



## DESCRIPTION

The A78M05 is available in TO-252 package.

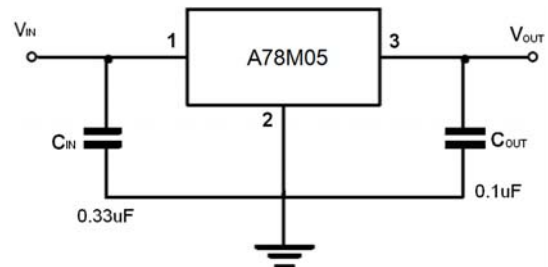
## FEATURES

- Output Current in Excess of 0.5A
- Output Voltage is 5V
- Internal thermal Overload protection
- Internal Short Circuit Current Limiting
- Available in TO-252 Package

## ORDER INFORMATION

Package Type	Part Number	
TO-252	D	A78M05DR
		A78M05DVR
Note	R: Tape & Reel V: Halogen free Package	
AiT provides all RoHS free products Suffix " V " means Halogen free Package		

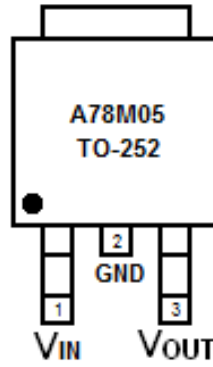
## TYPICAL APPLICATION



NOTE: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.



## PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	V <sub>IN</sub>	Supply Input
2	GND	Ground
3	V <sub>OUT</sub>	Output



## ABSOLUTE MAXIMUM RATINGS

$T_A=25^{\circ}\text{C}$

$V_{IN}$ , Input Voltage	35 V
$T_{OPR}$ , Operating Temperature	$-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$
$T_{STG}$ , Storage Temperature Range	$-55^{\circ}\text{C}$ to $150^{\circ}\text{C}$

Stresses above may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.



## ELECTRICAL CHARACTERISTICS

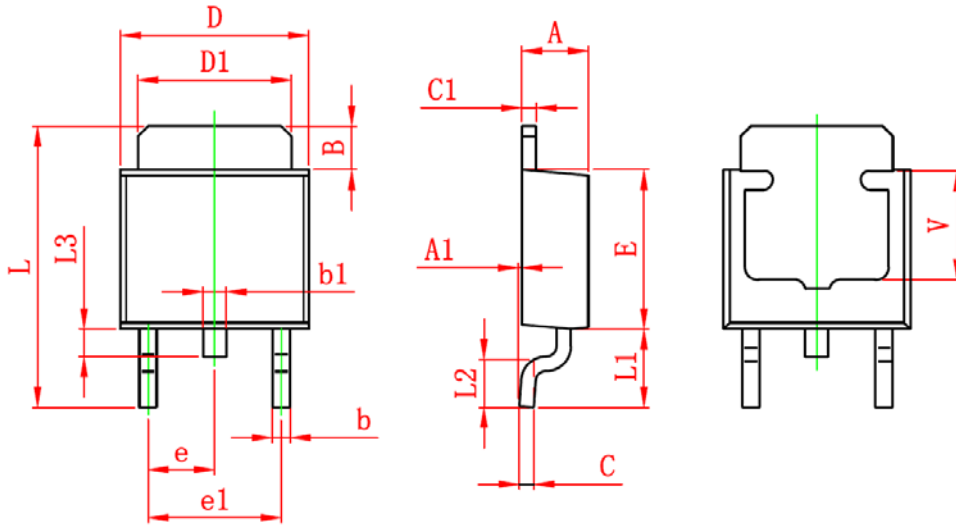
$V_{IN}=10V$ ,  $I_{OUT}=350mA$ ,  $-30^{\circ}C < T_J < 85^{\circ}C$ ,  $C_1=0.33\mu F$ ,  $C_{OUT}=0.1\mu F$ , unless otherwise noted

Parameter	Symbol	Conditions	Min	Typ.	Max	Unit
Output Voltage	$V_{OUT}$	$T_J=25^{\circ}C$	4.8	5	5.2	V
		$7V \leq V_{IN} \leq 20V$ , $I_{OUT}=5mA \sim 350mA$	4.75	5	5.25	
Load Regulation	$\Delta V_{OUT}$	$T_J=25^{\circ}C$ , $I_{OUT}=5mA \sim 500mA$	-	25	100	mV
		$T_J=25^{\circ}C$ , $I_{OUT}=5mA \sim 200mA$	-	10	50	
Line Regulation	$\Delta V_{OUT}$	$7V \leq V_{IN} \leq 25V$ , $I_{OUT}=200mA$ , $T_J=25^{\circ}C$	-	4	100	mV
		$8V \leq V_{IN} \leq 25V$ , $I_{OUT}=200mA$ , $T_J=25^{\circ}C$	-	2	50	
Quiescent Current	$I_q$	$T_J=25^{\circ}C$	-	4	6	mA
Quiescent Current Change	$\Delta I_q$	$8V \leq V_{IN} \leq 25V$ , $I_{OUT}=200mA$	-	-	0.8	mA
		$5mA \leq I_{OUT} \leq 350mA$	-	-	0.5	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$ , $T_J=25^{\circ}C$	-	40	200	$\mu V$
Dropout Voltage	$V_D$	$T_J=25^{\circ}C$	-	2	-	V
Ripple Rejection	RR	$8V \leq V_{IN} \leq 18V$ , $f=120Hz$ , $I_{OUT}=300mA$ , $T_J=25^{\circ}C$	56	80	-	dB
Short Circuit Current Limit	$I_{SC}$	$T_J=25^{\circ}C$	-	0.8	-	A



PACKAGE INFORMATION

Dimension in TO-252 (Unit: mm)



Symbol	Min	Max
A	2.200	2.400
A1	0.000	0.127
B	1.350	1.650
b	0.500	0.700
b1	0.700	0.900
c	0.430	0.580
c1	0.430	0.580
D	6.350	6.650
D1	5.200	5.400
E	5.400	5.700
e	2.300 TYP.	
e1	4.500	4.700
L	9.500	9.900
L1	2.550	2.900
L2	1.400	1.780
L3	0.600	0.900
V	3.800 REF.	



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**A78M05**

LINEAR REGULATOR

3 - TERMINAL POSITIVE VOLTAGE

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