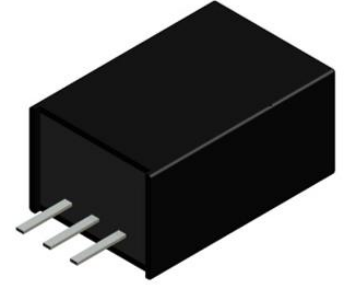


Features

- Efficiency up to 96%, non-isolated
- Pin-out compatible with LM78XX Linear
- Very lowest profile (L*W*H=11.5*8.5*17.5)
- Wide input range (9V-72V)
- Short circuit protection, Thermal shutdown
- -40°C to +85°C Operating Temperature
- Design meet EN60950 safety

Application

- Regulator requires
- High efficiency required



Selection Guide

Part number	Input voltage	Output voltage	Output current ⁽¹⁾ @ full load	Efficiency ⁽²⁾ Min. Input	Efficiency ⁽²⁾ Max. Input
C78HB3.3-0.5J	9-72 VDC	3.3 VDC	500mA	82%	76%
C78HB5.0-0.5J	9-72 VDC	5.0 VDC	500mA	87%	81%
C78HB6.5-0.5J	9-72 VDC	6.5 VDC	500mA	91%	84%
C78HB9.0-0.5J	14-72 VDC	9.0 VDC	500mA	92%	86%
C78HB12-0.5J	17-72 VDC	12 VDC	500mA	94%	89%
C78HB15-0.5J	21-72 VDC	15 VDC	500mA	95%	91%
C78HB24-0.5J	36-72 VDC	24 VDC	300mA	96%	92%

1. ⁽¹⁾To keep the output voltage on stable at least a 10mA (6mA for 24V output) of minimum loading is necessary.
2. ⁽²⁾The efficiency is test by min./ max. input voltage and max. full load @25°C.
3. Add suffixed "L" for output pins are 90° bent version.
4. All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.

Part Number

C 7 8 H B 3.3 - 0.5 J
 ↓ ↓
 Output voltage Output current

Specifications

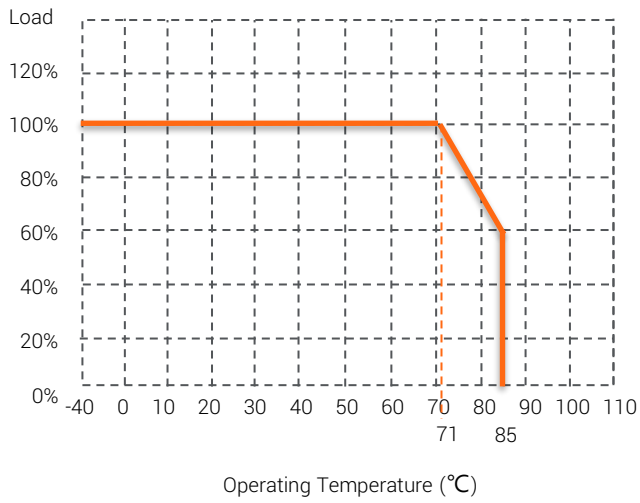
	Parameter	Conditions	Min.	Typ.	Max.	Unit
Input	Input filter				Capacitor	
	Voltage accuracy			±2	±3	%
Output	Capacitive Load				100	μF
	Line voltage regulation	LL to HL at 100% Load		0.4	1.0	%
	Load voltage regulation	10% to 100% of full load		0.3	0.6	%
	Dynamic load stability	100% to 50% Load		±75	±100	mV
	Ripple & Noise	10% to 100% of full load		20	60	mVp-p
	Operating frequency	100% Load	120		800	kHz
	Quiescent current	Vin=48V , min. load		1	5	mA
	Internal power dissipation				0.65	W
	Environment	Operating temperature	with de-rating	-40		85
Storage temperature			-55		125	°C
Operating case temperature					100	°C
Relative Humidity					95	%RH
Case thermal impedance					60	°C //W
Temperature coefficient		-40°C ~ +85°C Ambient			0.015	%/ °C
MTBF		+25°C	7395			KHrs
Function	Short-circuit protection				Continuous, automatic recovery	
	Short circuit input current	Nominal Vin=48V		15	25	mA
	Thermal shutdown	Internal IC junction		165		°C
	Vibration				MIL-STD-202	
	Safety Approvals				EN60950	
Physical	Dimension				17.5 x 11.5 x 8.5 mm	
	Weight				4	g
	Cooling method				Free air convection	
	Case material				Non-Conductive Black Plastic (UL94V-0)	
	Potting material				silicone	
EMC	EMI conduction	EN55032			Class A/B ⁽¹⁾	
	EMI radiation	EN55032			Class A/B ⁽¹⁾	

- ⁽¹⁾ With external components.
- All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
- The product information and specifications are subject to change without prior notice.

