



DESCRIPTION

The A7805A is available in TO-252 package.

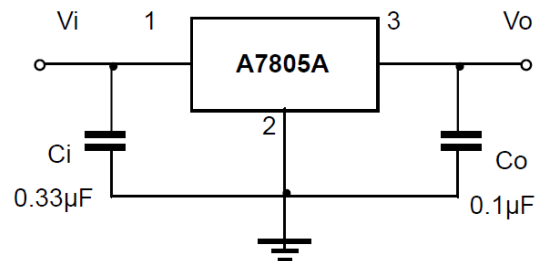
FEATURES

- Maximum output current I_{OM} : 1.5A
- Output voltage V_o : 5V
- Continuous total dissipation P_D :
1.25W ($T_A = 25^\circ\text{C}$)
10 W($T_C = 25^\circ\text{C}$)
- Available in TO-252 package

ORDERING INFORMATION

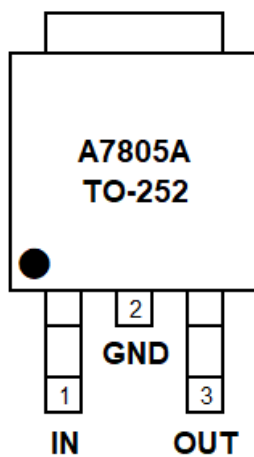
Package Type	Part Number	
TO-252 SPQ: 2,500pcs/Reel	D	A7805ADR
		A7805ADVR
Note	V: Halogen free Package R: Tape & Reel	
AiT provides all RoHS products		

TYPICAL APPLICATION





PIN DESCRIPTION



Top View

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



ABSOLUTE MAXIMUM RATINGS

Operating temperature range applies, unless otherwise specified

V_{IN} , Input Voltage	35V
$R_{\theta JA}$, Thermal Resistance from Junction to Air	100°C/W
$R_{\theta JC}$, Thermal Resistance from Junction to Case	12.5°C/W
T_{OPR} , Operating Junction Temperature Range	0°C ~ 125°C
T_{STG} , Storage Temperature Range	-65°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

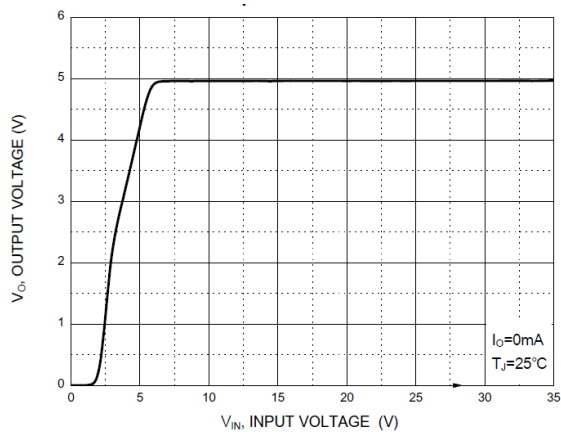
$V_I=10V$, $I_O=500mA$, $C_I=0.33\mu F$, $C_O=0.1\mu F$, unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Output Voltage	V_O	25°C	4.8	5.0	5.2	V
		7V≤ V_I ≤20V, $I_O=5mA-1A$, $P\leq 10W$ 0-125°C	4.75	5.00	5.25	
Load Regulation	ΔV_O	$I_O=5mA-1.5A$ 25°C	-	9	100	mV
		$I_O=250mA-750mA$ 25°C	-	4	50	
Line Regulation	ΔV_O	7V≤ V_I ≤25V 25°C	-	4	100	mV
		8V≤ V_I ≤12V 25°C	-	1.6	50	
Quiescent Current	I_Q	25°C	-	5.0	8.0	mA
Quiescent Current Change	ΔI_Q	7V≤ V_I ≤25V 0-125°C	-	0.3	1.3	mA
		5mA≤ I_O ≤1A 0-125°C	-	0.03	0.5	
Output Noise Voltage	V_N	10Hz≤f≤100KHz 25°C	-	42	-	μV
Output Voltage Drift	$\Delta V_O / \Delta T$	$I_O=5.0mA$ 0-125°C	-	-1.1	-	mV/°C
Ripple Rejection	RR	f=120Hz, $V_I=8V$ to 18V 0-125°C	62	73	-	dB
Dropout Voltage	V_d	$I_O=1A$ 25°C	-	2	-	V
Output resistance	R_O	f=1KHz 25°C	-	10	-	mΩ
Short Circuit Current	I_{SC}	25°C	-	230	-	mA
Peak Current	I_{PK}	25°C	-	2.2	-	A

