Correspond to Analog Ciruits, Ultra Low Noise 8mVp-p
Small Size, Long-Life, Isolated Type DC-DC Converter

Bellnix® Adopted In World Important Electronic Devices.

2 Watt BX-L Series

BX-L series is a 2W, long-life, ultra low noise and isolated type DC-DC converter which is most suitable for analog circuits and analog-digital circuits. It has achieved low conducted emission and low radiated emission with the improved TCT circuit. The output noise is ultra low noise of 8mVp-p and has the ability to become the industry's minimum.

<Features>

- Ultra Low Noise, 8mVp-p typ.
- DIP IC Size, 5-Side Metallic Shield Case
- Wide Operating Temp. Range -25°C to +71°C
- Possible to start-up from -30°C (No guarantee)
-No Electrolytic Capacitor, No Tantalum Capacitor
-MTBF 1,000,000Hrs , All aging
- High Reliability with the Latest SMD Structure
- Over-Heat Protection
- Over-Current protection
- Isolation Capacitance 100pF max.
- Isolated Type: DC500V
- Most Suitable for Analog and Digital Circuits
-High Reliability, Long-Life, High Performance
- Improved TCT Circuits (Patented)



<Model, Rating>

Table 1

Models BX-L Series	Rating Input Voltage Vdc	Input Voltage Range Vdc	Rating Output Voltage Vdc	Output Current mA	Line Reg %(max)	Load Reg %(max)	Noise mVpp(typ)	Efficiency %(typ)
BX05-12W08L	5	4.75-6	±12V	±0-80	0.3	0.3	8	60
BX05-15W07L	5	4.75-6	±15V	±0-70	0.3	0.3	8	60

* This model is compatible with the old BX series to be used for substitutions.

<Specification>

Table 2

Rating Input voltage/ Output Voltage	Refer to Table 1
Line Regulation	0.3% typ. (For the input voltage range of 5V±5%, at rating load)
Load Regulation	0.3% typ. (For the load regulation of 0-100% , at rating input voltage)
Temperature Coefficient	0.01%/°C typ. (When operating temperature changes between -20°C to +71°C)
Short Term Drift	30mV/8H max. (Room temperature, rating input/ output)
Ripple & Noise	8mVp-p typ. (20MHz bandwidth)
Efficiency	60% typ. (Rating input/ output, room temperature, refer to table 1)
Over-Current Protection	Operates at 105% or more rating load current, auto recovery type.
Over-Voltage Protection	None
Over-Heat Protection	Built-in in the regulator part
EMI Line Filter	Built-in LC type line filter
MTBF	1,000,000Hr (EIAJ RCR-9102)
Isolation Voltage	Between primary and secondary DC500V: for 1min., between case and input/ output DC500V: for 1min.
Isolation Resistance	Between primary and secondary DC500V: 10M ohm or more, between case and input/ output DC500V: 10M ohm or more.
Isolation Capacitance	Between primary and secondary capacitance: 100pF max.
Operating Temperature Range	-25°Cto +71°C (Temperature derating required from +50°C)
Storage Temperature Range	-35°C to +85°C
Humidity range	95%R. H. max.
Vibration	5-10Hz All amplitude 10mm (1 hour in each of 3 orthogonal axes) 10-55Hz acceleration 2G (1hour in each of 3 orthogonal axes)
Shock	Acceleration 20G (3 times in each of 3 orthogonal axes), Shocking time 11±5ms
Weight	11g typ.
Outline Dimensions	W=20 L=49 H=9.8 (mm) (For detail dimensions refer to the attached outline drawing.)

*The above specification is provided with rating value, unless otherwise specified.

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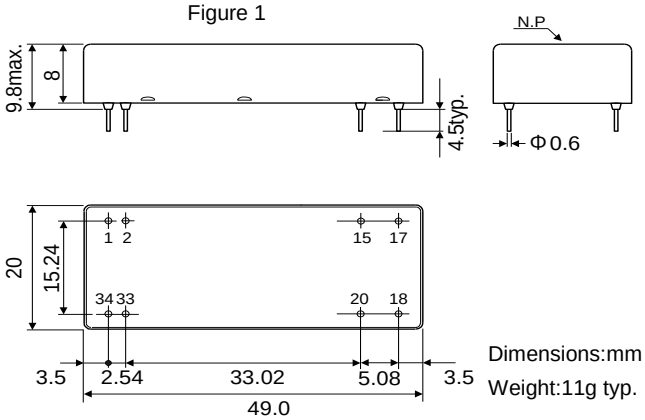
<Outline>

BX-L Series

Figure 1



BX-WL

Pin	Function
1	-Vin
2	-Vin
15	-Vout
17	Common
18	Common
20	+Vout
33	+Vin
34	+Vin

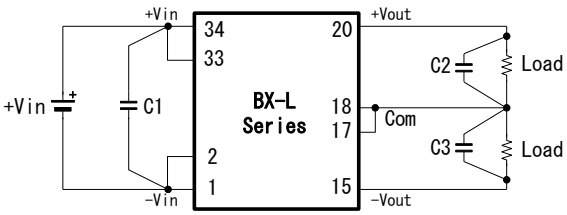
Dimensions:mm
Weight:11g typ.

- Terminal pins have the standoff function.
- 5-side metallic shield case, black plating
- Pin side is not shielded. It is recommended to set a pattern wider than the converter's bottom area right under the converter.

<Standard Usage>

BX-L Series (±12V, ±15V)

Figure 2



- Recommended capacitor

C1=22µF-33µF (Electrolytic or multilayer ceramic capacitor)
C2=0.47µF (Multilayer ceramic capacitor)

- Basically, external capacitors are not required, but noise can be lowered by reducing power line impedance and load impedance.
- High frequency and low impedance capacitors are recommended. Before choosing, be sure to check the ripple current.
- Noise can be lowered by designing the pattern with short lead and not to make a loop.

Bellnix®

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Dream and Creation

*All specification are subjected to change without notice.

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