

# ONE OUTPUT 2.5W NON-ISOLATED



## MAIN FEATURES

- Small Compact Size - PCB Mount
- Output Range : 3.3VDC - 24VDC
- Pin-out compatible with LM78xx/LM79xx Linear regulators
- Operating Temperature -40°C To +85°C
- Industry Standard Pinout
- Low Cost/High Reliability

- Safety: Compliance With All Requirements of IEC/EN62368-1, UL62368-1, CSA C22.2NO.62368-1-14, CE,UKCA Mark.
- Materials: Uses UL 94-V0 Plastic And Resin
- EMC : Conducted And Radiated Emission conform To EN55032, FCC Part 15, CLASS A, IEC/EN61000-3-2 CLASS A, EN61000-3-3
- Immunity Conform To:EN61000-4-2, IEC/EN61000-4-3, EN61000-4-4,EN61000-4-5,EN61000-4-6, EN61000-4-8 EN61000-4-11

Part Number	Output Power (W)	Output Voltage (VDC)	Output Current (mA)	Capacitor Load Max.(uF)	Max.Operating Ambient (°C)	Efficiency Typical (%)	Input Range (Vdc)
50200	1.65	3.3	500	680	85	84	6.0 ~36 (12V typ.)
50201	2.5	5	500	680	85	89	8.0 ~36 (12V typ.)
50202	2.5	9	277	680	85	92	13 ~36 (24V typ.)
50203	2.5	12	210	680	85	92	16 ~36 (24V typ.)
50204	2.5	15	166	680	85	94	20 ~36 (24V typ.)
50205	2.5	24	104	680	85	95	28 ~36 (32V typ.)
50206	2.5	-5	680	85	85	8.0 ~36 (12V typ.)	
50207	2.5	-12	210	680	85	88	8.0 ~36 (12V typ.)

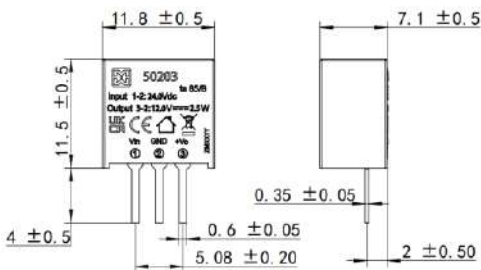
## DIMENSIONS and PINOUT

50200 to 50205:

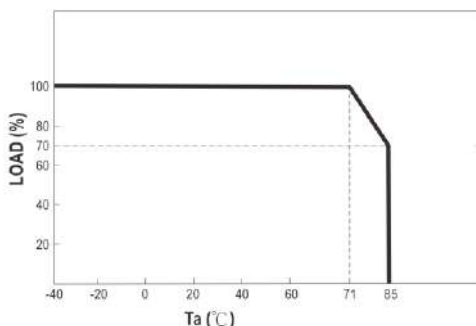
- Pin 1: DC Input +Vin
- Pin 2: DC Input GND
- Pin 3 : DC Output +Vout

50206 to 50207:

