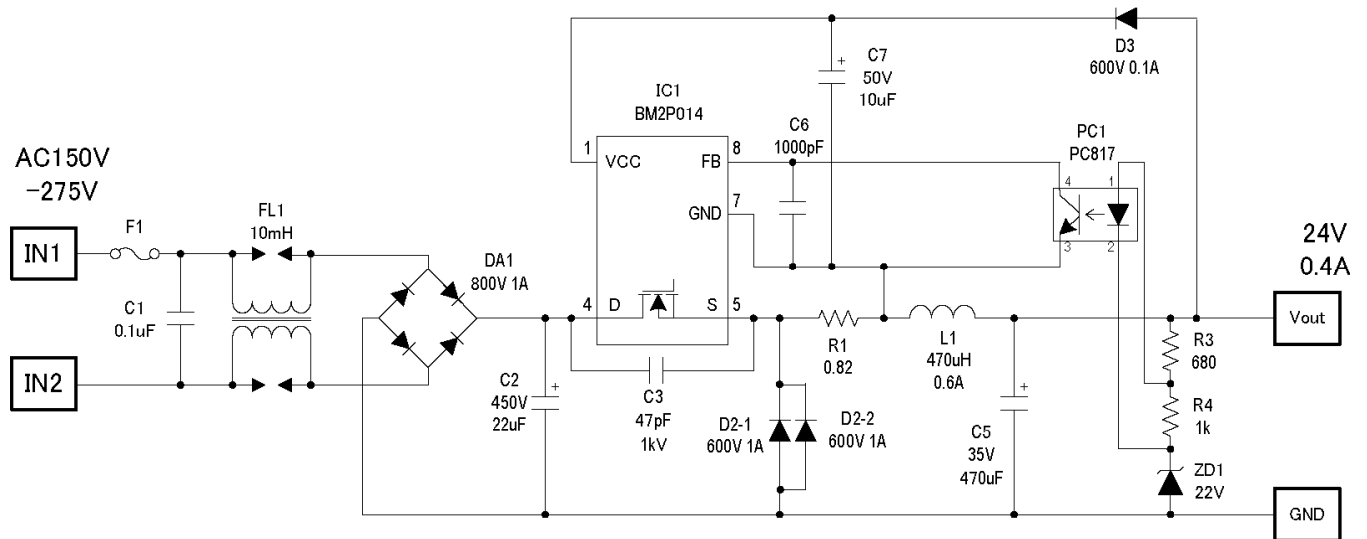


AC/DC Converter Controller Application Information

IC Product Name	BM2P014
Control Method	PWM
Input	150 Vac to 275 Vac
Output	24V 0.4A
Type	Non-isolation
Document Number	2-N-2400400-0000-00
Revision	001

