The BP5074 series AC/DC converters

with low power consumption during standby.

RoHS

(7mW – a decrease of at least 75% over previous units)

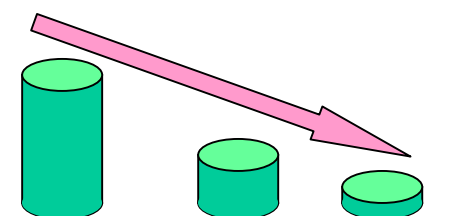Esternely only input & output capacitors

BP5074

High efficiency AC/DC converters (BP5074 series) have been developed in a microcontroller application). In addition, the only external with a power consumption of **7mW** during standby (¼ that of conventional products) and less than **50mW** during operation at light loads (e.g. 2mA components required are input/output capacitors and a rectifier diode. The entire series is **Lead-free and RoHS compliant**.

●Features

1. **Standby power consumption = 7mW**

Input AC 100V   Output DC12V, 0mA

Transformer   BP5034   BP5074
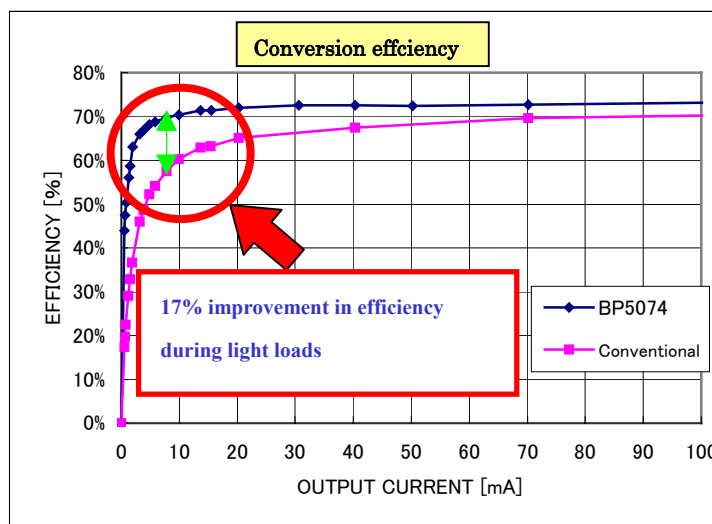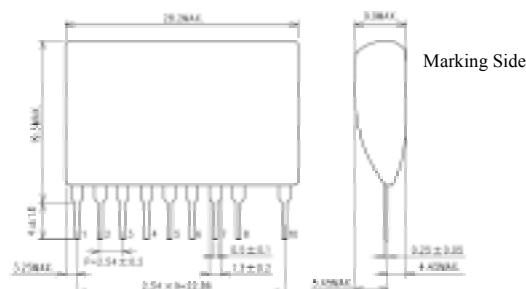Type   Conventional

2. Simple configuration **with internal coil**.

The only external components required are **input/output capacitors and a rectifier diode**.

3. Greater efficiency during lighter loads.

●Dimensions
BP5074

Marking Side

(UNIT：mm)

Conversion effciency

80%
70%
60%
50%
40%
30%
20%
10%
0%

EFFICIENCY [%]

17% improvement in efficiency during light loads

BP5074
Conventional

0 10 20 30 40 50 60 70 80 90 100

OUTPUT CURRENT [mA]

*Contact ROHM for more information on these products.

●Absolute Maximum Rating

Ta=25℃

Parameter	Symbol	Limits	Unit	Note
Input voltage	Vin	170	V	DC
Operating temperature range	Topr	-25 to 80	℃	Use within the limits of the derating
Storage temperature range	Tstg	-25 to 105	℃	
Maximum Surface Temperature	Tsmax	100	℃	Including intrinsic heat generation
Maximum Output Current	Iopeak	100	mA	Please note that the peak current value will vary depending on ambient temperature– refer to the derating curve.

●Electrical Characteristics

Unless otherwise noted, Ta=25°C, Vin=141V, Io=50mA

Parameter	Symbol	Standard			Unit	Conditions
		MIN.	TYP.	MAX.		
Input voltage	Vin	113	141	170	V	DC(80～120VAC)
Output voltage	Vo	11.5	12.5	13.5	V	
Output current	Io	0	-	100	mA	Note:
Line regulation	Vr	-	0.02	0.10	V	Vin=113～170V
Load regulation	Vl	-	0.05	0.15	V	Io=0～50mA
Output ripple voltage	Vp	-	0.05	0.15	Vp-p	
Conversion effciency	η	68	73	-	%	Io=100mA

Note: the maximum output current will vary depending on ambient temperature – refer to the derating curve.

●Application circuit