



# MK78M12 Three-terminal positive voltage regulator

## FEATURES:

※ Maximum output current

**IOM: 1A**

※ Output voltage

**VO: 12V**

※ Continuous total dissipation

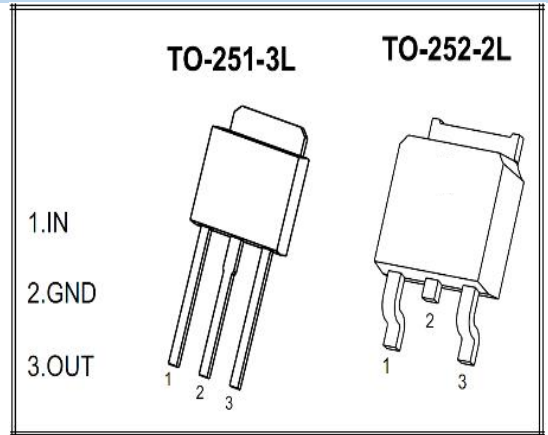
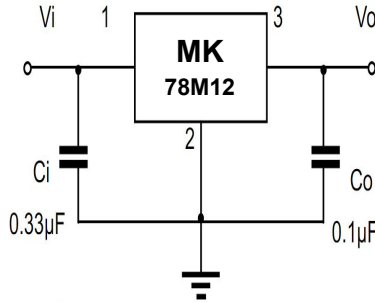
**PD: 1.25W**

## MARKING:

**MK 78M12 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=19V, Io=350mA, Ci=0.33µF, Co=0.1µF. Unless Otherwise Specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Output voltage	VO	25°C	11.5	12	12.5	V	
		14.5V≤Vi≤27V, Io=5mA-350mA	-25~+125	11.4	12	12.6	V
Load Regulation	ΔVO	Io=5mA-0.5A, Vi=19V	25°C		25	240	mV
		Io=5mA-200mA, Vi=19V	25°C		10	120	mV
Line Regulation	ΔVO	14.5V≤Vi≤30V, Io=200mA	25°C		10	100	mV
		16V≤Vi≤30V, Io=200mA	25°C		3	50	mV
Quiescent Current	Iq		25°C		4.6	6	mA
Quiescent Current Change	ΔIq	14.5V≤Vi≤30V, Io=200mA	-25~+125			0.8	mA
		5mA≤Io≤350mA	-25~+125			0.5	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz	25°C		75	200	µV/Vo
Ripple Rejection	Rr	15V≤Vi≤25V, f=120Hz, Io=300mA	-25~+125	55	80		dB
Dropout Voltage	Vd	Io=350mA	25°C		2	2.5	V
Short Circuit Current	Isc	Vi=19V	25°C		240		mA
Peak Current	IPK		25°C		0.7		A

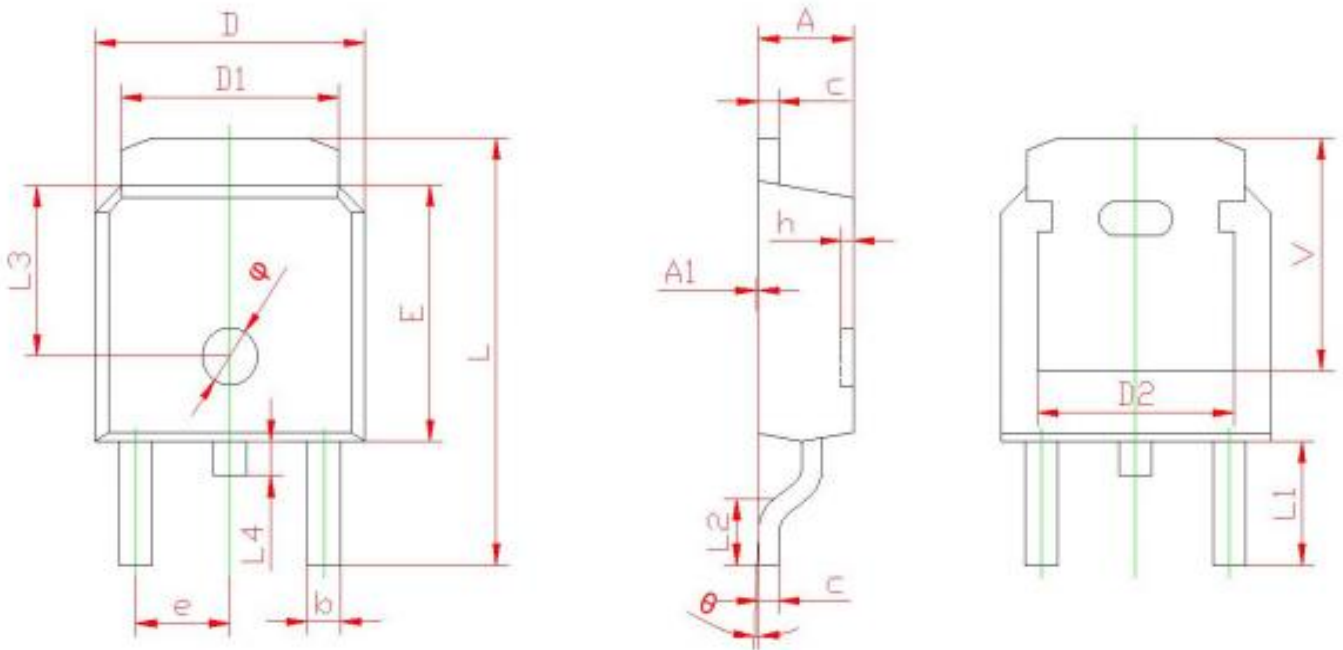
Note :

