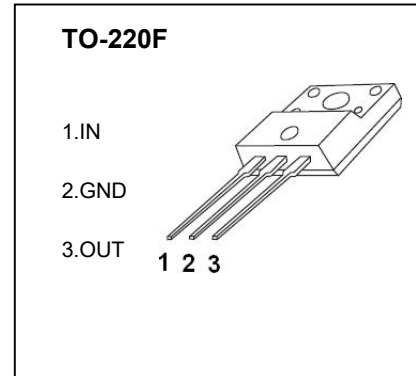


# TO-220F Plastic-Encapsulate Voltage Regulators

**CJ7805F** Three-terminal positive voltage regulator

## FEATURES

Maximum Output current  $I_{OM}$ : 1.5 A  
 Output voltage  $V_o$ : 5V  
 Continuous total dissipation  
 $P_D$ : 1.5 W ( $T_a = 25^\circ\text{C}$ )  
 15 W ( $T_c = 25^\circ\text{C}$ )



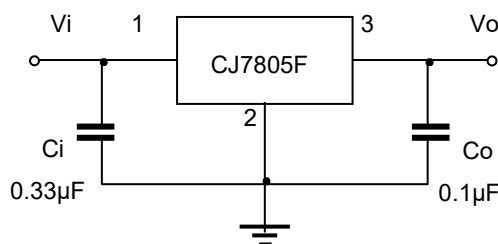
## ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_{OPR}$	0~+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^\circ\text{C}$

