



## DESCRIPTION

Three-terminal positive voltage regulator.

The A7805 is available in TO-252 package.

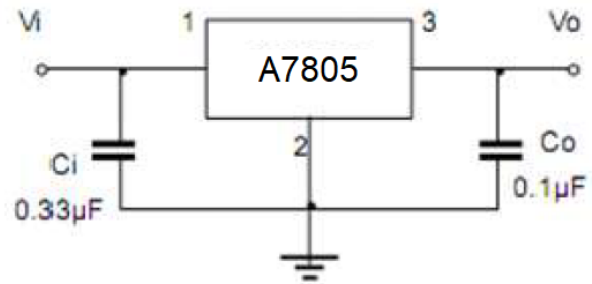
## FEATURES

- Maximum Output current  $I_{CM}$ : 1A
- Output voltage  $V_O$ : 5V
- Total dissipation  
 $P_D$ : 1.25W ( $T_A=25^\circ\text{C}$ )
- Available in TO-252 Package

## ORDERING INFORMATION

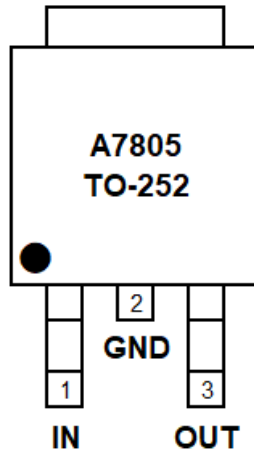
Package Type	Part Number	
TO-252 SPQ: 2,500pcs/Reel	D	A7805DR
		A7805DVR
Note	V: Halogen free Package R: Tape & Reel	
AiT provides all RoHS products		

## TYPICAL APPLICATION





## PIN DESCRIPTION



Top View

Pin #	Symbol	Function
1	IN	Input
2	GND	Ground
3	OUT	Output



## ABSOLUTE MAXIMUM RATINGS

Operating temperature unless otherwise specified

$V_I$ , Input Voltage	35V
$T_{OPR}$ , Operating Junction Temperature Range	0°C ~ +125°C
$T_{STG}$ , Storage Temperature Range	-55°C~+150°C

Stress beyond above listed "Absolute Maximum Ratings" may lead permanent damage to the device. These are stress ratings only and operations of the device at these or any other conditions beyond those indicated in the operational sections of the specifications are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

## ELECTRICAL CHARACTERISTICS

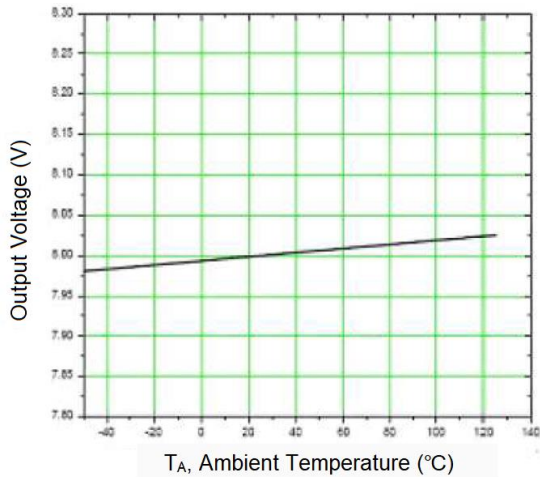
$T_{amb}=25^{\circ}\text{C}$ , unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Output Voltage	$V_O$		25°C	4.8	5.0	5.2	V
		$7\text{V} \leq V_I \leq 20\text{V}$ , $I_O = 5\text{mA} \sim 350\text{mA}$ , $P_O \leq 15\text{W}$	0~125°C	4.75	5.0	5.25	
Load Regulation	$\Delta V_O$	$I_O = 1\text{mA} \sim 0.5\text{A}$	25°C	-	15	100	mV
		$I_O = 5\text{mA} \sim 200\text{mA}$	25°C	-	5	100	
Line Regulation	$\Delta V_O$	$7\text{V} \leq V_I \leq 25\text{V}$ , $I_O = 200\text{mA}$		-	3	100	mV
		$8\text{V} \leq V_I \leq 25\text{V}$ , $I_O = 200\text{mA}$	25°C	-	1	50	
Quiescent Current	$I_Q$		25°C	-	4.2	6	mA
Quiescent Current Change	$\Delta I_Q$	$8\text{V} \leq V_I \leq 25\text{V}$ , $I_O = 200\text{mA}$	0~125°C	-	-	0.8	mA
		$5\text{mA} \leq I_O \leq 350\text{mA}$	0~125°C	-	-	0.5	
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{kHz}$	25°C	-	40	200	uV
Ripple Rejection	RR	$8\text{V} \leq V_I \leq 18\text{V}$ , $f = 120\text{Hz}$ , $I_O = 300\text{mA}$	0~125°C	62	80	-	dB
Dropout Voltage	$V_D$	$I_O = 350\text{mA}$	25°C	-	2	2.5	V

