPJ395 Rohm R5 $39k\Omega$ MCR10EZPJ393 Rohm R6 $200k\Omega/2W$ Rohm Rohm R7 $22\Omega/0.25W$ MCR18EZPJ220 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 $100k\Omega$ MCR10EZPJ104 Rohm R10 $0.1\Omega/1W$ Rohm R11 $1k\Omega$ MCR10EZPJ102 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	PC1		PC817	SHARP
R4 $3.9M\Omega/0.25W$ MCR18EZPJ395 Rohm R5 $39k\Omega$ MCR10EZPJ393 Rohm R6 $200k\Omega/2W$ R7 $22\Omega/0.25W$ MCR18EZPJ220 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 $100k\Omega$ MCR10EZPJ104 Rohm R10 $0.1\Omega/1W$ Rohm R11 $1k\Omega$ MCR10EZPJ102 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	Q1	500V/13A	ZDX130N50/R6011ENX	Rohm
R5 $39kΩ$ MCR10EZPJ393 Rohm R6 $200kΩ/2W$ R7 $22Ω/0.25W$ MCR18EZPJ220 Rohm R8 $150Ω$ MCR10EZPJ151 Rohm R9 $100kΩ$ MCR10EZPJ104 Rohm R10 $0.1Ω/1W$ R11 $1kΩ$ MCR10EZPJ102 Rohm R12 $10Ω/0.25W$ MCR18EZPJ100 Rohm R15 $2kΩ$ MCR10EZPJ202 Rohm R16 $1kΩ$ MCR10EZPJ102 Rohm R17 $120kΩ$ MCR10EZPF1203 Rohm	R3	10kΩ	MCR18EZPJ104	Rohm
R6 $200k\Omega/2W$ MCR18EZPJ220 Rohm R7 $22\Omega/0.25W$ MCR10EZPJ151 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 $100k\Omega$ MCR10EZPJ104 Rohm R10 $0.1\Omega/1W$ MCR10EZPJ102 Rohm R11 $1k\Omega$ MCR18EZPJ100 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	R4	3.9MΩ/0.25W	MCR18EZPJ395	Rohm
R7 $22\Omega/0.25W$ MCR18EZPJ220 Rohm R8 150Ω MCR10EZPJ151 Rohm R9 $100k\Omega$ MCR10EZPJ104 Rohm R10 $0.1\Omega/1W$ Rohm R11 $1k\Omega$ MCR10EZPJ102 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	R5	39kΩ	MCR10EZPJ393	Rohm
R8 150Ω MCR10EZPJ151 Rohm R9 100kΩ MCR10EZPJ104 Rohm R10 0.1Ω/1W Rohm Rohm R11 1kΩ MCR10EZPJ102 Rohm R12 10Ω/0.25W MCR18EZPJ100 Rohm R15 2kΩ MCR10EZPJ202 Rohm R16 1kΩ MCR10EZPJ102 Rohm R17 120kΩ MCR10EZPF1203 Rohm	R6	200kΩ/2W		
R9 100kΩ MCR10EZPJ104 Rohm R10 $0.1\Omega/1W$ R11 $0.1\Omega/1W$ R0hm R11 $1k\Omega$ MCR10EZPJ102 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	R7	22Ω/0.25W	MCR18EZPJ220	Rohm
R10 $0.1\Omega/1W$ R11 $1k\Omega$ MCR10EZPJ102 Rohm R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	R8	150Ω	MCR10EZPJ151	Rohm
R11 $1kΩ$ MCR10EZPJ102 Rohm R12 $10Ω/0.25W$ MCR18EZPJ100 Rohm R15 $2kΩ$ MCR10EZPJ202 Rohm R16 $1kΩ$ MCR10EZPJ102 Rohm R17 $120kΩ$ MCR10EZPF1203 Rohm	R9	100kΩ	MCR10EZPJ104	Rohm
R12 $10\Omega/0.25W$ MCR18EZPJ100 Rohm R15 $2k\Omega$ MCR10EZPJ202 Rohm R16 $1k\Omega$ MCR10EZPJ102 Rohm R17 $120k\Omega$ MCR10EZPF1203 Rohm	R10	0.1Ω/1W		
R15 $2kΩ$ MCR10EZPJ202 Rohm R16 $1kΩ$ MCR10EZPJ102 Rohm R17 $120kΩ$ MCR10EZPF1203 Rohm	R11	1kΩ	MCR10EZPJ102	Rohm
R16 $1kΩ$ MCR10EZPJ102RohmR17 $120kΩ$ MCR10EZPF1203Rohm	R12	10Ω/0.25W	MCR18EZPJ100	Rohm
R17 120kΩ MCR10EZPF1203 Rohm	R15	2kΩ	MCR10EZPJ202	Rohm
	R16	1kΩ	MCR10EZPJ102	Rohm
P18 9.1kO MCP10E7PE0101 Pohm	R17	120kΩ	MCR10EZPF1203	Rohm
TITLE STAND TO BE STANDED TO THE ROUTE OF TH	R18	9.1kΩ	MCR10EZPF9101	Rohm
R19 15kΩ MCR10EZPF1502 Rohm	R19	15kΩ	MCR10EZPF1502	Rohm
R20 1k Ω MCR10EZPJ102 Rohm	-		MCR10EZPJ102	
R23 short				
R24 10kΩ MCR18EZPJ104 Rohm	—		MCR18EZPJ104	Rohm
R25 4.7kΩ MCR10EZPJ472 Rohm				
T1 EER28L Tomita			-	

