



MK78M09 Three-terminal positive voltage regulator

FEATURES:

※ Maximum output current

IOM: 1A

※ Output voltage

VO: 9V

※ Continuous total dissipation

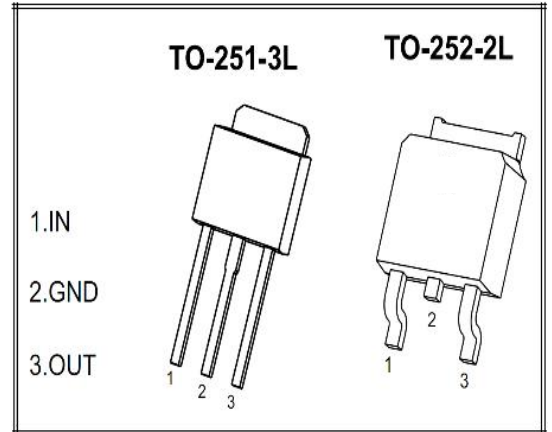
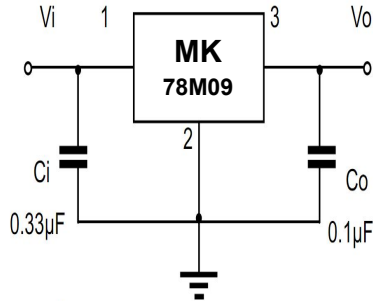
PD: 1.25W

MARKING:

MK 78M09 MKD / U ****

MK→logo (D→252) / (U→251) ****→Date

TYPICAL APPLICATION:



Absolute Maximum ratings (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	Vi	35	V
Thermal Resistance From Junction to air	RθJA	80	°C/W
Operating Junction Temperature Range	TOPR	-25~+125	°C
Storage Temperature Range	TSTG	-55~+150	°C

Electrical Characteristics At Specified Virtual Junction Temperature (Vi=16V, Io=350mA, Ci=0.33µF, Co=0.1µF. Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Output voltage	VO	25°C	8.65	9	9.35	V	
		11.5V≤Vi≤24V, Io=5mA-350mA	-25~+125	8.55	9	9.45	V
Load Regulation	ΔVO	Io=5mA-0.5A, Vi=16V	25°C		20	180	mV
		Io=5mA-200mA, Vi=16V	25°C		10	90	mV
Line Regulation	ΔVO	11.5V≤Vi≤26V, Io=200mA	25°C		6	100	mV
		12V≤Vi≤26V, Io=200mA	25°C		2	50	mV
Quiescent Current	Iq		25°C		4.6	6	mA
Quiescent Current Change	ΔIq	11.5V≤Vi≤26V, Io=200mA	-25~+125			0.8	mA
		5mA≤Io≤350mA	-25~+125			0.5	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz	25°C		60	200	µV/Vo
Ripple Rejection	Rr	13V≤Vi≤23V, f=120Hz, Io=300mA	-25~+125	56	80		dB
Dropout Voltage	Vd	Io=350mA	25°C		2	2.5	V
Short Circuit Current	Isc	Vi=16V	25°C		250		mA
Peak Current	IPK		25°C		0.5		A

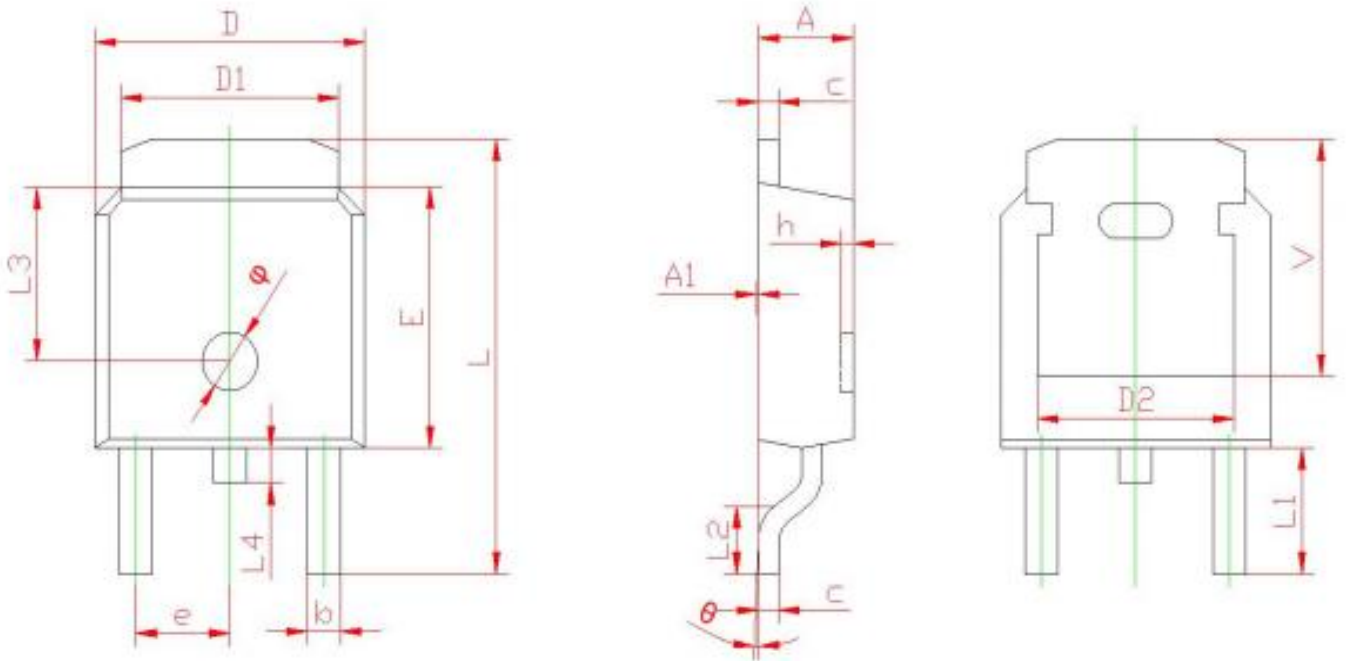
Note :

