

RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

DESCRIPTION

SJ7805J, fixed-voltage monolithic integrated circuit voltage regulator, is designed for a wide range of applications. These applications include on-card regulation for the elimination of noise and distribution problems associated with single-point regulation.

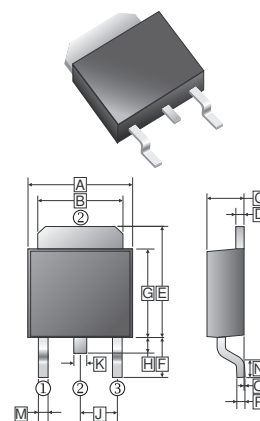
FEATURES

- Maximum output current, $I_{OM}=1.5A$
- Output voltage, $V_O=5V$
- Continuous total dissipation, $P_D=1.25W(T_A=25^\circ C)$, $P_D=10W(T_C=25^\circ C)$

PACKAGE INFORMATION

Package	MPQ	Leader Size
TO-252	2.5K	13 inch

TO-252

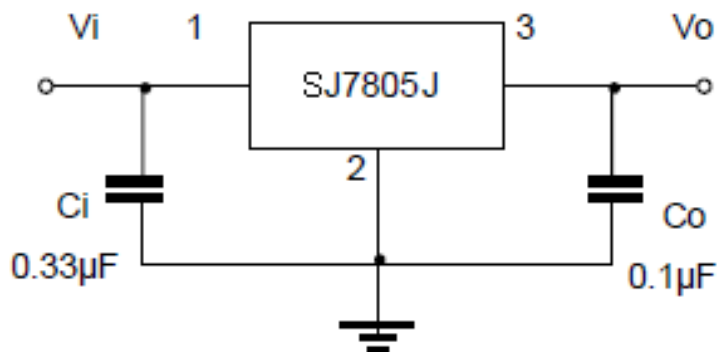


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	6.35	6.9	J	2.3	REF.
B	4.95	5.53	K	0.89	REF.
C	2.1	2.5	M	0.45	1.14
D	0.41	0.9	N	1.55	Typ.
E	6	7.5	O	0	0.13
F	2.90	REF.	P	0.58	REF.
G	5.4	6.4			
H	0.6	1.2			

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified.)

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	35	V
Thermal Resistance from Junction to Air	$R_{\theta JA}$	80	$^\circ C/W$
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-25~125, -65~150	$^\circ C$

TYPICAL APPLICATION



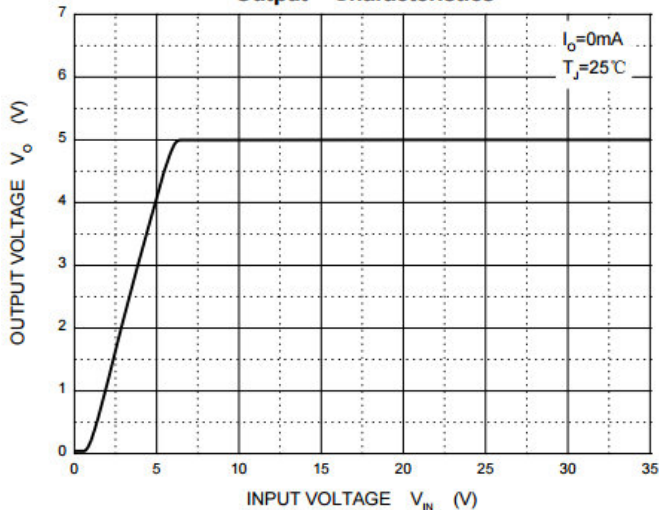
ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE

($I_o=500\text{mA}$, $V_{IN}=10\text{V}$, $C_{IN}=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