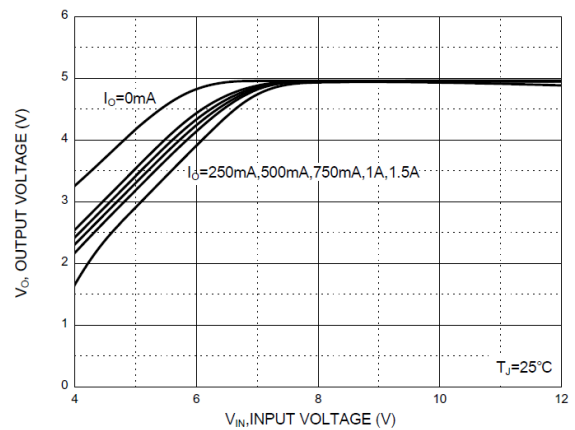


TYPICAL PERFORMANCE CHARACTERISTICS

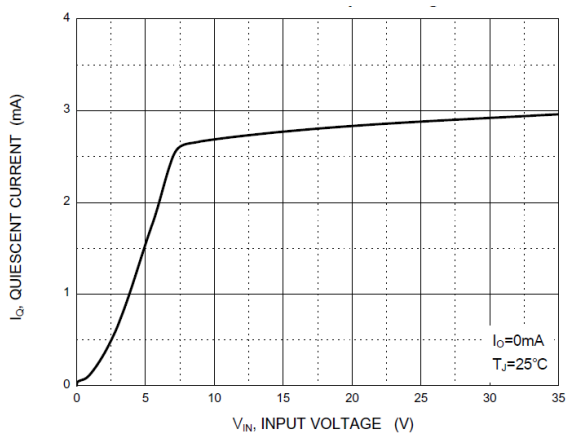
1. Output Characteristics



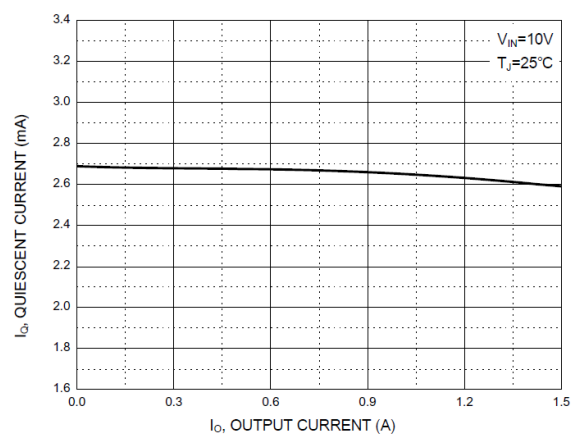
2. Dropout Characteristics



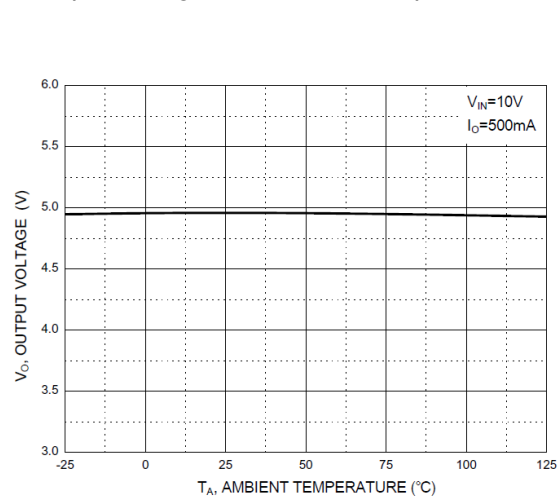
3. Quiescent Current vs. Input Voltage



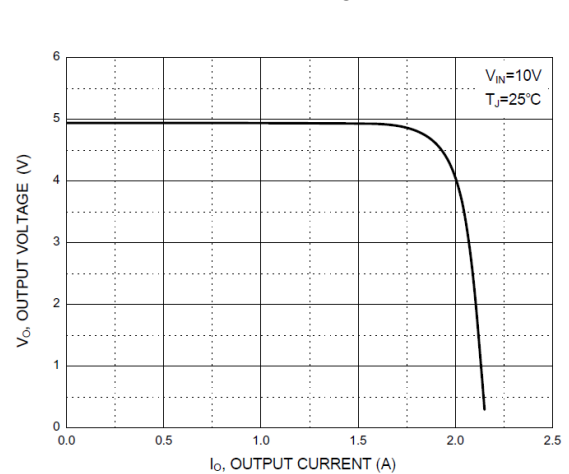
4. Quiescent Current vs. Output Current



5. Output Voltage vs. Ambient Temperature

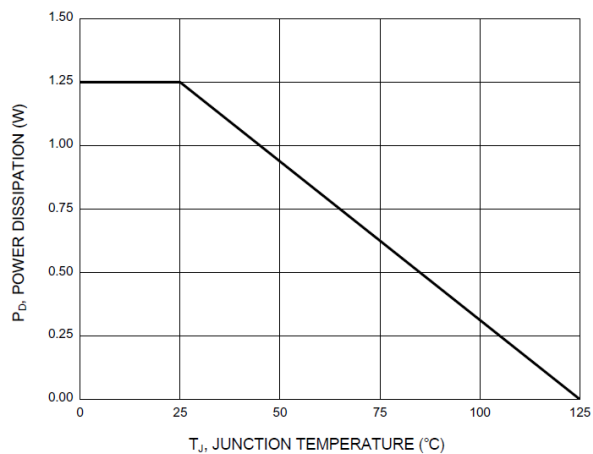


6. Current Cut-off Grid Voltage





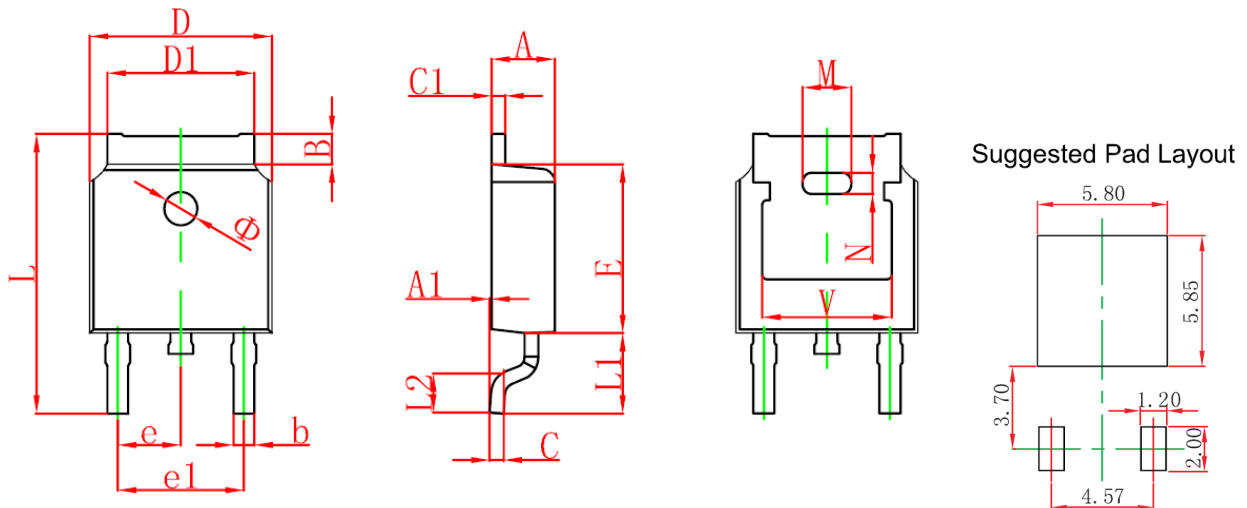
7. Power De rating Curve





PACKAGE INFORMATION

Dimension in TO-252-3 (Unit: mm)



Symbol	Millimeters		Inches	
	Min	Max	Min	Max
A	2.200	2.380	0.087	0.094
A1	0.000	0.100	0.000	0.004
B	0.800	1.400	0.031	0.055
b	0.710	0.810	0.028	0.032
c	0.460	0.560	0.018	0.022
c1	0.460	0.560	0.018	0.022
D	6.500	6.700	0.256	0.264
D1	5.130	5.460	0.202	0.215
E	6.000	6.200	0.236	0.244
e	2.286 TYP.		0.090 TYP	
e1	4.327	4.727	0.170	0.186
M	1.778REF.		0.070REF.	
N	0.762REF.		0.018REF.	
L	9.800	10.400	0.386	0.409
L1	2.9REF.		0.114REF.	
L2	1.400	1.700	0.055	0.067
V	4.830 REF.		0.190 REF.	
Φ	1.100	1.300	0.043	0.051



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