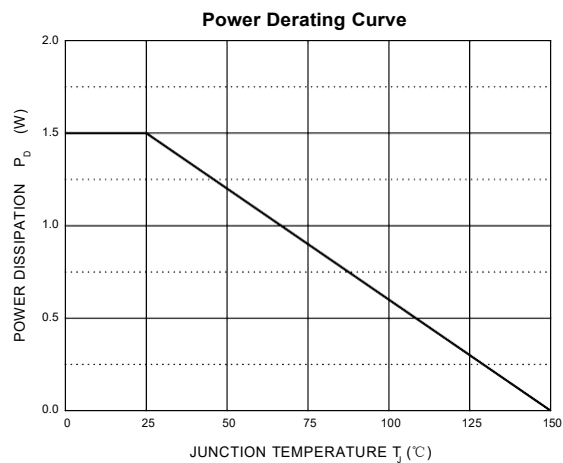
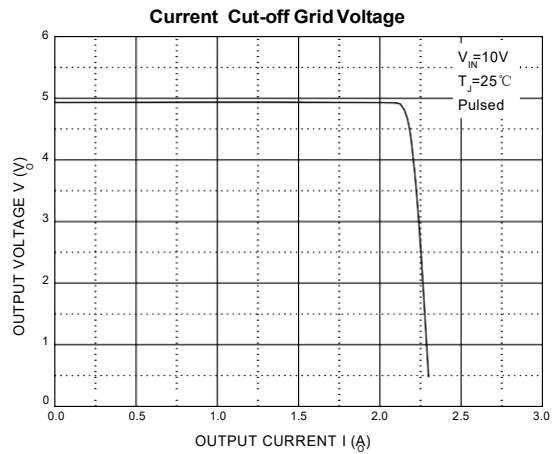
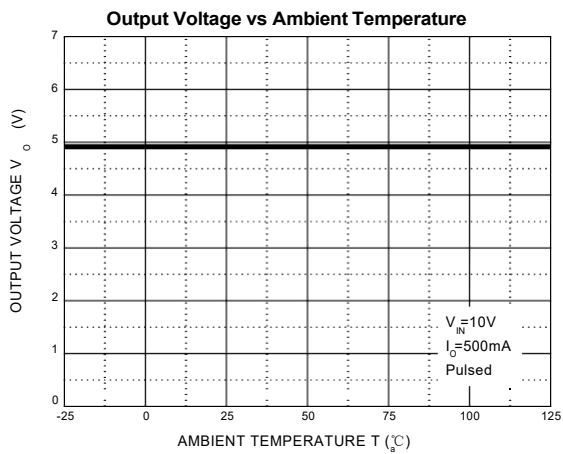
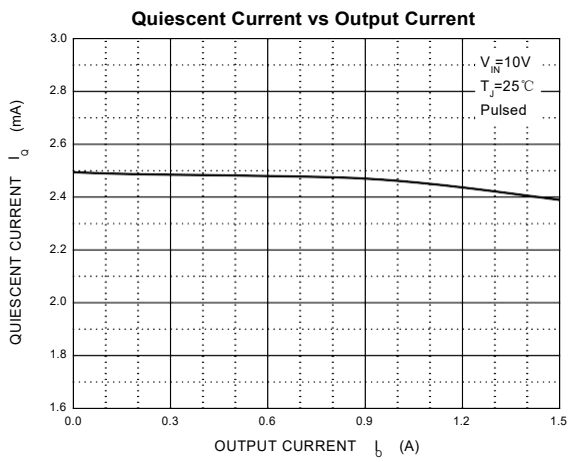
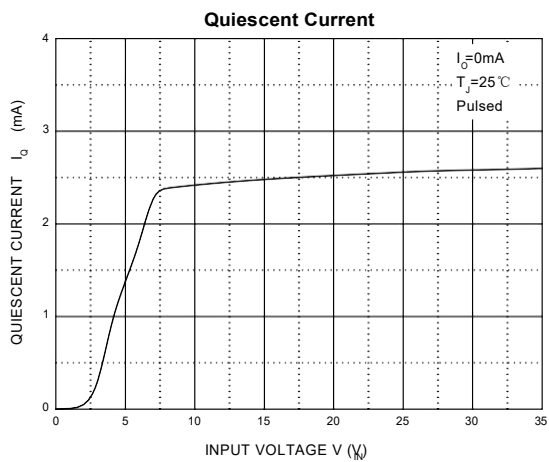
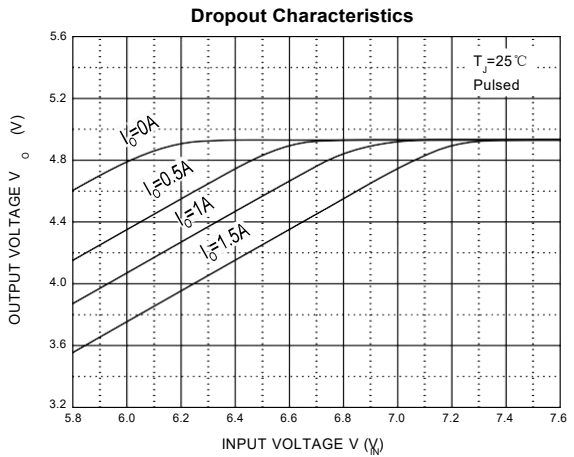
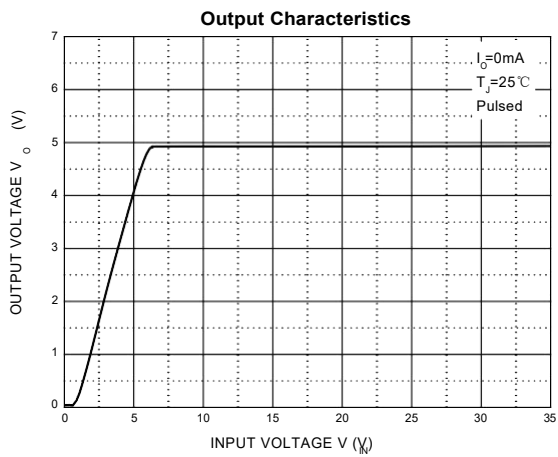
## ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ( $V_i=10\text{V}, I_o=500\text{mA}, C_i=0.33\mu\text{F}, C_o=0.1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	$V_o$	$25^\circ\text{C}$	4.8	5.0	5.2	V
		$7\text{V} \leq V_i \leq 20\text{V}, I_o=5\text{mA}-1\text{A}, P \leq 15\text{W}$ $0-125^\circ\text{C}$	4.75	5.00	5.25	V
Load Regulation	$\Delta V_o$	$I_o=5\text{mA}-1.5\text{A}$ $25^\circ\text{C}$		9	100	mV
		$I_o=250\text{mA}-750\text{mA}$ $25^\circ\text{C}$		4	50	mV
Line regulation	$\Delta V_o$	$7\text{V} \leq V_i \leq 25\text{V}$ $25^\circ\text{C}$		4	100	mV
		$8\text{V} \leq V_i \leq 12\text{V}$ $25^\circ\text{C}$		1.6	50	mV
Quiescent Current	$I_q$	$25^\circ\text{C}$		5	8	mA
Quiescent Current Change	$\Delta I_q$	$7\text{V} \leq V_i \leq 25\text{V}$ $0-125^\circ\text{C}$		0.3	1.3	mA
		$5\text{mA} \leq I_o \leq 1\text{A}$ $0-125^\circ\text{C}$		0.03	0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$ $25^\circ\text{C}$		42		$\mu\text{V}$
Output voltage drift	$\Delta V_o / \Delta T$	$I_o=5\text{mA}$ $0-125^\circ\text{C}$		-1.1		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 18\text{V}, f=120\text{Hz}$ $0-125^\circ\text{C}$	62	73		dB
Dropout Voltage	$V_d$	$I_o=1\text{A}$ $25^\circ\text{C}$		2		V
Output resistance	$R_o$	$f=1\text{KHz}$ $25^\circ\text{C}$		10		$\text{m}\Omega$
Short Circuit Current	$I_{sc}$	$25^\circ\text{C}$		230		mA
Peak Current	$I_{pk}$	$25^\circ\text{C}$		2.2		A