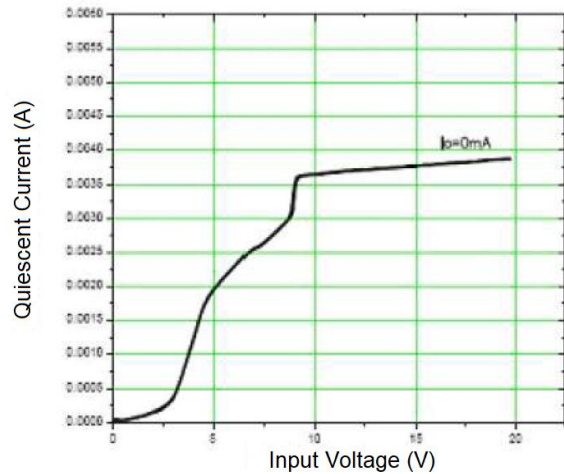


## TYPICAL PERFORMANCE CHARACTERISTICS

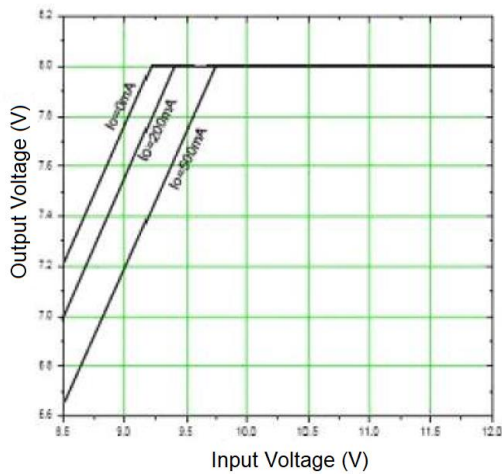
1. Ambient Temperature vs. Output Voltage



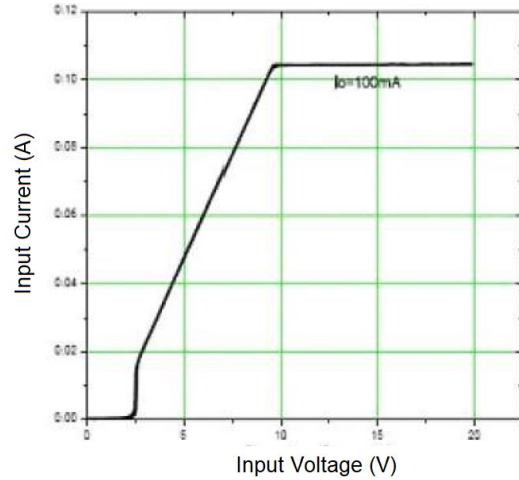
2. Input Voltage vs. Quiescent Current ( $T_J=25^{\circ}\text{C}$ )



3. Input Voltage vs. Output Voltage ( $T_J=25^{\circ}\text{C}$ )



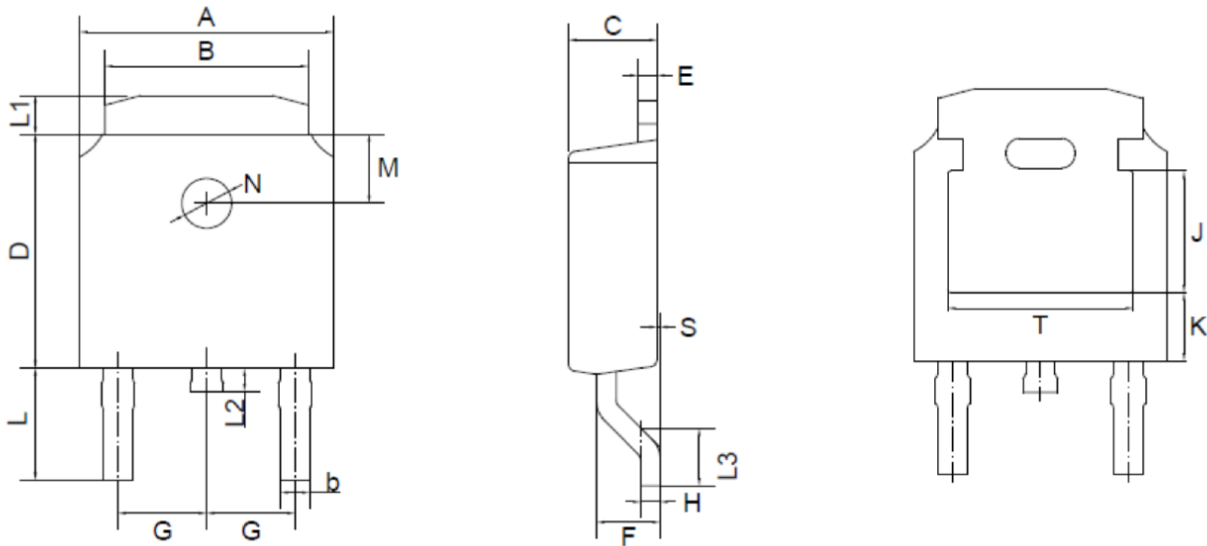
4. Input Voltage vs. Input Current ( $T_J=25^{\circ}\text{C}$ )





**PACKAGE INFORMATION**

Dimension in TO-252 (Unit: mm)



Symbol	mm		mil	
	Min	Max	Min	Max
A	6.3	6.7	248	264
B	5.1	5.5	201	217
b	0.3	0.8	12	31
C	2.1	2.5	83	98
D	5.9	6.3	232	248
E	0.4	0.6	16	24
F	1.3	1.8	51	71
G	2.29 TYP		90 TYP	
H	0.45	0.55	18	22
L	2.7	3.1	106	122
L1	0.8	1.2	31	47
L2	0.6	1.0	24	39
L3	1.40	1.75	55	69
S	0.0	0.1	0	4
M	1.8 TYP		71 TYP	
N	1.3 TYP		51 TYP	
J	3.16 REF		124 REF	
K	1.80 REF		71 REF	
T	4.83 REF		190 REF	



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