

Wide Input Non-Isolated, Regulated Series



K78XX-500 & K78XXM-1000 Series

WIDE INPUT NON-ISOLATED & REGULATED SINGLE POSITIVE/NEGATIVE OUTPUT

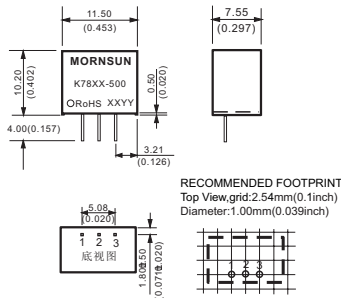
RoHS

FEATURES

- Operating Temperature: -40°C ~ +85°C
- Wide input range
- Efficiency up to 96%
- 0.5A or 1A current output
- No heat sink required
- Low ripple and noise
- Short circuit protection, thermal shutdown
- Application of negative output
- Industry Standard Pinout
- SIP Package, UL94-V0 Package
- Pin-out compatible with LM78XX linears

SPECIFICATIONS

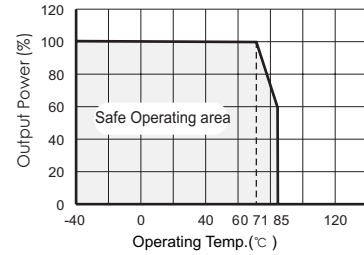
Positive voltage accuracy..... ± 2% (typ)
 Line regulation: Input voltage from low to high..... K78xx: ± 0.2% (typ)
 K78xxM: ± 0.5% (typ)
 Load regulation: From 10% to 100% load..... K78xx: ± 0.4% (typ)
 K78xxM: ± 0.5% (typ)
 Temperature drift: Refer to recommended circuit..... ± 0.02%/°C (max)
 Ripple & Noise: 20MHz Bandwidth..... 25mVp-p (typ)
 Storage temperature..... -55°C ~ +125°C
 MTBF(+25°C)..... 2,000,000 hours (min)
 Cooling..... Free air convection



K78XX-500 & K78XXM-1000 SIZE: 11.5x7.55x10.2(mm)

Function	+Vin	GND	+Vout	-Vout
Positive	1	2	3	-
Negative	1	3	-	2

TYPICAL TEMPERATURE CURVE



K78XX-500 Series

Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi(%) Vin(min.)	Effi(%) Vin(max.)
K7803-500	4.75-28	3.3	500	90	80
K7805-500	4.75-25	-3.3	-400	73	78
	6.5-32	5.0	500	93	84
K78X6-500	6.0-27	-5.0	-400	78	83
	8-32	6.5	500	94	87
K7809-500	6.0-25	-6.5	-300	83	85
	11-32	9.0	500	95	91
K7812-500	7.0-23	-9.0	-200	87	86
	15-32	12	500	95	92
K7815-500	7.0-20	-12	-200	85	87
	18-32	15	500	96	93
	7.0-17	-15	-200	84	89

Ultraminiature K78XXM-1000 Series

Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi(%) Vin(min.)	Effi(%) Vin(max.)
K7803M-1000	4.75-20	3.3	1000	90	83
K7805M-1000	6.5-20	5.0	1000	93	85

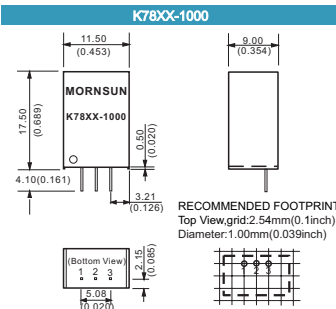
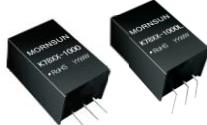
K78XX-1000 & K78XX-1000L Series

WIDE INPUT NON-ISOLATED & REGULATED SINGLE POSITIVE/NEGATIVE OUTPUT

RoHS

FEATURES

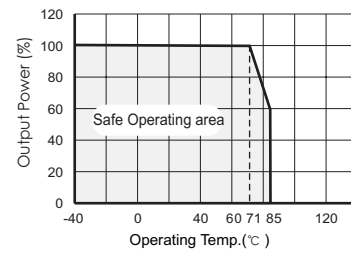
- Operating Temperature: -40°C ~ +85°C
- Efficiency up to 96%
- 1A current output
- No heat sink required
- Short circuit protection, Thermal Shutdown
- Low ripple and noise
- Ultra low power loss
- Application of negative output
- Industry Standard Pinout
- SIP Package, UL94-V0 Package
- Pin-out compatible with LM78XX linears