Bypass Capacitors are Recommended For Optimum Stability and Transient Response and Should be located as Close as Possible to the Regulators



Package Dimensions:

TO-252 PACKAGE OUTLINE DIMENSIONS

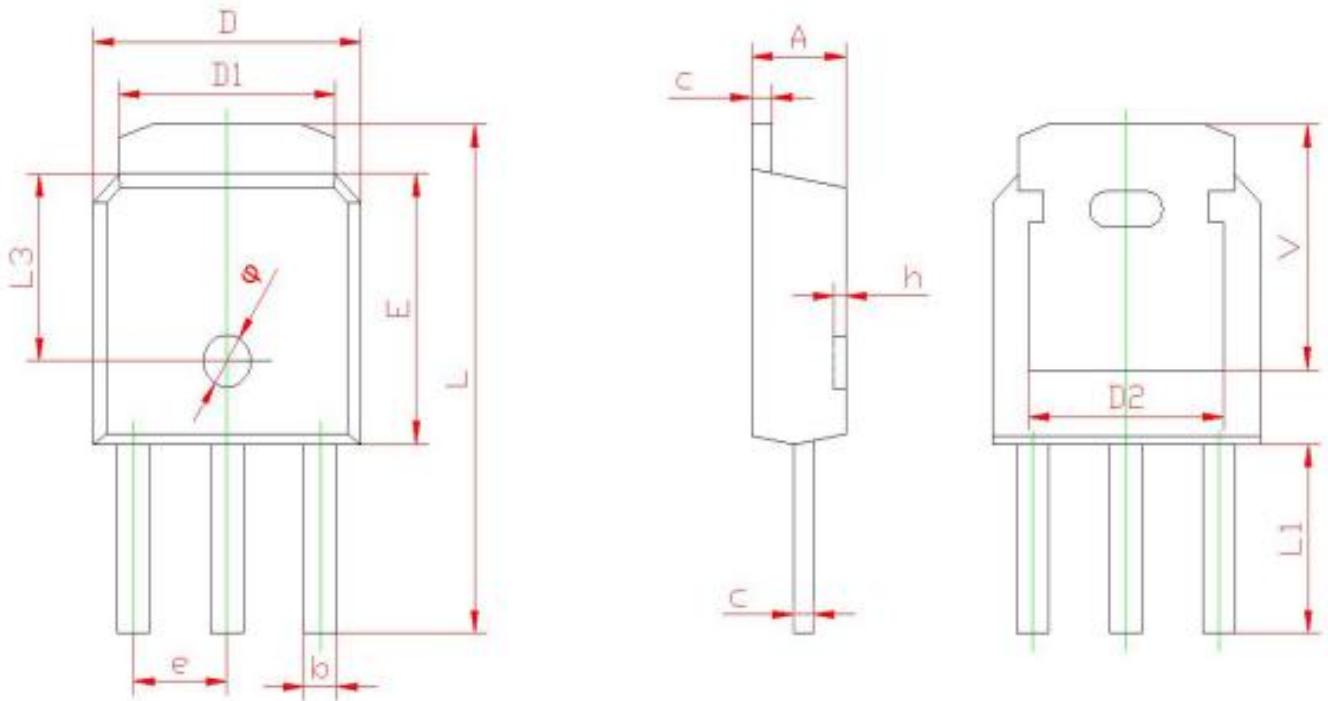


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	2.400	0.087	0.094
A1	0.000	0.127	0.000	0.005
b	0.660	0.860	0.026	0.034
c	0.460	0.580	0.018	0.023
D	6.500	6.700	0.256	0.264
D1	5.100	5.460	0.201	0.215
D2	4.800 REF		0.189 REF	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	2.900 REF		0.114 REF	
L2	1.400	1.700	0.055	0.067
L3	4.00 REF		0.157 REF	
L4	0.600	1.000	0.024	0.039
φ	1.200	1.400	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.500 REF		0.217 REF	



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TO-251 PACKAGE OUTLINE DIMENSIONS



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D1	5.100	5.460	0.201	0.215
D2	4.800 REF		0.189 REF	
E	6.000	6.200	0.236	0.244
e	2.186	2.386	0.086	0.094
L	9.800	10.400	0.386	0.409
L1	4.300 REF		0.170 REF	
L3	4.00 REF		0.16 REF	
L4	0.600	1.000	0.024	0.039
h	0.000	0.300	0.000	0.012
V	5.500 REF		0.217 REF	