- Pin 1: DC Input +Vin
- Pin 2: DC Input -Vout
- Pin 3 : DC Output GND

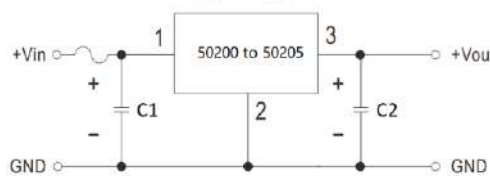


## Derating Graph

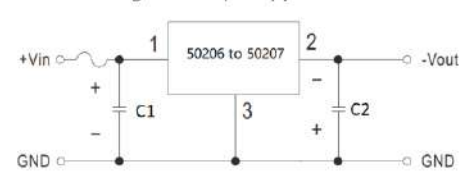


## TYPICAL APPLICATION

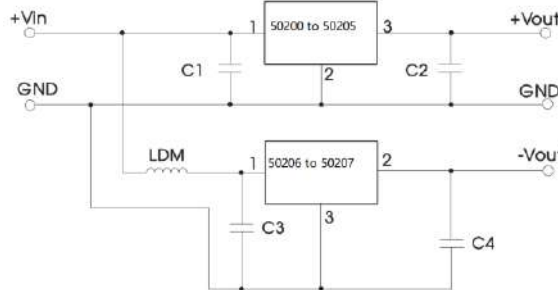
### Positive output application circuit



### Negative output application circuit



### Positive and negative output paralleling application circuit

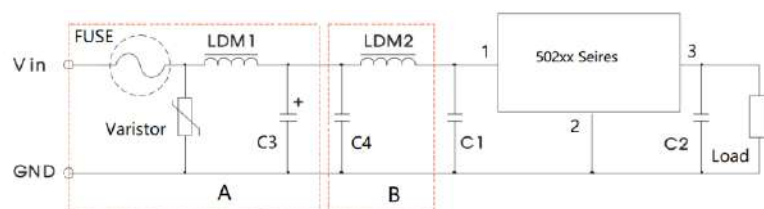


### External capacitor:

- C1,C3: 10uF/50V
- C2,C4: 3.3Vdc, 5.0Vdc output types: 22uF/10V; 9.0Vdc,15Vdc output types: 22uF/25V; 24Vdc output types: 22uF/50V;

- In using parallel application circuit, input voltage range should be taken notice of and a 10uH LDM component is recommended to reduce the interference.

## EMC SUGGESTION



LDM1,LDM2: 10uH to 100uH; C1: 10uF/50V; C2: 22uF/10V to 50V; C3:680uF/50V; C4: 4.7uF/50V; Varistor: 10D470K to 20D470K; FUSE:1A slow-blow type; Circuit A part: used for EMS tests, circuit B part: used for EMI tests.

@ pending certification

Model: 2.5 Watt		Specification
DC Input Characteristics	Rated input Voltage	See table
	Input Voltage Range	36VDC max. (see table)
	Input Current	See table
	Protection (Fuse recommended)	1000mA slow-blow type for all models
	Input Filter	Capacitor type
DC Output Characteristics	Output Voltage Accuracy	Refer to datasheet document
	Output Voltage Line Regulation	Refer to datasheet document
	Output Voltage Load Regulation	Refer to datasheet document
	Ripple & Noise	Max 100mVp-p @Rated DC input (The measuring will be terminated with a 22uF AL E-Cap and a 0.1uF Cer-Cap. An oscilloscope set at 20MHz bandwidth)
	Switching Frequency	1MHz typ.
Protection Characteristics	Over Current Protection	The DC converter shall automatically protect against over current. The DC converter shall auto-recover normal operation after the fault condition is removed. No excessive heat, odour, or plastic deformation shall occur with no safety hazard during the fault
	Output Short Circuit Protection	The DC converter shall withstand a continuous output short without damage; The DC converter shall resume normal operation after the short is removed, no excessive heat, odour, or plastic deformation shall occur with no safety hazard
Environmental	Operation Temperature	-40°C ~ +85°C (Refer to "Derating Graph")
	Operation Humidity	10~90% RH (No Condensing) @ DC output with full load
	Storage Temperature	-10°C~ +35°C
	Storage Humidity	<75%RH
Safety & EMC Requirement	Dielectric Strength	Non-isolation
	Radiation	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit ).
	Conduction	Meeting EN55032, FCC part 15, (Class A/B with external components, refer to EMC typical recommended circuit ).
	Safety Standards	Compliance With all requirements of : UL62368-1, CSA C22.2NO.62368-1-14 , IEC/EN62368-1, CE,UKCA Mark
Reliability Requirement	MTBF	>200K Hours @ at 85deg.C and DC output with full load >700K Hours @ at 25deg.C and DC output with full load <i>Calculated in accordance with MIL-HDBK-217-F2</i>
	Burn-In Test	The unit shall be burned in for 2~5hours under rated input voltage and DC with full load at an ambient temperature of 30~45 degrees C
	Net Weight	Approximately 1.5 grams per product unit.
Guarantee	This product is in accordance with the European RoHS & REACH directives	

Myrra reserve the right to change specifications in this document without notice