

Wide Input Voltage Range, Save Mounting Space !

# 3 Watt BTB Series



The Fifth Generation, Ultra Small Size, Isolated Type DC-DC Converter

**Input: 5V, 12V, 24V, 48V**

**Output: 3.3V, 5V, 12V, 15V, ±12V, ±15V**

- Adjustable Output Voltage
- Remote ON/OFF Control
- Dual Power Supply Usable As Single Power Supply
- Isolation Voltage AC500V
- Under Voltage Lock Out
- Over Current Protection
- No Electrolytic Capacitor, No Tantalum Capacitor
- MTTF 2,000,000Hrs
- Metallic Shield Cover
- Halogen-Free PCB Used
- Between Primary and Secondary isolation capacitance is approx. 40-140pF
- Operating Temp Range -40°C to +85°C (Temp Derating Required)
- RoHS Compliance
- UL/C-UL Recognition

Models BTB Series	Input V Vdc	Output V Vdc	Output I mA	Line Reg. %(max.)	Load Reg. %(max.)	Ripple Noise mVpp(typ.)	Efficiency %(typ.)
BTB05-03S80X	4.5-9	3.3	0-800	0.6	1.2	40	73
BTB05-05S60X		5	0-600	0.4	0.8		77
BTB05-12S25X		12(15)	0-250 (200)	0.35	0.85	30	82
BTB05-12W12X		±12(±15)	0-125 (100)	0.7	5		80
BTB12-03S80X	9-18	3.3	0-800	0.6	1.2	40	74
BTB12-05S60X		5	0-600	0.4	0.8		79
BTB12-12S25X		12(15)	0-250 (200)	0.35	0.85	30	82
BTB12-12W12X		±12(±15)	0-125 (100)	0.7	5		81
BTB24-03S80X	18-36	3.3	0-800	0.6	1.2	40	73
BTB24-05S60X		5	0-600	0.4	0.8		78
BTB24-12S25X		12(15)	0-250 (200)	0.35	0.85	30	82
BTB24-12W12X		±12(±15)	0-125 (100)	0.7	5		81
BTB48-03S80X	36-76	3.3	0-800	0.6	1.2	40	73
BTB48-05S60X		5	0-600	0.4	0.8		79
BTB48-12S25X		12(15)	0-250 (200)	0.35	0.85	30	81
BTB48-12W12X		±12(±15)	0-125 (100)	0.7	5		80

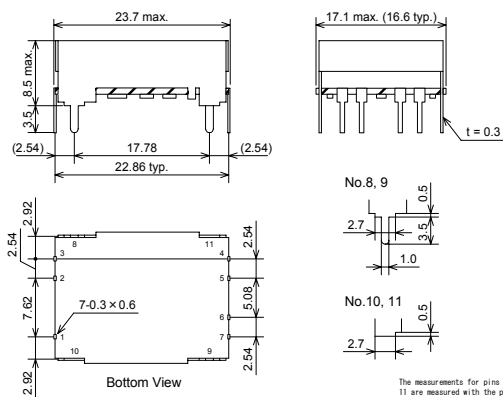
Note 1: Add the model type suffix where the X is where D : DIP type, S : SMD type  
Ex.) DIP type: BTB05-03S80D, SMD type: BTB05-03S80S

Note 2: The output voltage inside ( ) is when Vadj. and -Vout is short. The adjustable range of output voltages are: 3.15-3.6V (3.3V products), 4.75-6V (5V products), 11.4-15V (12V products) respectively.

Note 3: The output current inside ( ) is when adjusted to the max. output voltage.

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

### <Outline> (DIP type)



### BTB-S Series

Pin	Function
1	+Vin
2	ON/OFF
3	-Vin
4	NC
5	-Vout
6	Vadj
7	+Vout
8, 9	Case Connection
10, 11	Stand Off

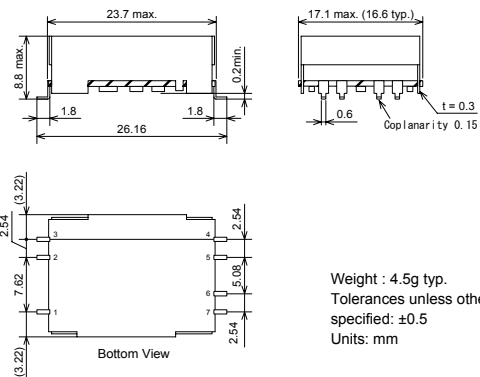
\*8-11pin are only available for DIP type.

### BTB-W Series

Pin	Function
1	+Vin
2	ON/OFF
3	-Vin
4	-Vout
5	Common
6	Vadj
7	+Vout
8, 9	Case Connection
10, 11	Stand Off

\*8-11pin are only available for DIP type.

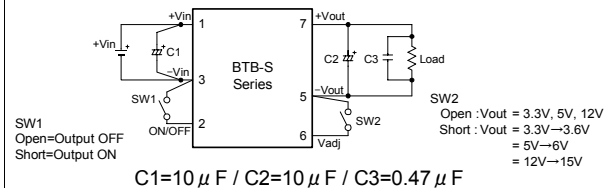
### <Outline> (SMD type)



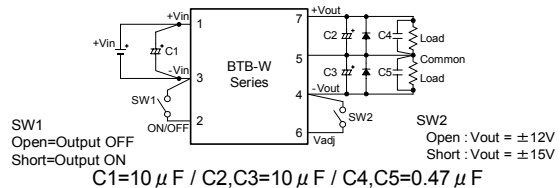
Weight : 4.5g typ.  
Tolerances unless otherwise specified: ±0.5  
Units: mm

### <Standard Connection Diagram>

#### BTB-S Series (3.3V, 5V, 12V, 15V)



#### BTB-W Series (±12V, ±15V)



- This product has limit to the capacity of external capacitor. Please refer to data sheets.
- Rated output voltage, with 6pin open. Output voltage is adjustable as shown above with Vadj and -Vout short.