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 Crrent 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

PIN CONNECTION

Ordering Information

Product Model	Package Type	Marking	Packing	Packing Qty
78M05	TO-252	78M05 043	REEL	2500PCS/REEL
78M05	TO-252	78M05 G043	REEL	2500PCS/REEL

ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

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

ELECTRICAL CHARACTERISTICS

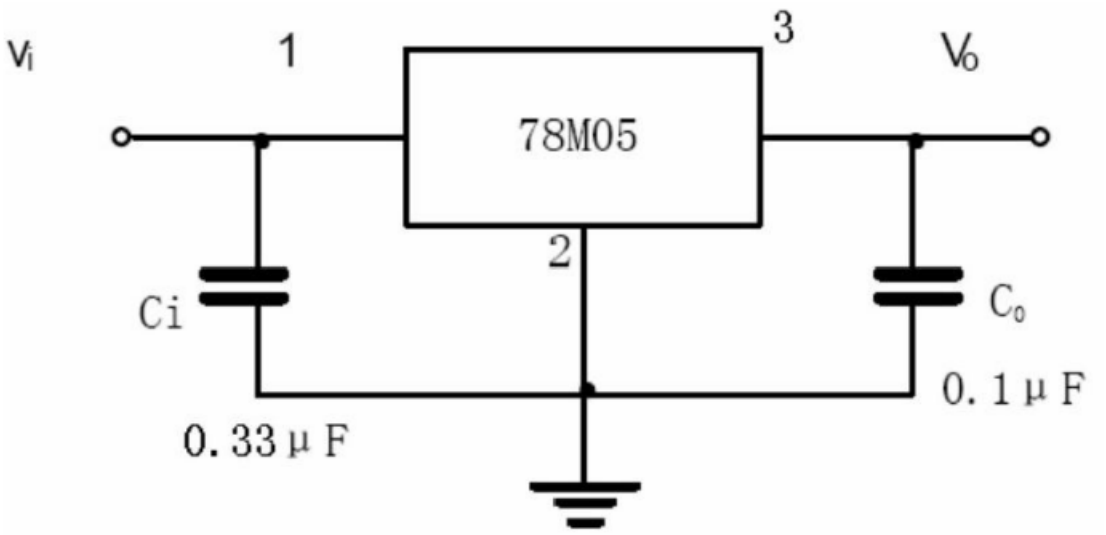
(unless otherwise noted,Vi=10V,Io=250mA,0Tj<125,C1e0.33μF,Co=0.1μF)

Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Voltage	Vo	Tj=25°C	4.8	5.0	5.2	V
		7V≤Vi≤20V,Io=5mA～250mA	4.75	5	5.25	

Load Regulation	△Vo	Tj=25°C,Io=5mA~500mA		25	100	mV
		Tj=25°C,Io=5mA~200mA		10	50	
Line Regulation	△Vo	7V≤Vi≤25V,Io=200mA, Tj=25°C		4	100	mV
		8V≤Vi≤25V,Io=200mA, Tj=25°C		2	50	
Quiescent Current	Iq	Tj=25°C		4	6	mA
Quiescent Current Charge	△Iq	8V≤Vi≤25V,Io=200mA			0.8	mA
		5mA≤Io≤350mA			0.5	

Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Noise Voltage	V_N	10Hz≤f≤100kHz,Tj=25°C		40	200	μV
Dropout Voltage	Vd	Tj=25°C		1.7		V
Ripple Rejection	RR	8V≤Vi≤18V,f=120Hz, Io=300mA,Tj=25°C	56	80		dB
Short Circuit Current Limit	Isc	Tj=25°C		500		mA

APPLICATION CIRCUIT

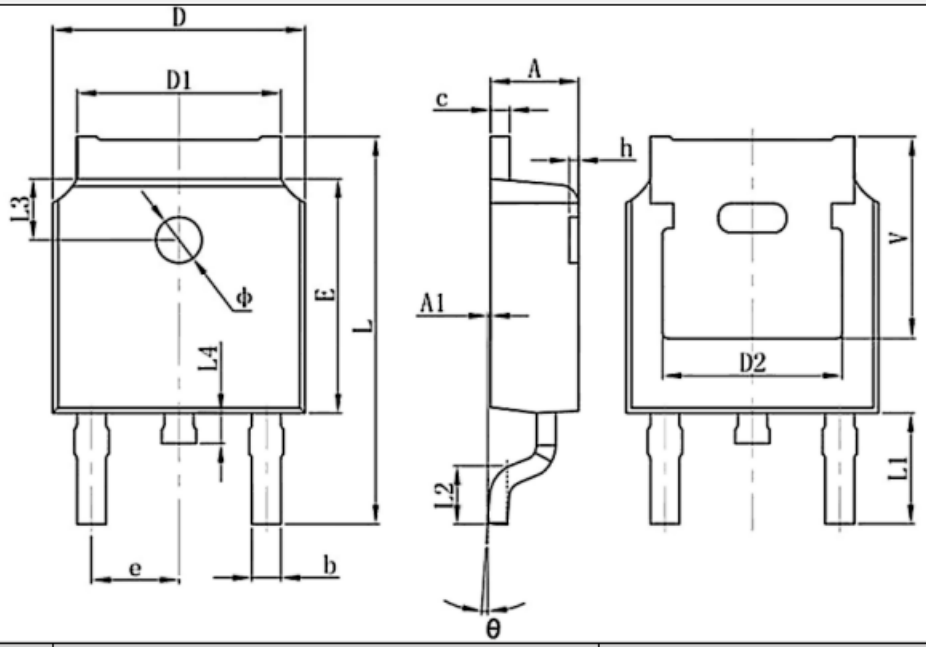


*Bypass capacitors are recommended for optimum stability and transient response and should be located as close as Possible to the regulators.

Outline Dimensions

TO-252-2

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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