

Product Specification

XBLW L78M05

500mA Three-terminal Positive Regulators

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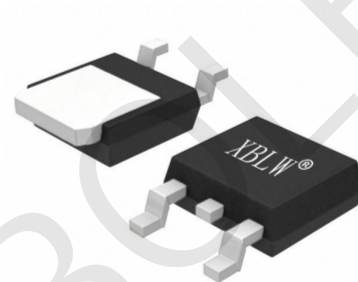
Descriptions

L78M05 is a three port current positive fixed voltage regulator widely used in various electronic devices and circuits that require a stable 5V DC power supply, such as power supply for microcontrollers, digital circuits, sensors, as well as power supply for LED lighting, communication equipment, and low voltage drop circuits for computers.

The chips are available in TO252-2L package.

Features

- Output Current up to 500mA
- Output Voltages of 5V
- Internal thermal Overload protection
- Internal Short Circuit Current Limiting



TO-252-2L

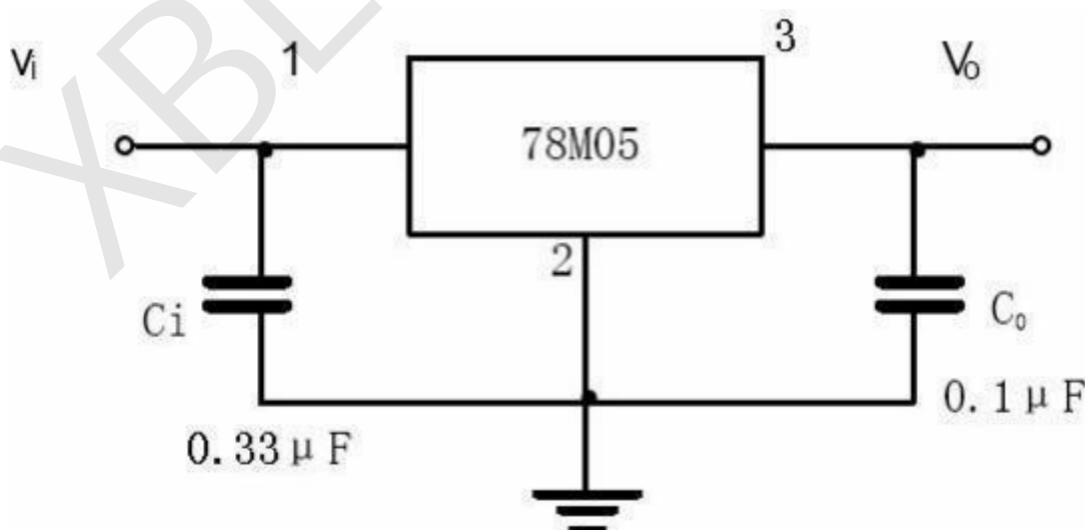
Applications

- Electronic point-of-sale
- Appliances and white goods
- TVs and set-top boxes
- Motor drives
- Building automation

Ordering Information

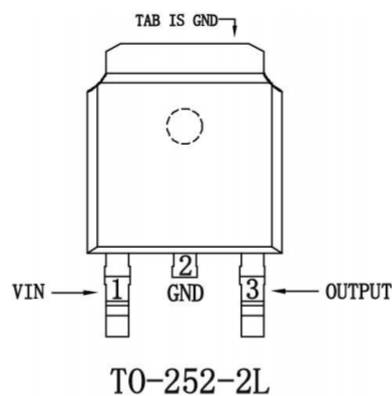
Product Model	Package Type	Marking	Packing	Packing Qty
XBLW L78M05DTR	TO-252-2L	78M05	Tape	2500Pcs/Reel

Typical Application



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

Pin Descriptions



PIN NO.	Name	Description
1	VIN	VIN -----Supply Voltage Input
2	GND	GND -----Ground
3	Output	Output ---Power Switching Output
TAB	GND	TAB-----Cooling rib

Absolute Maximum Ratings

Characteristics	Symbol	Value	Unit
Input Voltage	V_i	7 ~ 36	V
Storage Temperature Range	T_{stg}	- 85 ~ 150	°C
Maximum junction temperature	T_{opr}	-25~125	°C