CTC is the professional and one among world's leading manufacturers of DC-DC/ AC-DC converters.

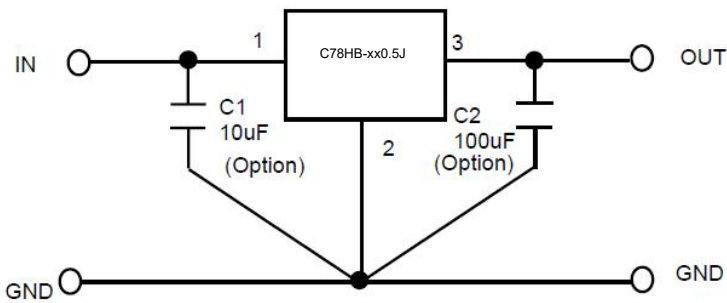
The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

Derating Curve



The derating curve was measured in chamber with natural convection.

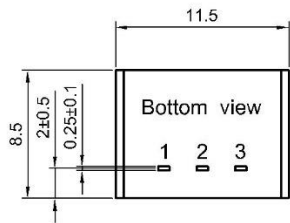
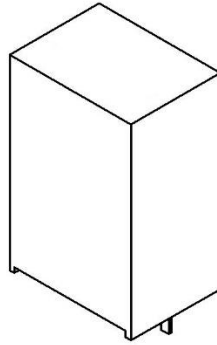
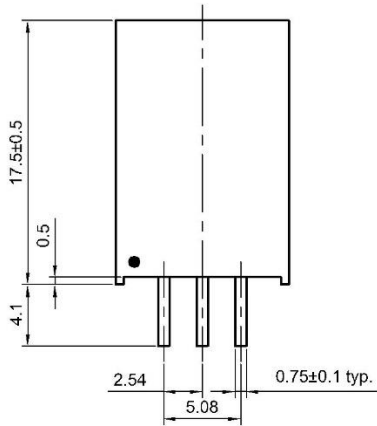
Standard application circuit



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Mechanical Dimension & Pinning



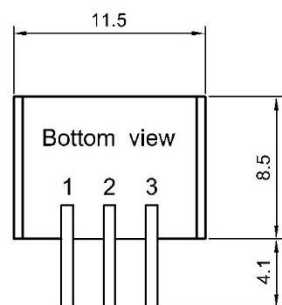
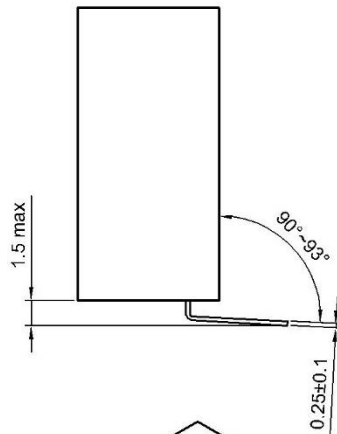
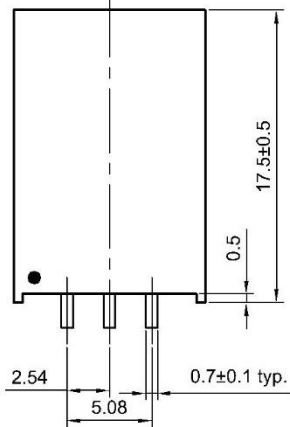
Projection : Third angle projection
Unit : mm
Tolerance : ±0.25mm

Pin	Single
1	+Vin
2	GND
3	+Vout

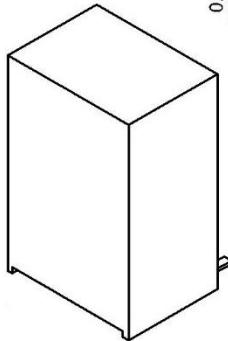
xx.x±0.5mm

xx.xx±0.25mm

Add suffixed "/L"



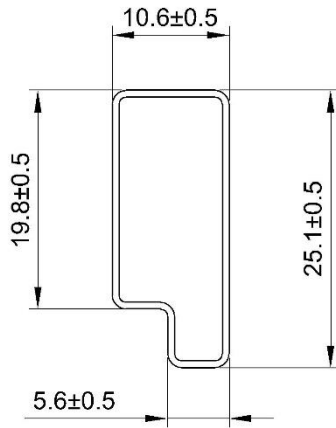
Projection : Third angle projection
Unit : mm
Tolerance : ±0.25mm



