BL78M09

Three-terminal positive Voltage Regulator
BL78M09

FEATURES

- Output Crrent in Excess of 1A
- Output Voltage is 9V
- Internal thermal Overload protection
- Internal Short Circuit Current Limiting

PIN CONNECTION

1.INPUT

2. GND

3. OUTPUT

1 2 3
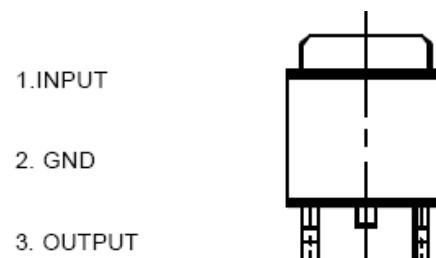
ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Characteristics	Symbol	Value	Unit
Input Voltage	Vi	40	V
Power dissipation	PD	12	W
Operating Temperature	Topr	0～125	℃
Storage Temperature Range	Tstg	-65～150	℃

ELECTRICAL CHARACTERISTICS

(unless otherwise noted, Vi=15V,Io=500mA, 0℃<Tj<125℃,C1=0.33μF,Co=0.1μF)

Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vo	Tj=25℃, Io=100mA	8.64	9.0	9.36	V
		11.5V≤Vi≤26V, Io=5mA～1A	8.55	9.0	9.45	
Load Regulation	ΔVo	Tj=25℃,Io=5mA～1A			180	mV
		Tj=25℃,Io=250mA～750mA			90	
Line Regulation	ΔVo	11.5V≤Vi≤26V,Io=500mA, Tj=25℃			180	mV
		13V≤Vi≤19V,Io=500mA, Tj=25℃			90	
Quiescent Current	Iq	Tj=25℃		4.2	8	mA
Quiescent Current Charge	ΔIq	7V≤Vi≤25V,Io=500mA			1.3	mA
		5mA≤Io≤1A			1.3	

Continues:

| Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Noise Voltage	V_N	10Hz≤f≤100kHz, Tj=25℃		75		μV
Dropout Voltage	Vd	Tj=25℃，Io=1A		2		V
Ripple Rejection	RR	12.5V≤Vi≤22.5V,f=120Hz, Io=50mA, Tj=25℃	56	72		dB
Short Circuit Current Limit	Isc	Tj=25℃，Vi=35V		1		A

APPLICATION CIRCUIT
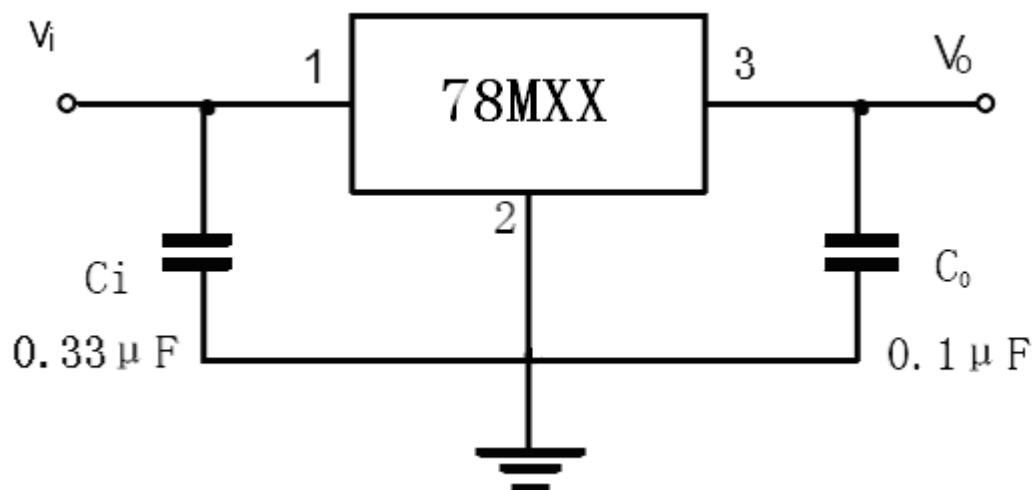
*Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

OUTLINE DRAWING

TO-252-2L
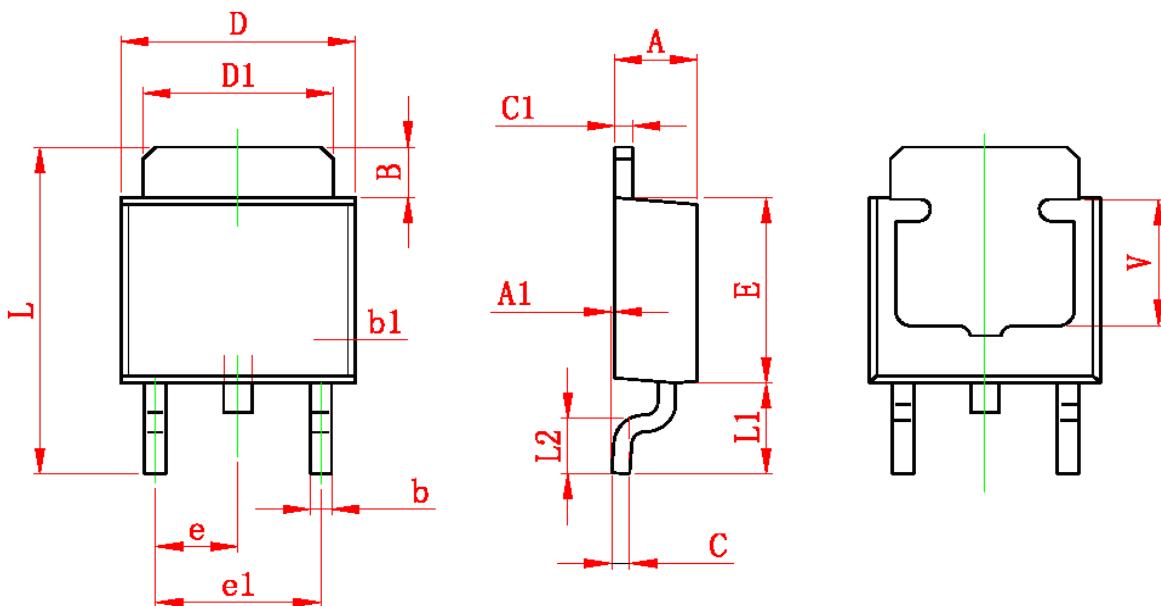
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
B	1.350	1.650	0.053	0.065
b	0.500	0.700	0.020	0.028
b1	0.700	0.900	0.028	0.035
c	0.430	0.580	0.017	0.023
c1	0.430	0.580	0.017	0.023
D	6.350	6.650	0.250	0.262
D1	5.200	5.400	0.205	0.213
E	5.400	5.700	0.213	0.224
e	2.300 TYP		0.091 TYP	
e1	4.500	4.700	0.177	0.185
L	9.500	9.900	0.374	0.390
L1	2.550	2.900	0.100	0.114
L2	1.400	1.780	0.055	0.070
V	3.80 REF		0.150 REF	