78M08
DATASHEET

Specification Revision History:

Version	Date	Description
V1.0	2019/08	New
V1.1	2021/05	Modify Ordering Information
V1.2	2025/02	Modify Ordering Information
V1.3	2025/03	Add application precautions and overall typesetting.

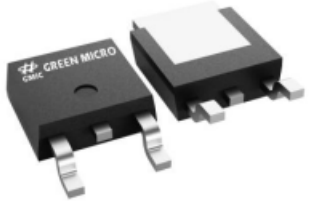
General Description

The 78M08 is monolithic fixed voltage regulator integrated circuit. They are suitable for applications that required supply current up to 0.5 A.

Features

- Output Current Up To0.5A
- Fixed Output Voltage Of 8V,Available
- Thermal Overload Shutdown Protection
- Short Circuit Current Limiting
- Output Transistor SOA Protection

The appearance of the product

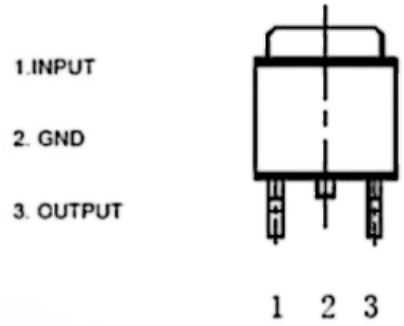


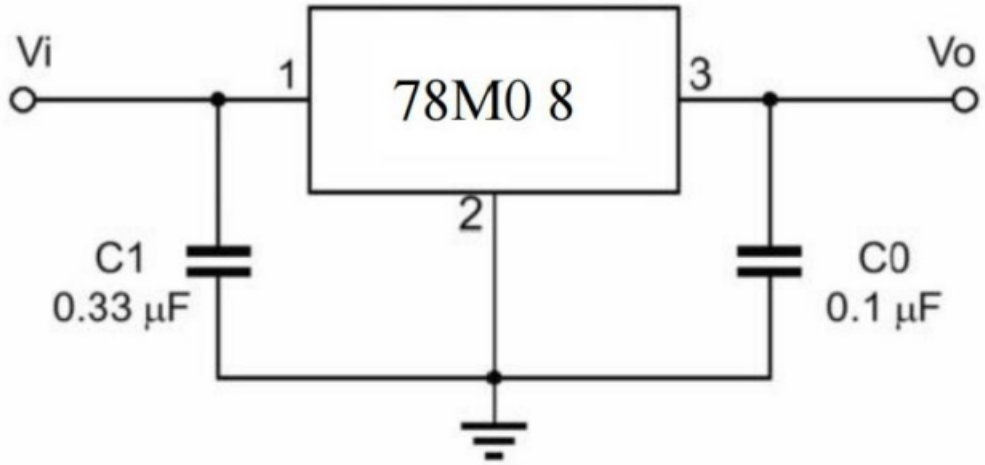
TO-252-2

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
78M08	TO-252-2	78M08 57	REEL	2500PCS/REEL

TypicalApplication Circuits





Absolute Maximum Ratings(TJ=25°C, unless otherwise specified)

Characteristic	Value	Value	Unit
Input Voltage	Vi	35	V
Thermal Resistance Junction-Case	$R_{\theta JC}$	10	°C/W
Thermal Resistance Junction-Air	$R_{\theta JA}$	93	°C/W
Operating Temperature Range	T_{OPR}	-40~+85	°C
Storage Temperature Range	T_{STG}	-55~+150	°C

Electrical Characteristics

(Unless otherwise specified,-40°C<Tj<85°C,Io=500mA,Vi=10V,Ci=0.33μF,Co=0.1μF)

For 78M08(unless otherwise noted,Vi=14V,Io=350mA,0°C<Tj<125°C,Ci=0.33μF,Co=0.1μF)

Characteristics	Symbol	Test Conditions	Min	Typ	Max	Unit
Output Voltage	Vo	T_J=+25°C	7.68	8.0	8.32	V
		10.5V≤Vi≤23V,Io=5mA～0.35A	7.6	8.0	8.4	
Line Regulation*	△Vo	10.5V≤Vi≤25V Tj=25°C,Io=200mA		6	100	mV
		11V≤Vi≤25V,Io=0.5A,Tj=25°C,Io=200mA		2	50	
Load Regulation*	△Vo	Tj=25°C,Io=5mA～0.5A		26	160	mV
		Tj=25°C,Io=5mA～200mA		10	80	
Quiescent Current	I_Q	T_J=+25°C		4.0	6.0	mA
Quiescent Current Change	$\triangle I_Q$	10.5V≤Vi≤25V,Io=200mA			0.8	mA
		5mA≤Io≤0.5A			0.5	
Output Noise Voltage	V_N	10Hz≤f≤100kHz		60	250	μV
Ripple Rejection	RR	11.5V≤Vi≤21.5V,f=120Hz, Io=300mA,Tj=25°C	56	80		dB
Dropout Voltage	Vd	T_J=+25°C		2		V
Short Circuit Current Limit	Isc	Vi=30V,Vo=0V,T_J=+25°C		0.8		A

Outline Dimensions

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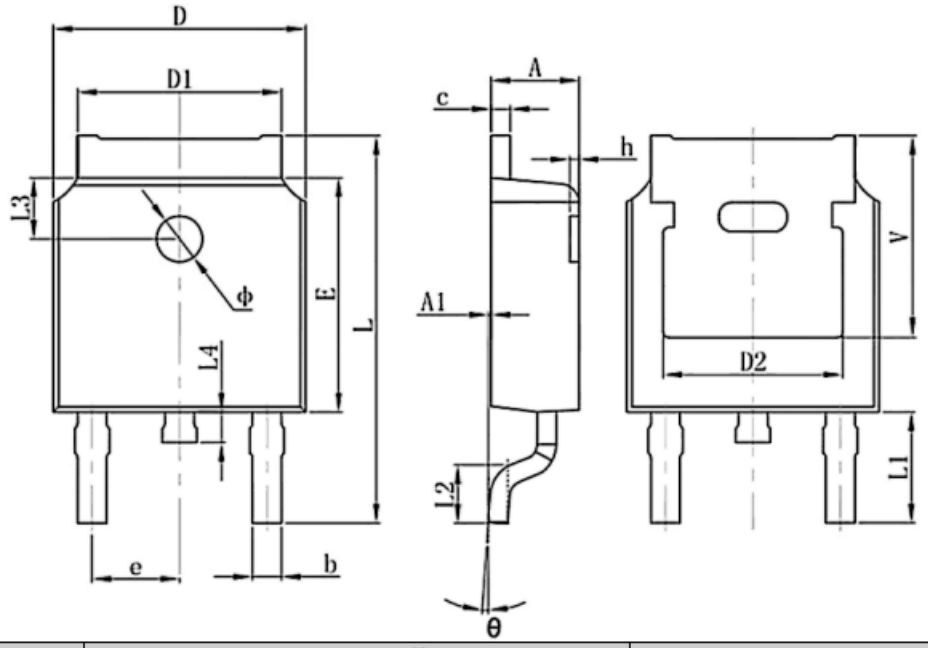
Unit : mm



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	4.830 REF.		0.190 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	1.600 REF.		0.063 REF.	
L4	0.600	1.000	0.024	0.039
Φ	1.100	1.300	0.043	0.051
θ	0°	8°	0°	8°
h	0.000	0.300	0.000	0.012
V	5.350 REF.		0.211 REF.	

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