Typical Characteristics

Vin:AC85V 50Hz

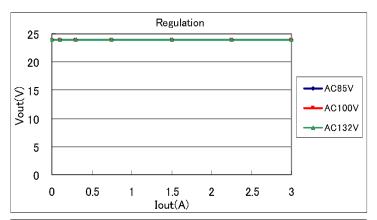
Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
0	23.92	0	0.059	-
0.1	23.92	2.392	2.786	85.8
0.3	23.92	7.175	8.233	87.1
0.75	23.91	17.93	20.70	86.6
1.5	23.91	35.87	41.74	85.9
2.25	23.91	53.80	63.01	85.4
3	23.91	71.72	84.57	84.8

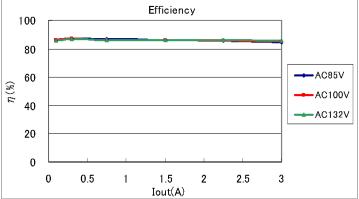
Vin:AC100V 50Hz

Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
0	23.92	0	0.061	-
0.1	23.92	2.392	2.781	86.0
0.3	23.92	7.175	8.228	87.2
0.75	23.91	17.93	20.76	86.4
1.5	23.91	35.87	41.59	86.2
2.25	23.91	53.80	62.73	85.8
3	23.91	71.72	84.03	85.4

Vin:AC132V 50Hz

VIII.7 (O 102 V OOI 12					
	Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
	0	23.92	0	0.072	_
	0.1	23.92	2.392	2.796	85.5
	0.3	23.92	7.175	8.255	86.9
	0.75	23.91	17.93	20.79	86.3
	1.5	23.91	35.87	41.51	86.4
	2.25	23.91	53.79	62.43	86.2
	3	23.91	71 72	83 52	85.9





<待機時電力>

(*)抵抗負荷にて測定

Vin: AC100V/50Hz時

$RL(k\Omega)$	Vout(V)	Iout(mA)	Pout(W)	Pin(W)	η (%)
47	23.92	0.509	0.012	0.071	17.1
1.8	23.92	13.29	0.318	0.423	75.1

Revision History

Date	Revision	Changes
20.Jan.2014	001	New Release

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	(110101) Interior Equipment Glacomoration of the Opcomoraphication					
	JAPAN	USA	EU	CHINA		
Г	CLASSⅢ	CLASSⅢ	CLASS II b	CLASSⅢ		
	CLASSIV	CLASSIII	CLASSⅢ	CLASSIII		

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