

78M05 DATASHEET

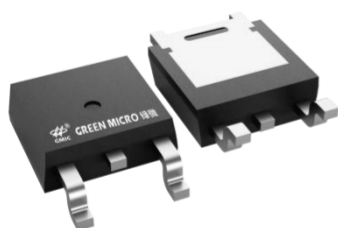
Specification Revision History:

Version	Date	Description
V1.0	2020/12	New
V1.1	2021/03	Modify Ordering Information
V1.2	2024/02	Modify Ordering Information
V1.3	2025/03	Add application precautions and overall typesetting.

Features

- ※ Output Current in Excess of 0.5A
- ※ Output Voltage is 5V
- ※ Internal thermal Overload protection
- ※ Internal Short Circuit Current Limiting

The appearance of the product

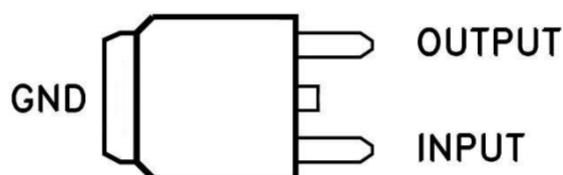


TO-252-2

Ordering Information

Product Model	Package Type	Packing	Packing Qty
L78M05CDT	TO-252-2	REEL	2500PCS/REEL
78M05	TO-252-2	REEL	2500PCS/REEL

Pin Configurations



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Absolute Maximum Ratings (Ta=25°C)

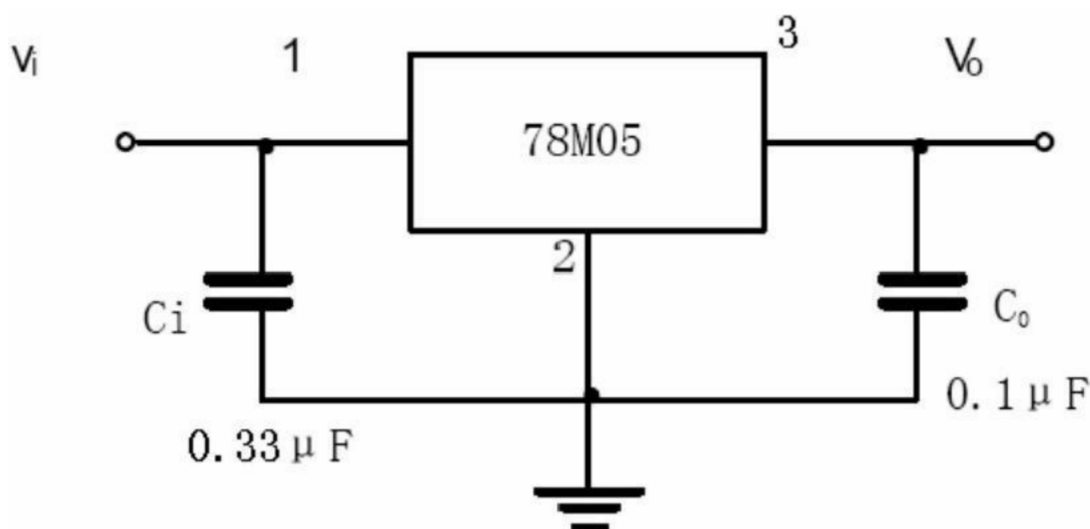
Characteristics	Symbol	Value	Unit
Input Voltage	Vi	36	V
Storage Temperature Range	Tstg	-85~150	°C

Electrical Characteristics

(unless otherwise noted, $V_i=10V$, $I_o=250mA$, $0T_j<125$, $C_i=0.33\mu F$, $C_o=0.1\mu F$)

Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Voltage	V_o	$T_j=25^\circ C$	4.8	5.0	5.2	V
		$7V \leq V_i \leq 20V, I_o=5mA \sim 250mA$	4.75	5	5.25	
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=5mA \sim 500mA$		25	100	mV
		$T_j=25^\circ C, I_o=5mA \sim 200mA$		10	50	
Line Regulation	ΔV_o	$7V \leq V_i \leq 25V, I_o=200mA, T_j=25^\circ C$		4	100	mV
		$8V \leq V_i \leq 25V, I_o=200mA, T_j=25^\circ C$		2	50	
Quiescent Current	I_q	$T_j=25^\circ C$		4	6	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V, I_o=200mA$			0.8	mA
		$5mA \leq I_o \leq 350mA$			0.5	
Output Noise Voltage	V_N	$10Hz \leq f \leq 100kHz, T_j=25^\circ C$		40	200	μV
Dropout Voltage	V_d	$T_j=25^\circ C$		1.7		V
Ripple Rejection	RR	$8V \leq V_i \leq 18V, f=120Hz, I_o=300mA, T_j=25^\circ C$	56	80		dB
Short Circuit Current Limit	I_{sc}	$T_j=25^\circ C$		500		mA

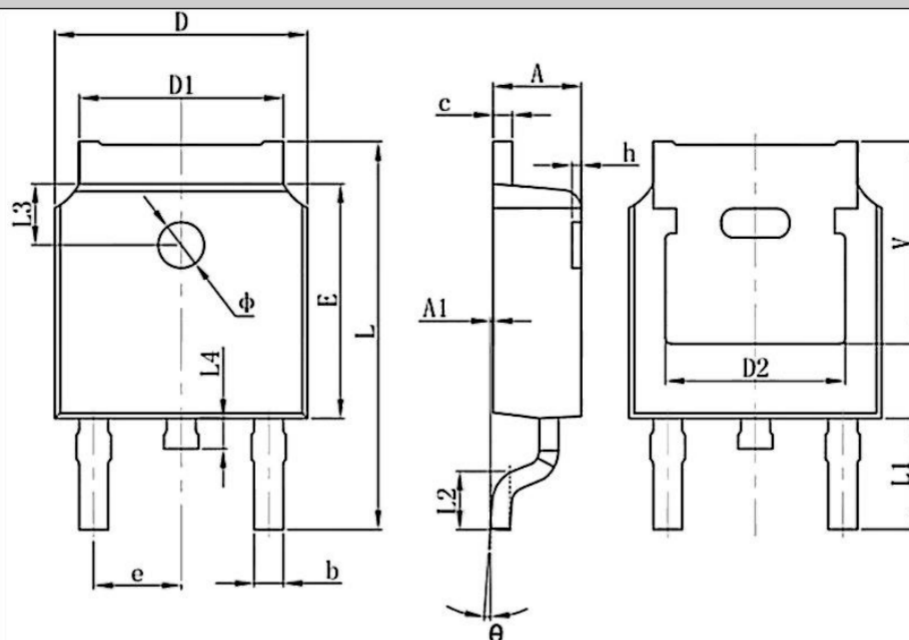
Application Circuit



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

Outline Dimensions

TO-252-2



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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