K78XX-1000 SIZE: 11.5x9.00x17.5(mm)

Function	+Vin	GND	+Vout	-Vout
Positive	1	2	3	-
Negative	1	3	-	2

TYPICAL TEMPERATURE CURVE



K78XX-1000 Series

Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi(%) Vin(min.)	Effi(%) Vin(max.)
K7803-1000	4.75-28	3.3	1000	90	83
	4.75-25	-3.3	-600	80	82
K7805-1000	6.5-32	5.0	1000	93	88
	7.0-27	-5.0	-600	85	87
K78X6-1000	9.0-32	6.5	1000	94	90
	7.0-25	-6.5	-400	88	90
K7809-1000	12-32	9.0	1000	95	92
	7.0-23	-9.0	-400	89	91
K7812-1000	16-32	12	1000	96	94
	7.0-20	-12	-300	89	91
K7809-1000L	20-32	15	1000	97	94
	7-17	-15	-300	87	92

K78XX-1000L Series

Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi(%) Vin(min.)	Effi(%) Vin(max.)
K7803-1000L	4.75-28	3.3	1000	90	83
	4.75-25	-3.3	-600	80	82
K7805-1000L	6.5-32	5.0	1000	93	88
	7.0-27	-5.0	-600	85	87
K78X6-1000L	9.0-32	6.5	1000	94	90
	7.0-25	-6.5	-400	88	90
K7809-1000L	12-32	9.0	1000	95	92
	7.0-23	-9.0	-400	89	91
K7812-1000L	16-32	12	1000	96	94
	7.0-20	-12	-300	89	91
K7815-1000L	20-32	15	1000	97	94
	7-17	-15	-300	87	92

SPECIFICATIONS

Positive voltage accuracy..... ± 2% (typ)
 Line regulation: Input voltage from low to high..... ± 0.2% (typ)
 Load regulation: From 10% to 100% load..... ± 0.4% (typ)
 Temperature drift: Refer to recommended circuit..... ± 0.02%/°C (max)
 Ripple & Noise: 20MHz Bandwidth..... 25mVp-p (typ)
 Storage temperature..... -55°C ~ +125°C
 MTBF(+25°C)..... 2,000,000 hours (min)
 Cooling..... Free air convection

Wide Input Non-Isolated, Regulated Series



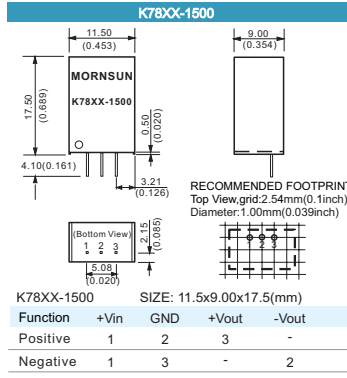
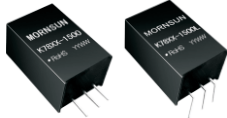
K78XX-1500 & K78XX-1500L Series

WIDE INPUT NON-ISOLATED & REGULATED
SINGLE POSITIVE/NEGATIVE OUTPUT

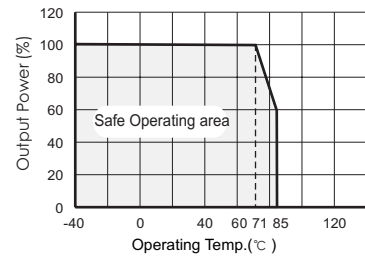
RoHS

FEATURES

- Operating Temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Efficiency up to 95%
- 1.5A large current output
- No heatsink required
- Short circuit protection, thermal shutdown
- Low ripple and noise
- Ultra low power loss
- Negative output application
- Industry Standard Pinout
- SIP Package, UL94-V0 Package
- Pin-out compatible with LM78XX linears



TYPICAL TEMPERATURE CURVE

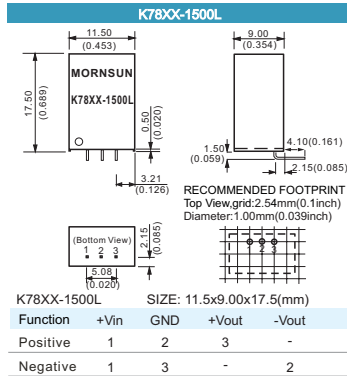


K78XX-500 Series

Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi (%) Vin(min.)	Effi (%) Vin(max.)
K7802-1500(L)	4.75-18	2.5	1500	88	85
	6.5-15	-2.5	-1200	81	84
K7803-1500(L)	4.75-18	3.3	1500	91	88
	6.5-16	-3.3	-1200	82	86
K7805-1500(L)	6.5-18	5	1500	93	91
	7-13	-5	-1000	84	88
K7806-1500(L)	8-18	6.5	1500	95	93
	7-13	-6.5	-800	87	90

