



These converters are well suitable for battery operated equipment, measurement equipment, telecom, wireless network, Industry control system, everywhere where isolated, tightly regulated voltages and compact size are required.

- Wide 2:1 Input Voltage Range
- Input / Output Isolation: 1500VDC
- Operating Temperature: -40°C to +95°C
- Remote On/Off
- Output Short Circuit Protection
- Over Voltage Protection: Clamp Mode
- Over Temperature Protection
- Adjustable Output Voltage
- Lead Free Design, RoHS Compliant
- Designed according to IEC/EN/UL 62368-1

BWC60 - **24** **S** **1** **HS**
(1) (2) (3) (4) (5)

3 - 15V

HS - With Heat-sink

Models and Ratings								
Model Number	Input Voltage Range (VDC)	Output Voltage (VDC)	Output Current (mA)		Input Current (mA) typ.		Efficiency (%) typ.	Capacitive Load (μF) max.
			Min. Load	Full Load	No Load	Full Load		
BWC60-24S0	18 - 36 24V nominal	3.3	0	14000	120	2292	88	47000
BWC60-24S1		5	0	12000	160	2907	90	36000
BWC60-24S2		12	0	5000	45	2941	89	6800
BWC60-24S3		15	0	4000	45	2907	90	4700
BWC60-48S0	36 - 75 48V nominal	3.3	0	14000	65	1132	89	47000
BWC60-48S1		5	0	12000	90	1453	90	36000
BWC60-48S2		12	0	5000	30	1453	90	6800
BWC60-48S3		15	0	4000	30	1437	91	4700

Input Specifications		
Input voltage	See 'Models and Ratings' table	
	100ms max.	
Input surge voltage	24Vin models	50 VDC
	48Vin models	100 VDC
Input filter	Pi type	
Input reflected ripple current	Nominal Vin and full load	66 mAp-p typ.
Remote ON/OFF	Converter On	Open circuit or 3.5 to 12 VDC
	Converter Off	Short circuit or 0 to 0.7 VDC
	Refer to 'Remote' and '-Vin' pin	
Off idle input current	Nominal Vin	20 mA max.
Remote pin input current	Nominal Vin	0.2 mA max.

Output Specifications		
Voltage accuracy	Nominal Vin and full load	±1% max.
Output voltage adjustability (Trim)		±10% max.
Minimum load	See 'Models and Ratings' table	
Line regulation		±0.2% max.
	25% to 100% load	
Load regulation	3.3Vout models	±0.8% max.
	Other models	±0.5% max.

Ripple and noise	20MHz bandwidth	85 mVp-p max.
Capacitive load		See 'Models and Ratings' table
Short circuit protection		Continuous, Automatic recovery
Overload protection	Nominal Vin	110% min. of full load
	3.3V output	3.9V
Over voltage protection	5V output	6.2V
(Zener Diode Clamp)	12V output	15V
	15V output	18V
Transient recovery time	50% load step change	160 μ s typ.
Transient response deviation	di/dt = 0.8 A/ μ s	$\pm$ 5% max.
Temperature coefficient	Full load	$\pm$ 0.02%/°C max.

General Specifications

Efficiency	Nominal Vin and full load	See 'Models and Ratings' table
Start-up time	Nominal Vin and constant resistive load	160 ms typ.
Switching frequency		300 kHz typ.
Isolation voltage	Input to output, 60 s	1500 VDC min.
	Input/output to case, 60 s	1500 VDC min.
Isolation resistance	500 VDC	1000 M Ω min.
Isolation capacitance		1200 pF typ.
Reliability, calculated MTBF	MIL-HDBK-217F@25°C, Ground Benign	7.48×10^5 h
Operating ambient temperature	With derating	-40°C to +95°C
Maximum case temperature		+105°C max.
Over Temperature Protection	Case temperature	+110°C typ.
Storage temperature range		-55°C to +125°C
Relative humidity		95% RH max.
Cooling		Natural convection

