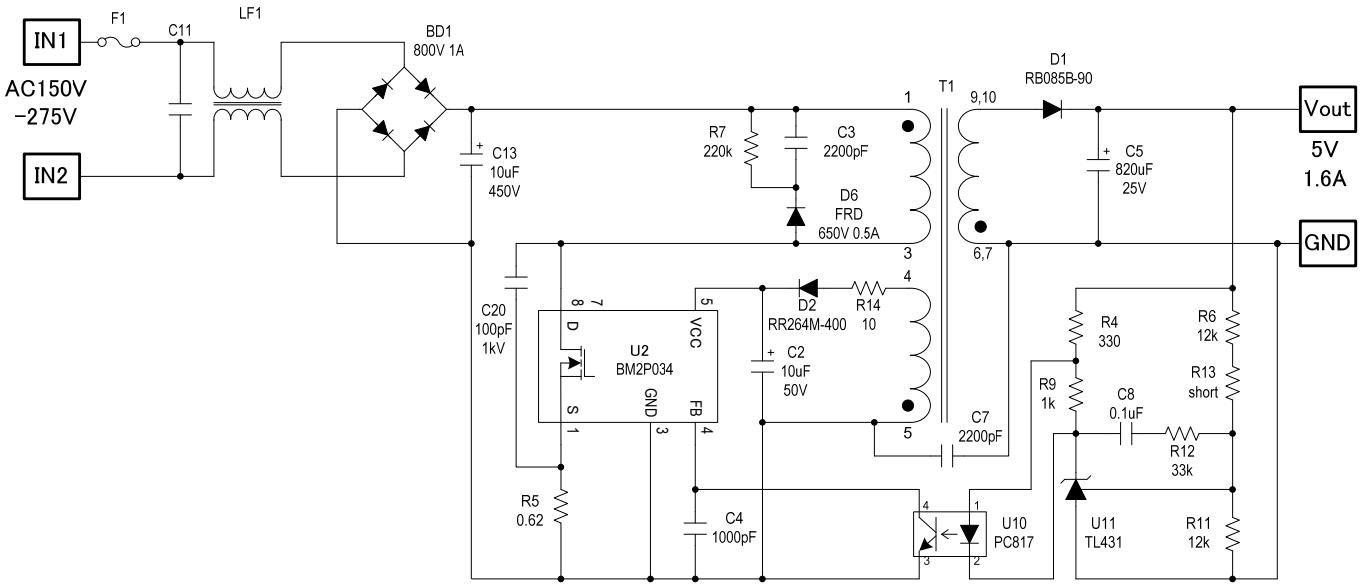
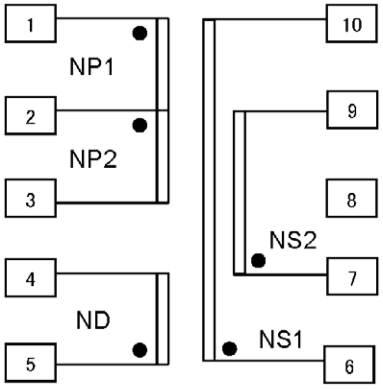
AC/DC Converter Controller Application Information

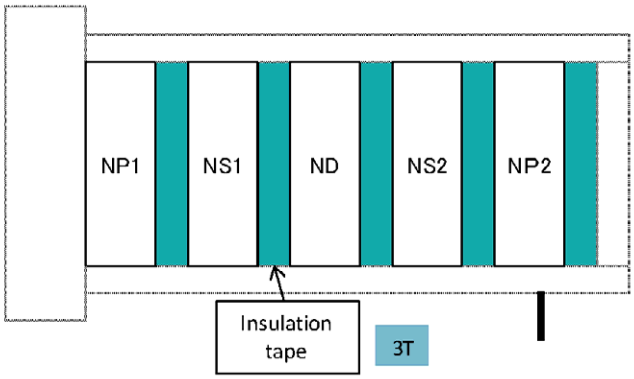
IC Product Name	BM2P034
Control Method	PWM
Input	150 Vac to 275 Vac
Output	5V 1.6A
Type	Isolation
Document Number	2-I-0500160-0000-00
Revision	001

Reference Circuit



Transformer Specification





Core: Tomita 2G8-EI-22 or compatible
Bobbin: Tomita TBB248 Vertical/Terminal Pins 5-5(10pins) or compatible
AL-Value: 156.3 nH/N^2
Inductance(1-3pin): 0.490 mH±15%

Coil	Terminal	Turns	Wire	Winding Method
NP1	‘1-2	28	2UEW 0.25	1 Layer FIT(密)
NS1	‘6-10	7	TEX-E 0.35 X2	1 Layer FIT(密)
ND	‘5-4	20	2UEW 0.35	1 Layer SPACE(均等)
NS2	‘7-9	7	TEX-E 0.35 X2	1 Layer FIT(密)
NP2	‘2-3	28	2UEW 0.25	1 Layer FIT(密)

耐圧 P-S :AC3.0KVrms 1MIN. 2mA or AC3.6kVrms 1s 2mA
PS-CORE:AC1.5KVrms 1MIN. 2mA or AC1.8kVrms 1s 2mA
IR : P-S,PS-CORE 100 MΩ MIN. at DC 500V