SPECIFICATIONS

Output voltage accuracy..... $\pm 2\%$ (typ)
 Line regulation: Vin=min. to max, at full load..... $\pm 0.5\%$ (typ)
 Load regulation: From 10% to 100% load..... $\pm 0.5\%$ (typ)
 Temperature drift: Refer to recommended circuit..... $\pm 0.02^{\circ}\text{C}/^{\circ}\text{C}$ (max)
 Ripple & Noise: 20MHz Bandwidth..... 20mVp-p (typ)
 Storage temperature..... $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
 MTBF(+25°C)..... > 2,000,000 hours (min)
 Cooling..... Free air convection



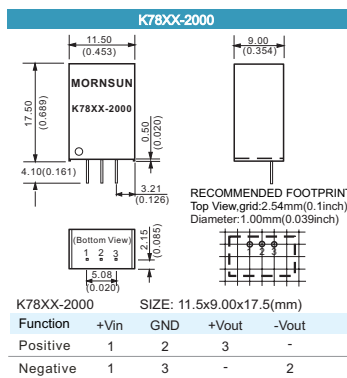
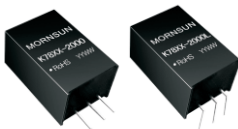
K78XX-2000 & K78XX-2000L Series

WIDE INPUT NON-ISOLATED & REGULATED
SINGLE POSITIVE/NEGATIVE OUTPUT

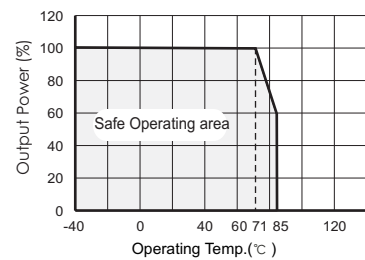
RoHS

FEATURES

- Operating Temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Efficiency up to 92%
- 2A large current output
- No heatsink required
- Short circuit protection, thermal shutdown
- Low ripple and noise
- Ultra low power loss
- Negative output application
- Industry Standard Pinout
- SIP Package, UL94-V0 Package
- Pin-out compatible with LM78XX linears



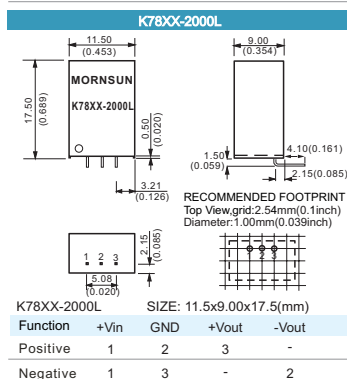
TYPICAL TEMPERATURE CURVE



Part Number	Input Range (VDC)	Vout (VDC)	Iout (mA)	Effi (%) Vin(min.)	Effi (%) Vin(max.)
K7802-2000(L)	4.75-18	2.5	2000	85	83
	6.5-15	-2.5	-1200	81	84
K7803-2000(L)	4.75-18	3.3	2000	87	86
	6.5-16	-3.3	-1200	82	86
K7805-2000(L)	7-18	5	2000	91	88
	7-13	-5	-1000	84	88
K7806-2000(L)	8.5-18	6.5	2000	92	91
	7-13	-6.5	-800	87	90

SPECIFICATIONS

Output voltage accuracy..... $\pm 2\%$ (typ)
 Line regulation: Vin=min. to max, at full load..... $\pm 0.5\%$ (typ)
 Load regulation: From 10% to 100% load..... $\pm 0.5\%$ (typ)
 Temperature drift: Refer to recommended circuit..... $\pm 0.03^{\circ}\text{C}/^{\circ}\text{C}$ (max)
 Ripple & Noise: 20MHz Bandwidth..... 25mVp-p (typ)
 Storage temperature..... $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
 MTBF(+25°C)..... > 2,000,000 hours (min)
 Cooling..... Free air convection



AC-DC SERIES
DC-DC FIXED INPUT ISOLATED/UNREGULATED
DC-DC FIXED INPUT ISOLATED/REGULATED
DC-DC WIDE INPUT ISOLATED/REGULATED
DC-DC ULTRA-WIDE INPUT ISOLATED/REGULATED
DC-DC WIDE INPUT NON-ISOLATED/REGULATED
LED DRIVER
IGBT DRIVER
ISOLATION AMPLIFIER MODULE