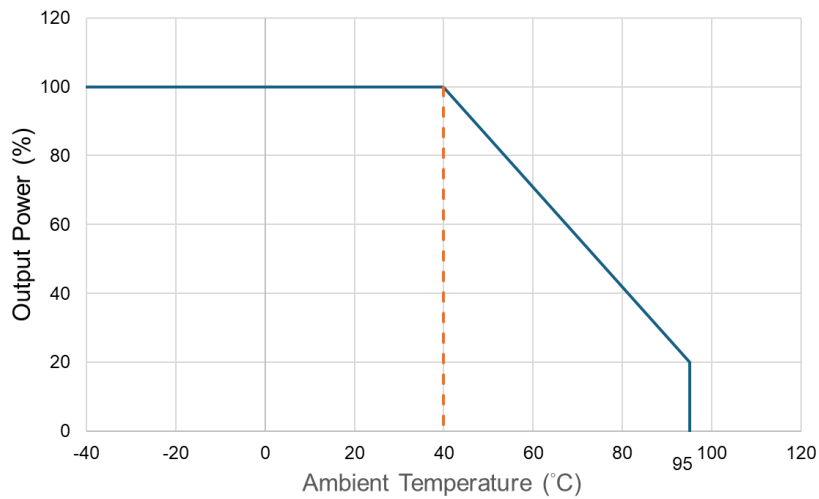
Physical Specifications

Case material	Nickel-coated copper
Base material	FR4 PCB (UL 94 V-0)
Pin material	Copper alloy
Pin Foundation Plating	Nickel
Pin Surface Plating	Tin
Potting material	Silicone (UL 94 V-0)
Dimensions	2.0 × 2.0 × 0.4 inch 50.8 × 50.8 × 10.2 mm
Weight	60 g typ.