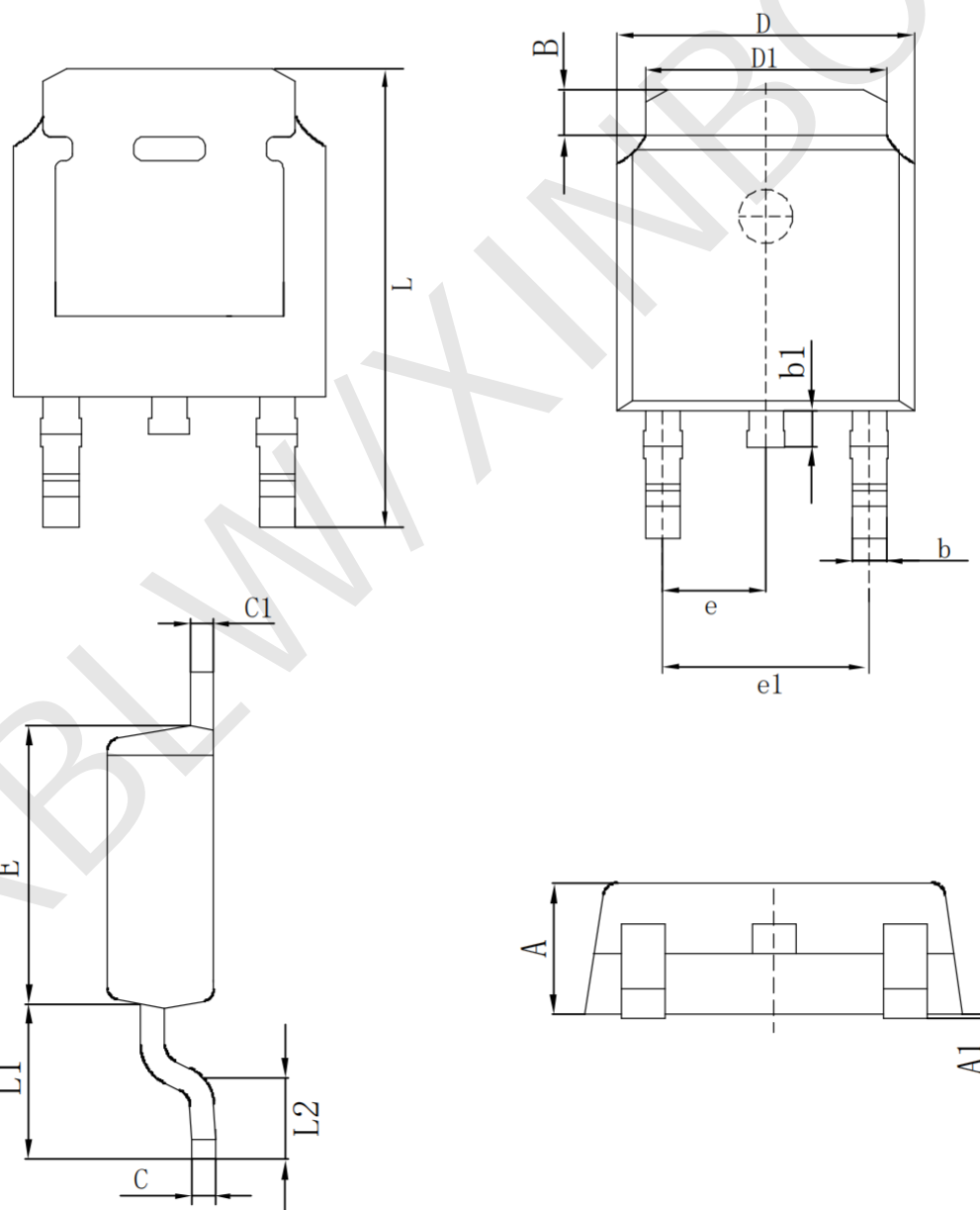
Electrical Characteristics

(unless otherwise noted, $V_i=10V$, $I_o=350\text{ mA}$, $0\text{ }^{\circ}\text{C} < T_j < 125\text{ }^{\circ}\text{C}$, $C_1=0.33\text{ }\mu\text{F}$, $C_o=0.1\text{ }\mu\text{F}$)

Characteristics	Symbol	Test conditions	Min.	Typ.	Max.	Unit
Output Voltage	V_o	$I_o=40\text{mA}$, $V_{IN}=10V$, $T_j=25^{\circ}\text{C}$	4.8	5.0	5.2	V
		$I_o=1\text{mA}\sim 40\text{mA}$, $V_{IN}=7V\sim 18V$	4.75	5	5.25	
Load Regulation	ΔV_o	$T_j=25^{\circ}\text{C}$, $V_{IN}=7V\sim 18V$, $I_o=40\text{mA}$			150	mV
		$T_j=25^{\circ}\text{C}$, $V_{IN}=8V\sim 18V$, $I_o=40\text{mA}$			100	
Line Regulation	ΔV_o	$V_{IN}=8V\sim 18V$, $I_o=40\text{mA}$, $T_j=25^{\circ}\text{C}$		4	100	mV
		$V_{IN}=8V\sim 18V$, $I_o=40\text{mA}$, $T_j=25^{\circ}\text{C}$		2	50	
Quiescent Current	I_q	$T_j=25^{\circ}\text{C}$		4	6	m A
Quiescent Current Charge	ΔI_q	$V_{IN}=8V\sim 18V$, $I_o=40\text{mA}$			1.3	mA
		$V_{IN}=8V\sim 18V$, $I_o=40\text{mA}$			0.1	
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{kHz}$, $T_j=25^{\circ}\text{C}$		40	200	μV
Dropout Voltage	V_d	$T_j=25^{\circ}\text{C}$		1.7		V
Ripple Rejection	RR	$8V\leq V_i\leq 18V$, $f=120\text{Hz}$, $I_o=200\text{mA}$, $T_j=25^{\circ}\text{C}$	56	80		dB
Short Circuit Current Limit	I_{sc}	$T_j=25^{\circ}\text{C}$		950		m A

· T0-252-2L

Symbol	Dimensions In Millimeters		Symbol	Dimensions In Inches	
	Min(mm)	Max(mm)		Min(mm)	Max(mm)
A	2.200	2.400	A	0.087	0.094
A1	0.000	0.127	A1	0.000	0.005
B	1.350	1.650	B	0.053	0.065
b	0.500	0.700	b	0.020	0.028
b1	0.700	0.900	b1	0.028	0.035
c	0.430	0.580	c	0.017	0.023
c1	0.430	0.580	c1	0.017	0.023
D	6.350	6.500	D	0.250	0.262
D1	5.200	5.400	D1	0.205	0.213
E	5.400	5.700	E	0.213	0.224
e	2.300 (TYP)		e	0.091 (TYP)	
e1	4.500	4.700	e1	0.177	0.185
L	9.500	9.900	L	0.374	0.390
L1	2.550	2.900	L1	0.100	0.114
L2	1.400	1.780	L2	0.055	0.070



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