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**

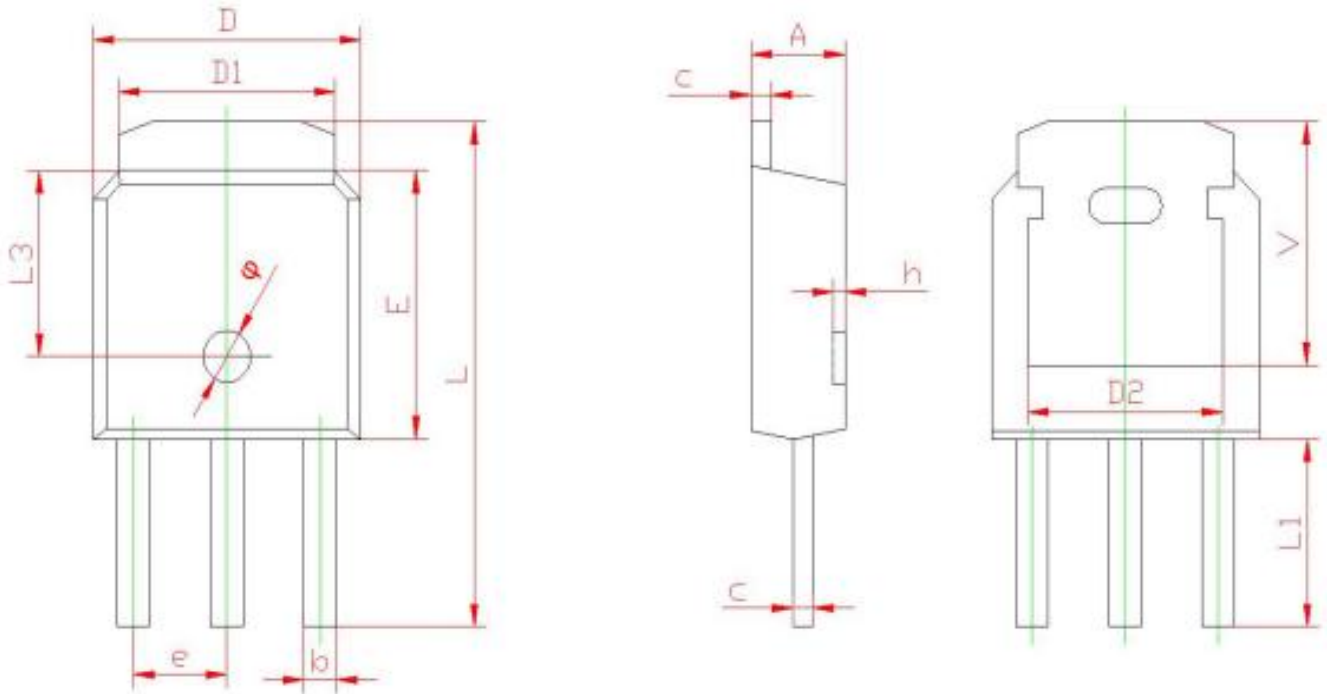


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.200	<b>2.400</b>	0.087	0.094
A1	0.000	<b>0.127</b>	0.000	0.005
b	0.660	<b>0.860</b>	0.026	0.034
c	0.460	<b>0.580</b>	0.018	0.023
D	6.500	<b>6.700</b>	0.256	0.264
D1	5.100	<b>5.460</b>	0.201	0.215
D2	4.800 REF		0.189 REF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



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	Min.	Max.	Min.	Max.
A	2.200	<b>2.400</b>	0.087	0.094
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D	6.500	<b>6.700</b>	0.256	0.264
D1	5.100	<b>5.460</b>	0.201	0.215
D2	4.800 REF		0.189 REF	
E	6.000	<b>6.200</b>	0.236	0.244
e	2.186	<b>2.386</b>	0.086	0.094
L	9.800	<b>10.400</b>	0.386	0.409
L1	4.300 REF		0.170 REF	
L3	4.00 REF		0.16 REF	
L4	0.600	<b>1.000</b>	0.024	0.039
h	0.000	<b>0.300</b>	0.000	0.012
V	5.500 REF		0.217 REF	