

AC/DC Converter Controller

Application Information

IC Product Name	BM2PAB1Y-Z
Control Method	PWM
Input	85 Vac to 264 Vac
Output	11.5V 0.5A
Type	Non- Isolation
Document Number	66AN141E
Revision	001

Reference Circuit

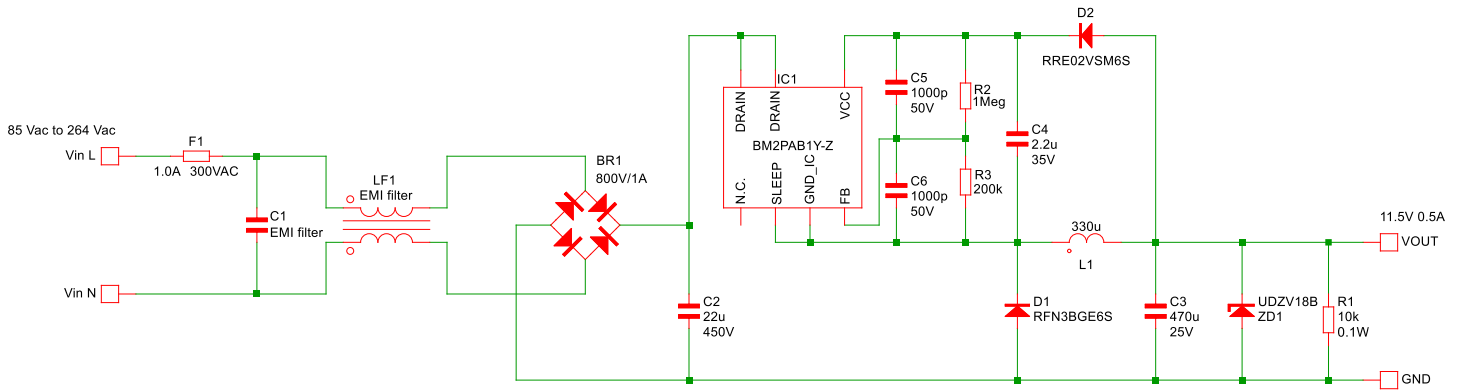


Fig1. Reference Circuit

Bill of Materials

Item	Specification	Parts name	Manufacture
IC1		BM2PAB1Y-Z	Rohm
BR1	800V/1A		
C1	EMI filter	X-Capacitor	
C2	22 μ F/450V		
C3	470 μ F/25V		
C4	2.2 μ F/35V		
C5	1000pF/50V		
C6	1000pF/50V		
D1	600V/3A	RFN3BGE6S	Rohm
D2	600V/0.2A	RRE02VSM6S	Rohm
F1	1.0A/300VAC		
L1※	330 μ H/1.5A		
LF1	EMI filter		
R1	10k Ω /0.1W	MCR03EZPJ103	Rohm
R2	1M Ω	MCR03EZPFX1004	Rohm
R3	200k Ω	MCR03EZPFX2003	Rohm
ZD1	18V/0.2W	UDZV18B	Rohm

※コイルは閉磁型のものを選んでください。

Use a shield coil.

Fig2. Bill of Materials

Typical Characteristics

	85Vac	100Vac	230Vac	264Vac
0A	13.09V	13.13V	13.44V	13.56V
0.005A	12.25V	12.24V	12.34V	12.38V
0.01A	11.97V	12.00V	12.06V	12.09V
0.1A	11.64V	11.63V	11.61V	11.60V
0.2A	11.61V	11.60V	11.58V	11.57V
0.3A	11.56V	11.56V	11.55V	11.55V
0.4A	11.52V	11.52V	11.51V	11.51V
0.5A	11.49V	11.49V	11.48V	11.48V

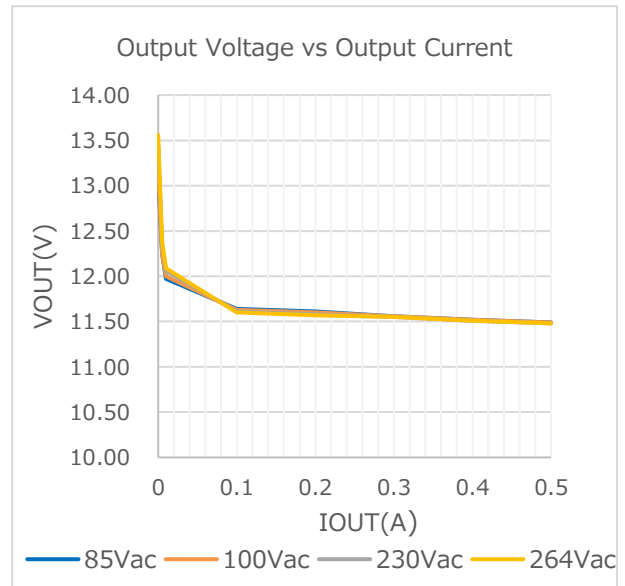


Fig3. Output Voltage vs Output Current

	85Vac	100Vac	230Vac	264Vac
0.005A	60.0%	59.4%	53.6%	49.9%
0.01A	66.9%	69.0%	63.1%	61.7%
0.1A	82.9%	82.6%	79.6%	78.9%
0.2A	84.4%	84.1%	81.6%	80.8%
0.3A	84.4%	84.1%	82.3%	81.6%
0.4A	84.2%	84.2%	82.6%	82.1%
0.5A	84.0%	84.1%	82.9%	82.6%

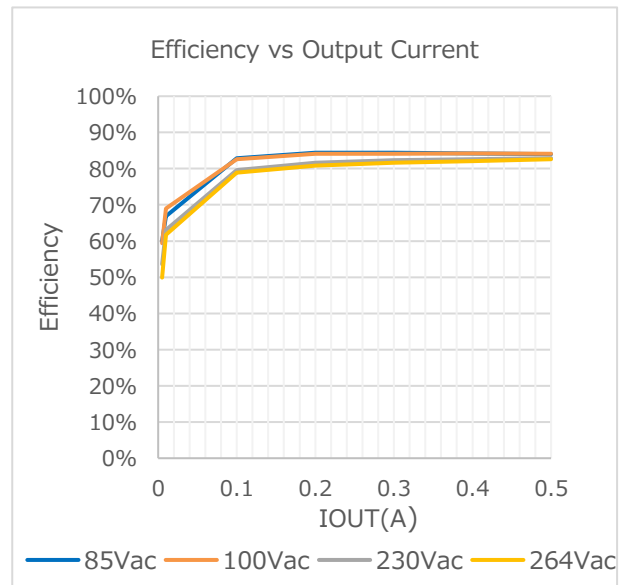


Fig4. Efficiency vs Output Current

Revision History

Date	Revision	Changes
20.Feb.2024	001	New Release

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