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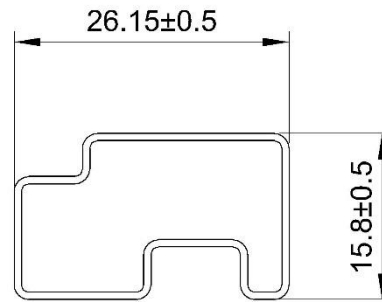
The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

Package



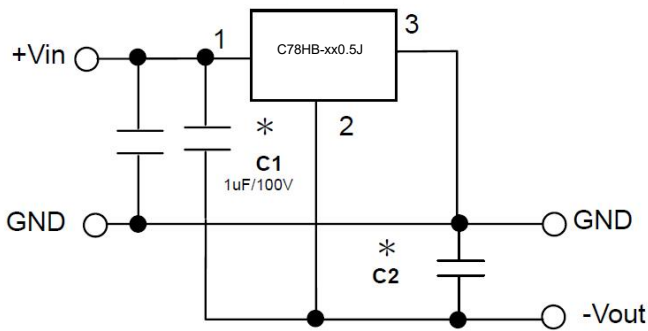
UNIT:mm
1 Tube = 42 pcs
Length:520±2mm

Add suffixed "L"



UNIT:mm
1 Tube = 42 pcs
Length:520±2mm

Positive-to-negative converter



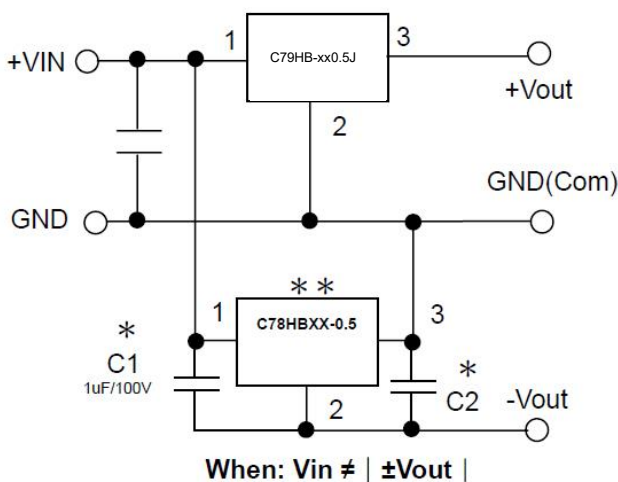
Pin	Negative output	Positive output
1	+Vin	+Vin
2	-Vout	GND
3	GND	+Vout

* C1, C2 is requested and lay closely at the pins of the converter.

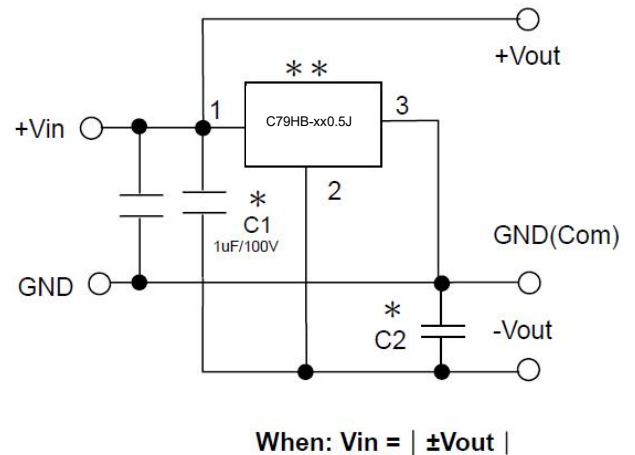
Selection Guide - Negative Output

Part number	Input voltage	Output voltage	Output current ⁽¹⁾ @ full load	Efficiency ⁽²⁾ (Min.)	Efficiency ⁽²⁾ (Max.)	External capacitors	
						C1	C2
C79HB3.3-0.5J	15-65 VDC	-3.3 VDC	-400mA	78%	75%	1µF/100V	22µF/6.3V
C79HB5.0-0.5J	15-65 VDC	-5.0 VDC	-400mA	82%	80%	1µF/100V	22µF/10V
C79HB6.5-0.5J	15-65 VDC	-6.5 VDC	-350mA	84%	82%	1µF/100V	22µF/10V
C79HB9.0-0.5J	15-62 VDC	-9.0 VDC	-300mA	87%	85%	1µF/100V	10µF/16V
C79HB12-0.5J	15-59 VDC	-12 VDC	-250mA	88%	86%	1µF/100V	10µF/25V
C79HB15-0.5J	15-56 VDC	-15 VDC	-200mA	89%	87%	1µF/100V	10µF/25V
C79HB24-0.5J	20-48 VDC	-24 VDC	-200mA	89%	87%	1µF/100V	10µF/35V

Dual Outputs (two converters)



Dual outputs(single converter)



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