Reference Circuit



Bill of Materials

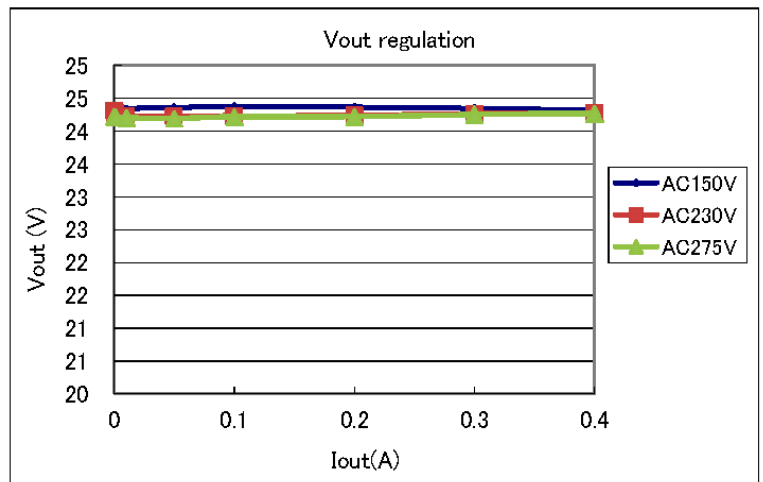
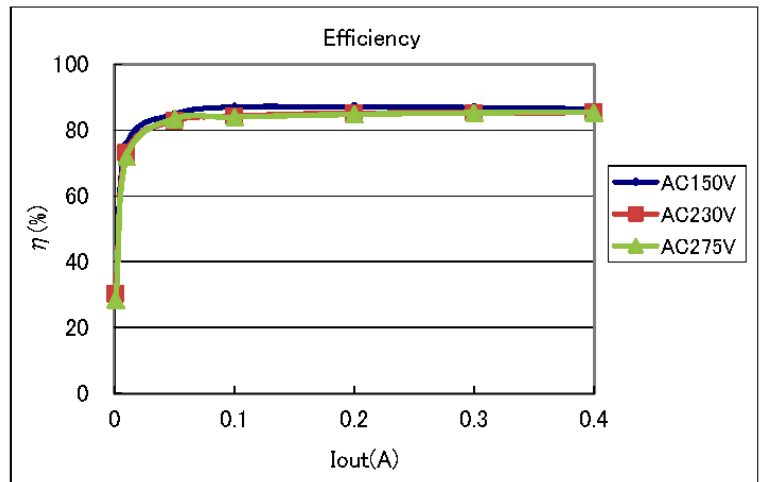
Item	Spec	Parts name	Maker
C1	0.1uF/AC300V X-Cap	LE104	Okaya
C2	22uF/450V	VY 22uF 450V	Nichicon
C3	100pF/1kV	CC45SL3AD101JY*N	TDK
C5	470uF/35V Low-Z	HD 470uF 35V	Nichicon
C6	0.01F/16V	GRM219B711H103K	Murata
C7	10uF/50V	PM 10uF 50V	Nichicon
C8	47pF/16V	GRM219B711H470K	Murata
DA1	400V/3A	D10XB80	Shindengen
D2-1	600V/1A		
D2-2	600V/1A		
D3	600V/0.1A	RRE02VS6S	Rohm
ZD1	22V	UDZVTE-1722B	Rohm
F1	3.15A		
FL1	10mH		
IC1	-	BM2P014	Rohm
L1	470uH/0.6A		
PC1	-	PC817	SHARP
R1	0.82Ω/0.5W	MCR25JZHFLOR82	Rohm
R3	680Ω	MCR10EZPJ681	Rohm
R4	1kΩ	MCR10EZPJ102	Rohm

Typical Characteristics

AC150V		Vin:AC120V 50Hz		
I _{out} (A)	V _{out} (V)	P _{out} (W)	P _{in} (W)	η (%)
0	24.270	0	0.056	–
0.001	24.285	0.024	0.076	32.0
0.01	24.340	0.243	0.322	75.6
0.05	24.360	1.218	1.436	84.8
0.1	24.375	2.438	2.801	87.0
0.2	24.365	4.873	5.593	87.1
0.3	24.349	7.305	8.410	86.9
0.4	24.322	9.729	11.260	86.4

AC230V		Vin:AC230V 50Hz		
I _{out} (A)	V _{out} (V)	P _{out} (W)	P _{in} (W)	η (%)
0	24.315	0	0.061	–
0.001	24.285	0.024	0.080	30.4
0.01	24.237	0.242	0.332	73.0
0.05	24.227	1.211	1.463	82.8
0.1	24.234	2.423	2.878	84.2
0.2	24.239	4.848	5.692	85.2
0.3	24.268	7.280	8.540	85.3
0.4	24.281	9.712	11.370	85.4

AC275V		Vin:AC275V 50Hz		
I _{out} (A)	V _{out} (V)	P _{out} (W)	P _{in} (W)	η (%)
0	24.223	0	0.065	–
0.001	24.215	0.024	0.085	28.5
0.01	24.207	0.242	0.337	71.8
0.05	24.196	1.210	1.450	83.4
0.1	24.221	2.422	2.886	83.9
0.2	24.224	4.845	5.713	84.8
0.3	24.256	7.277	8.540	85.2
0.4	24.269	9.708	11.380	85.3



Revision History

Date	Revision	Changes
7.Mar.2014	001	New Release

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(Note1) Medical Equipment Classification of the Specific Applications

JAPAN	USA	EU	CHINA
CLASS III	CLASS III	CLASS II b	CLASS III
CLASS IV		CLASS III	

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