巻始め：バリアテープ固定
巻終り：直角引き出し挟み込み処理
巻方向 ： 統一

Bill of Materials

Item	Spec	Parts name	Maker
BD1	800V/1A	D1VBA80	Shindengen
C2	10uF/50V	PM 10uF 50V	Nichicon
C3	2200pF/500V	CK45-B3AD222KY*N	TDK
C4	1000pF/16V		Murata
C5	820uF/25V Low-Z	KZM 680uF 25V	Nippon Chemi-con
C7	2200pF/AC250V	CS11-E2GA222MYNS	TDK
C8	0.1uF/25V		Murata
C11		LE104	Okaya
C13	10uF/450V	VY 10uF 450V	Nichicon
C20	100pF/1kV	CC45SL3AD101JYGN	TDK
D1	SBD 90V/10A	RB085B-90/RB085BM-90	Rohm
D2	200V/0.5A	RR264M-400/RR264MM-400	Rohm
D6	FRD 650V/0.5A	RFN1L7S	Rohm
F1	1A		
LF1	10mH		
R4	330Ω	MCR10EZPJ331	Rohm
R5	0.62Ω/1W		
R6	12kΩ	MCR10EZPF1202	Rohm
R7	220kΩ/0.25W	MCR25JZHJ224	Rohm
R9	1kΩ	MCR10EZPJ102	Rohm
R11	12kΩ	MCR10EZPF1202	Rohm
R12	33kΩ	MCR10EZPJ333	Rohm
R14	10Ω/0.25W	MCR18EZPJ100	Rohm
T1	EI22		
U10		PC817	SHARP
U11		TL431	TI
U2		BM2P034	Rohm

Typical Characteristics

Vin:AC150V 50Hz

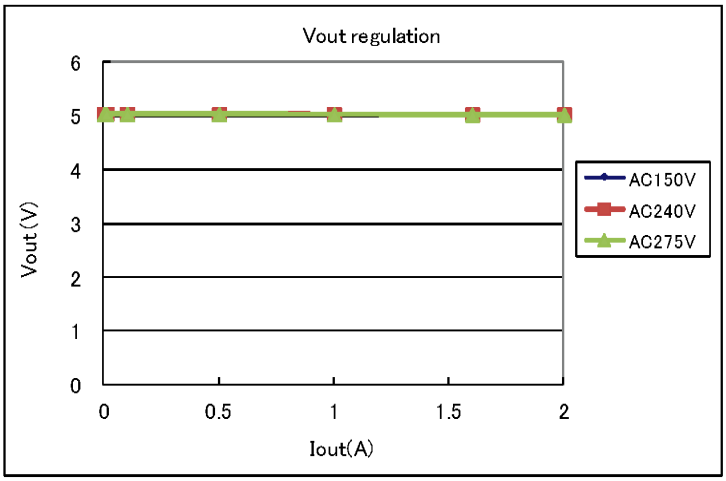
Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
0	5.038	0	0.02	–
0.004	5.038	0.020	0.045	44.8
0.01	5.038	0.050	0.083	60.7
0.1	5.038	0.504	0.643	78.4
0.5	5.035	2.518	3.110	80.9
1	5.033	5.033	6.229	80.8
1.6	5.028	8.045	10.017	80.3
2	5.026	10.052	12.571	80.0

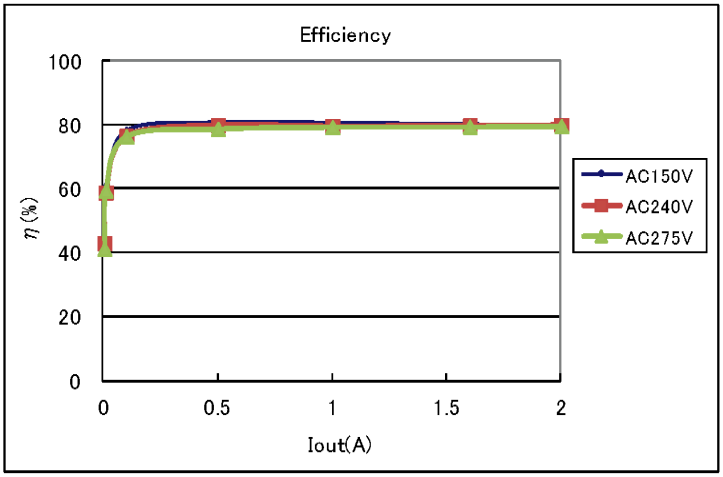
Vin:AC240V 50Hz

Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
0	5.038	0	0.021	–
0.004	5.039	0.020	0.047	42.9
0.01	5.039	0.050	0.086	58.6
0.1	5.038	0.504	0.659	76.4
0.5	5.036	2.518	3.149	80.0
1	5.033	5.033	6.321	79.6
1.6	5.029	8.046	10.084	79.8
2	5.026	10.052	12.569	80.0

Vin:AC275V 50Hz

Iout(A)	Vout(V)	Pout(W)	Pin(W)	η (%)
0	5.041	0	0.023	–
0.004	5.040	0.020	0.049	41.1
0.01	5.039	0.050	0.085	59.3
0.1	5.039	0.504	0.659	76.5
0.5	5.037	2.519	3.195	78.8
1	5.033	5.033	6.340	79.4
1.6	5.028	8.045	10.121	79.5
2	5.026	10.052	12.619	79.7





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
CLASSⅢ	CLASSⅢ	CLASSⅡb	CLASSⅢ
CLASSⅣ		CLASSⅢ	

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