Wide Input Non-Isolated, Regulated Series

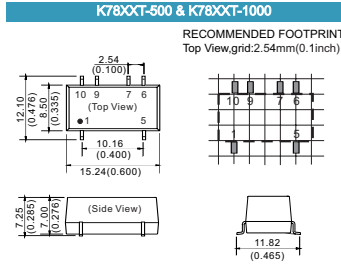
K78XXT-500 & K78XXT-1000 Series

WIDE INPUT NON-ISOLATED SMD PACKAGE SINGLE OUTPUT

RoHS

FEATURE

- Operating temperature: $-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- Efficiency up to 96%
- No heat sink required
- SMD package
- Wide input range
- Adjustable output voltage
- Remote ON/OFF control
- Short circuit protection, Thermal Shutdown
- Very low shutdown current
- Super low Ripple and Noise



Function	Vin	GND	Vout	Vadj	ON/OFF
K78XXT	1	7,9	5	6	10

K78XXT-500 Series

Part Number	Input Range (VDC)	Output Range (VDC)	Current (mA)	Efficiency (%)	Vin(min)	Vin(max)
K7803T-500	4.5-28	1.8-5.5	500	90	75	
K7805T-500	6.0-28	2.5-8.0	500	94	81	
K7812T-500	14-28	4.5-13.5	500	95	90	
K7815T-500	17-28	4.5-15.5	500	96	92	

K78XXT-1000 Series

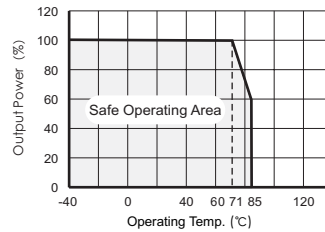
Part Number	Input Range (VDC)	Output Range (VDC)	Current (mA)	Efficiency (%)	Vin(min)	Vin(max)
* K7803T-1000	6.0-18	1.8-6.5	1000	86	80	
	4.5-20		800	88	79	
* K7805T-1000	8.0-18	2.5-6.5	1000	90	85	
	6.5-20		800	92	84	

Note: *** Designing

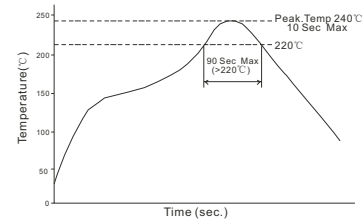
SPECIFICATION

- Output voltage accuracy: At 100% load..... $\pm 2\%$ (typ)
- Line regulation: Vin=min. to max. at full load...K78XXT-500: $\pm 0.2\%$ (typ)
K78XXT-1000: $\pm 0.5\%$ (typ)
- Load regulation: 10% to 100% load.....K78XXT-500: $\pm 0.3\%$ (typ)
K78XXT-1000: $\pm 0.5\%$ (typ)
- Ripple and Noise: 20MHZ Bandwidth.....10mVp-p(typ)
- Temperature drift..... $\pm 0.02\%/^{\circ}\text{C}$ (max)
- Storage temperature..... $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Cooling..... Free air convection
- MTBF (+25 $^{\circ}\text{C}$)..... 2,000,000 hours(min)

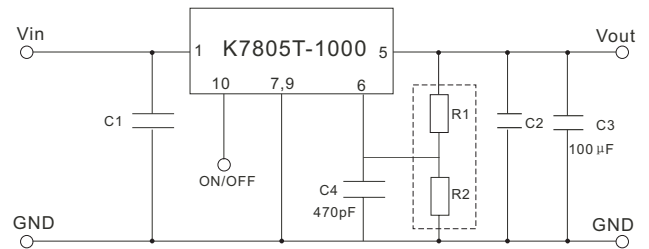
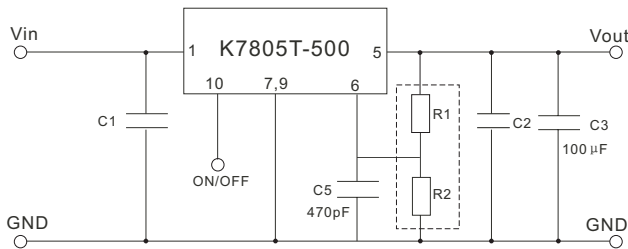
TYPICAL TEMPERATURE CURVE



RECOMMENDED REFLOW SOLDERING PROFILE



STANDARD APPLICATION CIRCUIT



1. C1, C2: Choose a ceramic type capacitors; C3 is require , for best performance , use a 100 μF or more capacitor please.
2. C1, C2 are require and should be placed close to the pins of the converter, with shortest possible traces.
3. No parallel connection or plug and play.