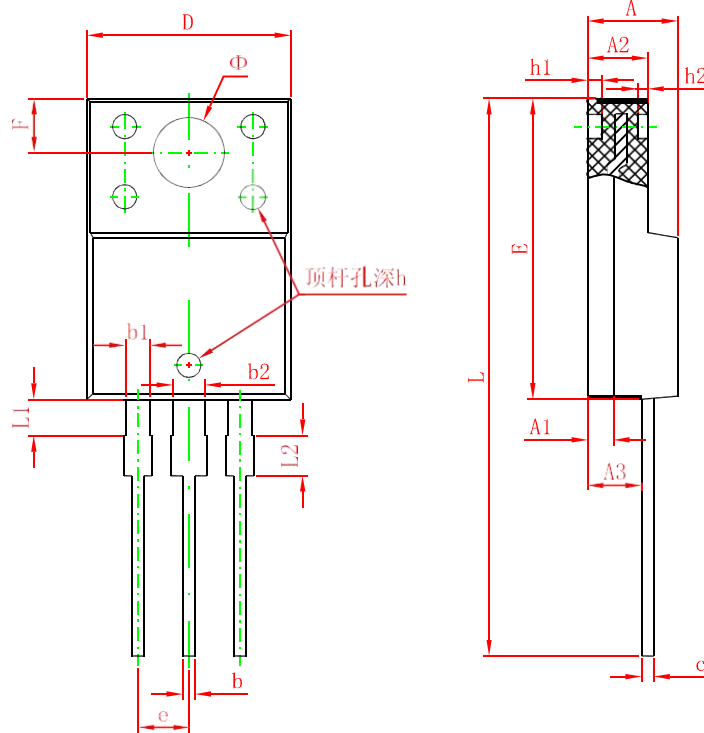
## TYPICAL APPLICATION



# Typical Characteristics



# TO-220F PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	4.300	4.700	0.169	0.185
A1	1.300 REF.		0.051 REF.	
A2	2.800	3.200	0.110	0.126
A3	2.500	2.900	0.098	0.114
b	0.500	0.750	0.020	0.030
b1	1.100	1.350	0.043	0.053
b2	1.500	1.750	0.059	0.069
c	0.500	0.750	0.020	0.030
D	9.960	10.360	0.392	0.408
E	14.800	15.200	0.583	0.598
e	2.540 TYP.		0.100 TYP.	
F	2.700 REF.		0.106 REF.	
$\Phi$	3.500 REF.		0.138 REF.	
h	0.000	0.300	0.000	0.012
h1	0.800 REF.		0.031 REF.	
h2	0.500 REF.		0.020 REF.	
L	28.000	28.400	1.102	1.118
L1	1.700	1.900	0.067	0.075
L2	1.900	2.100	0.075	0.083