20Watt BSI-P Series

RoHS Compliance

Ultra High Efficiency POL DC-DC Converters/BSI 20Watt Series

Ultra High Efficiency (88%-92%), Minimum Size Step-Down DC-DC Converter

Input: +5V, +6V **Output: +3.3V (+1.8V to +3.3V)**
Input: +6V, +12V, +15V **Output: +5.0V (+3.0V to +5.0V)**

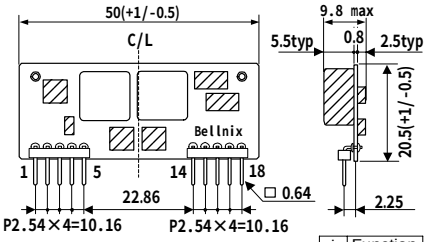
- Efficiency 88%-92%
- Latest Technology, Synchronous Rectification Circuit
- Adjustable Output Voltage
- Non-Isolated Type Converter
- Short Circuit, Over-Current Protection
- No Electrolytic Capacitor, No Tantalum Capacitor
- Heat Sink Not Required
- Minimum Size
- Remote ON/OFF Control
- Low Standby Current 100μA
- MTBF 1,000,000Hrs
- High Reliability, High Performance
- Operating Temp. Range -10°C to +70°C (Temp. derating required)
- RoHS Compliance

Models BSI-P Series	Input V Vdc	Output V Vdc	Output I A	Line Reg %(typ.)	Load Reg %(typ.)	Ripple/Noise mVpp(typ.)	Efficiency %(typ.)
BSI-3.3S6R0PA	+4.75 to +7.5	3.3 (1.8-3.3)	0-6	0.5	1.5	50	88
BSI-3.3S6R0FPA							
BSI-5.0S4R0PA	+6 to +16.5	5.0 (3.0-5.0)	0-4	0.3	0.2	50	92
BSI-5.0S4R0FPA							

Note 1: When operating at output current 3A-6A, air flow (1m/sec) is required.
Note 2: The output voltage inside the ( ) indicates the adjustable range.
Note 3: External capacitors are required.
Note 4: Suffix "A" stands for version.

<Outline>

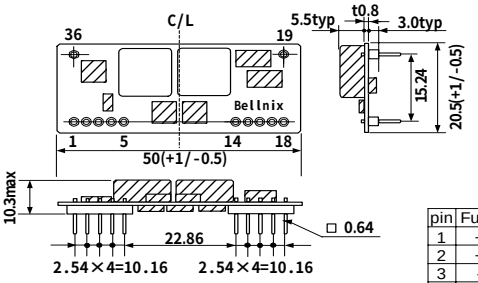
BSI-3.3S6R0PA (t=10.3typ)
BSI-5.0S4R0PA (t=8.8typ)



pin	Function
1	+Vin
2	+Vin
3	-Vin
4	-Vin
5	ON/OFF
14	V.ADJ
15	-Vout
16	-Vout
17	+Vout
18	+Vout

Dimensions: mm Weight: 12g typ.
Load current: 3A or more
Air flow (1m/sec) required.

BSI-3.3S6R0FPA (h=11.3typ)
BSI-5.0S4R0FPA (h=9.3typ)

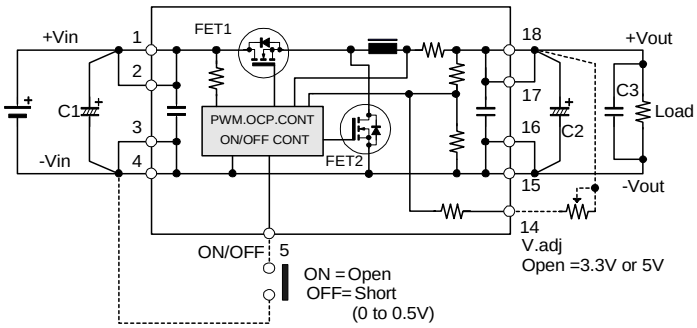


pin	Function
1	+Vin
2	+Vin
3	-Vin
4	-Vin
5	ON/OFF
14	V.ADJ
15	-Vout
16	-Vout
17	+Vout
18	+Vout
19	NC
36	NC

Dimensions: mm Weight: 12g typ.
Load current: 3A or more
Air flow (1m/sec) required.

- Note!
This catalogue is an outline of the products. When designing, be sure to refer to the data sheets.

<Standard Connection Diagram>



- External Capacitors

C1=100μF20WV× 2 pcs or more (Recommended OS-CON SH, FA type)
C2=220μF10WV× 2 pcs or more (Recommended OS-CON SH, FA type)

- ON/OFF Control

ON/OFF control is controlled by opening and shortening between 5pin(ON/OFF) and 3, 4pin (-Vin).

- Adjustable Output Voltage

The output voltage is adjustable by connecting a resistor between 14pin (V.ADJ) and 17, 18pin (+Vout).
When 14pin is open, the rated output voltage is as follows

BSI-3.3S = +3.3V±5%
BSI-5.0S = +5.0V±5%