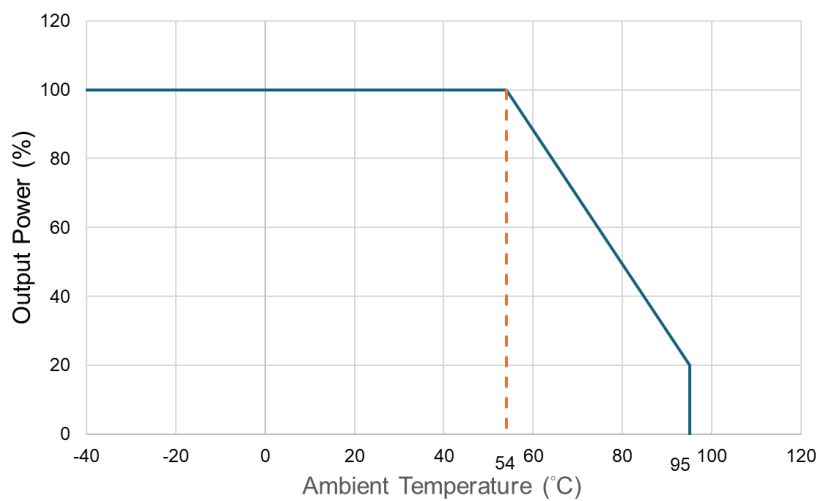
Characteristic Curves

Power Derating Curve

Without Heat-sink

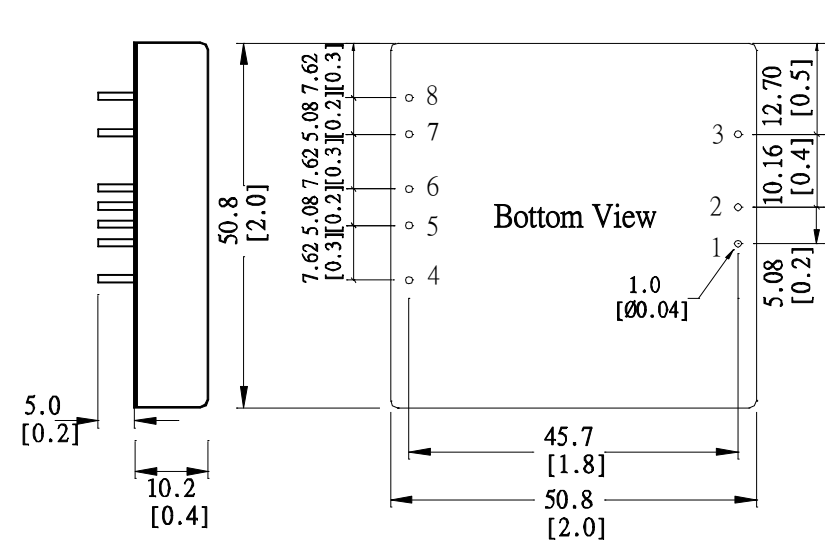


With Heatsink



Mechanical

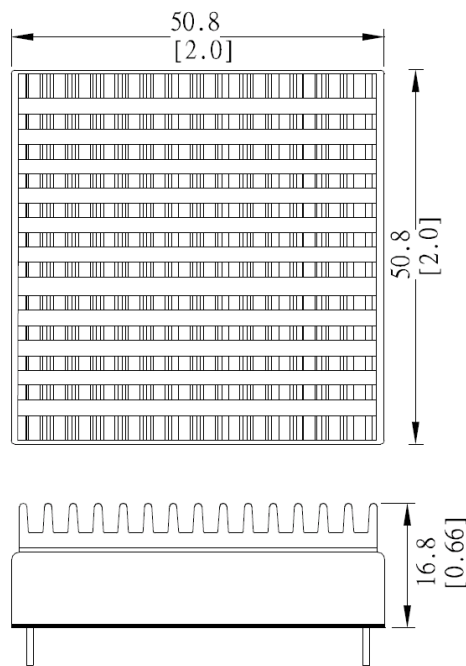
Standard model



Pinout	
PIN	Function
1	+Vin
2	-Vin
3	Remote On/Off
4	-Sense
5	+Sense
6	+Vout
7	-Vout
8	Trim

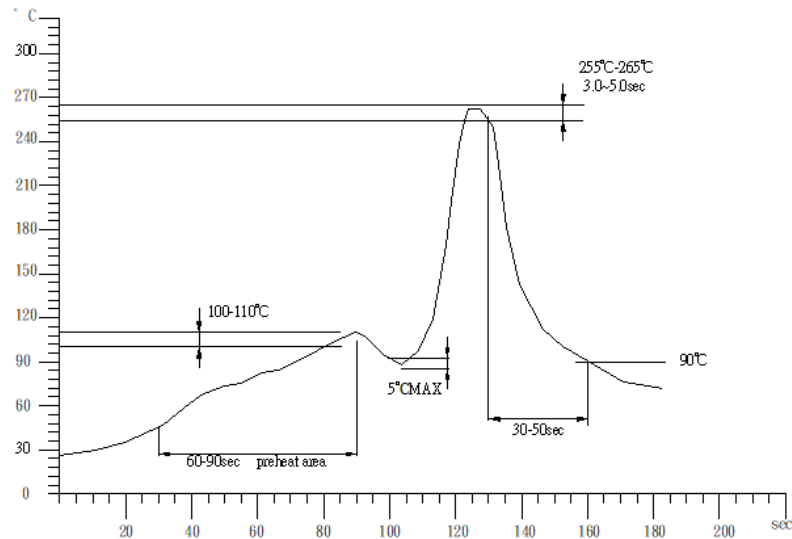
Dimensions in mm [inch]
Tolerances: ± 0.5 [± 0.02]
Pin dimension tolerances: ± 0.10 (± 0.004)

Optional model with heatsink



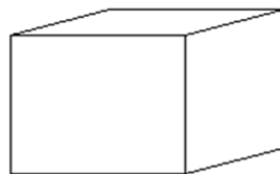
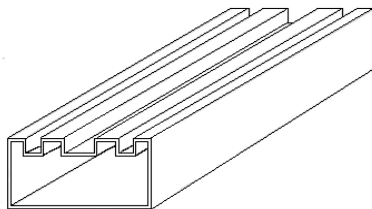
Heatsink
Material: Anodized aluminum (black)
Weight: 19g (0.67oz)

Wave Soldering Temperature Curve

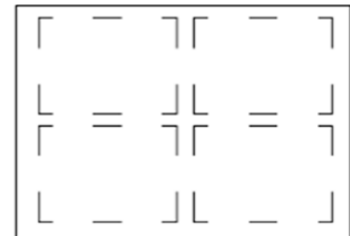


Carton Package

Standard model



INNER CARTON: 388*158.5*115



EXPORT CARTON: 405*334*263

TUBE = 5PCS

INNER CARTON = 16 TUBE = 16*5 = 80PCS

EXPORT CARTON = 4 INNER CARTON = 4*80 = 320PCS

For More Information:

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