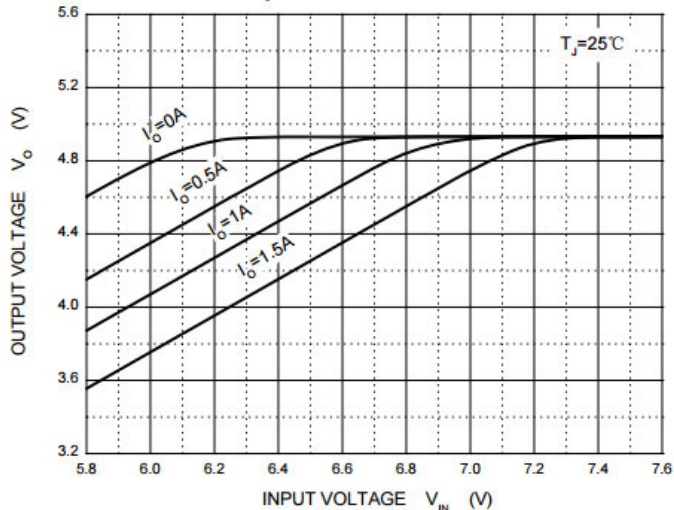
Symbol	Test Condition	Min	Typ	Max	Unit	
V_o		$T_J=25^\circ\text{C}$	4.8	5	5.2	V
	$7\text{V} \leq V_{IN} \leq 20\text{V}$, $5\text{mA} \leq I_o \leq 1\text{A}$	$T_J = -25 \sim 125^\circ\text{C}$	4.75	5	5.25	
ΔV_o (Load Regulation)	$5\text{mA} \leq I_o \leq 1.5\text{A}$	$T_J=25^\circ\text{C}$	-	9	100	mV
	$250\text{mA} \leq I_o \leq 750\text{mA}$		-	4	50	
ΔV_o (Line Regulation)	$7\text{V} \leq V_{IN} \leq 25\text{V}$	$T_J=25^\circ\text{C}$	-	4	100	
	$8\text{V} \leq V_{IN} \leq 12\text{V}$		-	1.6	50	
I_q		$T_J=25^\circ\text{C}$	-	5	8	mA
ΔI_q	$7\text{V} \leq V_{IN} \leq 25\text{V}$	$T_J = -25 \sim 125^\circ\text{C}$	-	0.3	1.3	mA
	$5\text{mA} \leq I_o \leq 1\text{A}$		-	0.03	0.5	
V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	$T_J=25^\circ\text{C}$	-	42	-	μV
$\Delta V_o / \Delta T$	$I_o=5\text{mA}$	$T_J = -25 \sim 125^\circ\text{C}$	-	-1.1	-	$\text{mV}/^\circ\text{C}$
RR	$8\text{V} \leq V_{IN} \leq 18\text{V}$, $f=120\text{Hz}$	$T_J = -25 \sim 125^\circ\text{C}$	62	73	-	dB
V_D	$I_o=1\text{A}$	$T_J=25^\circ\text{C}$	-	2	-	V
R_o	$f=1\text{KHz}$	$T_J=25^\circ\text{C}$	-	10	-	$\text{m}\Omega$
I_{SC}		$T_J=25^\circ\text{C}$	-	230	-	mA
I_{PK}		$T_J=25^\circ\text{C}$	-	2.2	-	A

CHARACTERISTIC CURVE

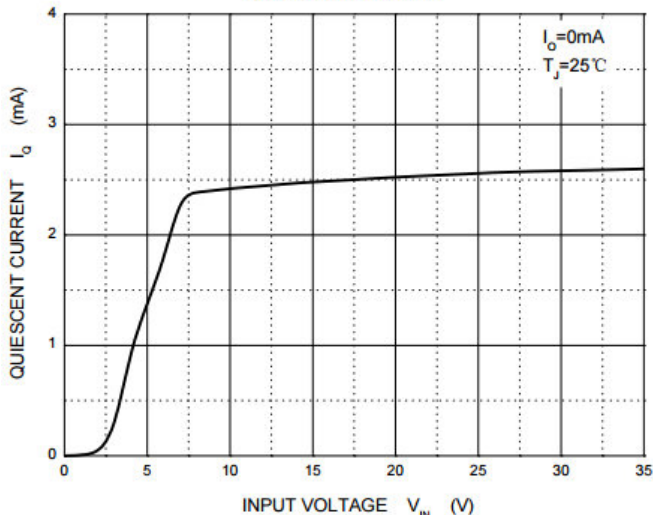
Output Characteristics



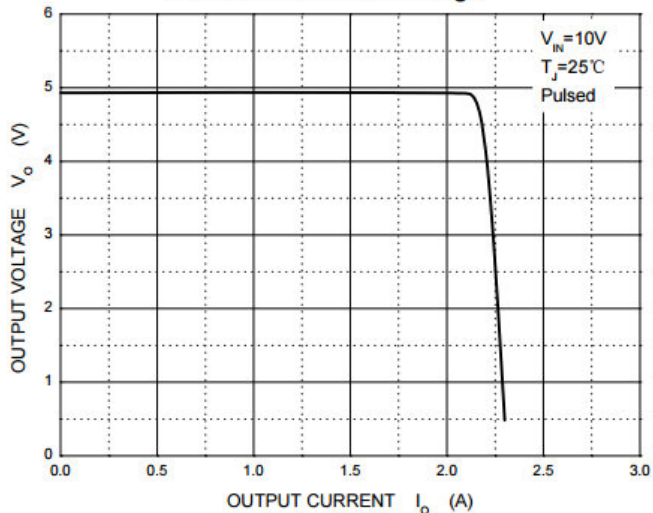
Dropout Characteristics



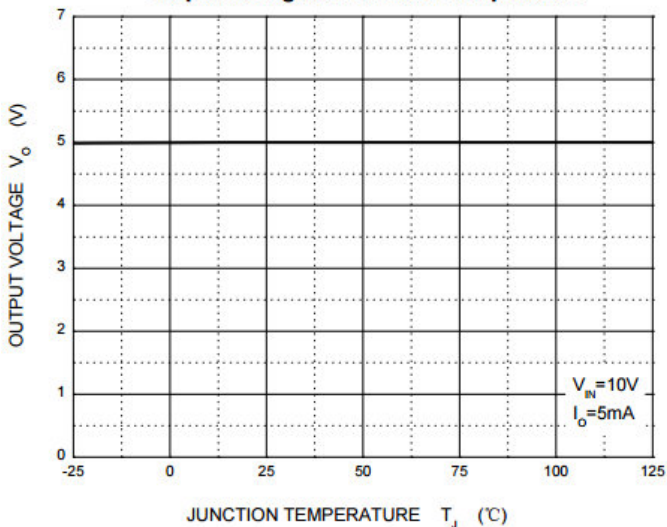
Quiescent Current



Current Cut-off Grid Voltage



Output Voltage vs Junction Temperature



Power Derating Curve

