



TO-220F Plastic-Encapsulate Transistors

CJ7806F Three-terminal positive voltage regulator

FEATURES

Maximum Output current

I_{OM} : 1.5 A

Output voltage

V_O : 5V

TO—220F

1.IN

2.GND

3.OUT



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Operating Junction Temperature Range	T_{OPR}	0—+125	°C
Storage Temperature Range	T_{STG}	-55—+150	°C

ELECTRICAL CHARACTERISTICS ($V_i=10V, I_o=500mA, 0^\circ C < T_j < 125^\circ C, C_i=0.33 \mu F, C_o=0.1 \mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_j=25^\circ C$	5.75	6	6.25	V
		$8V \leq V_i \leq 21V, I_o=5mA-1A$ $P_o < 15W$	5.7	6	6.3	V
Load Regulation	ΔV_o	$T_j=25^\circ C, I_o=5mA-1.5A$		14	120	mV
		$T_j=25^\circ C, I_o=250mA-750mA$		4	60	mV
Line regulation	ΔV_o	$8V \leq V_i \leq 25V, T_j=25^\circ C$		5	120	mV
		$9V \leq V_i \leq 13V, T_j=25^\circ C$		1.5	60	mV
Quiescent Current	I_q	$T_j=25^\circ C$		4.3	8	mA
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 25V$			1.3	mA
	ΔI_q	$5mA \leq I_o \leq 1A$			0.5	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$		45		μV
Ripple Rejection	RR	$9V \leq V_i \leq 19V, f=120Hz, T_j=0-125^\circ C$	59	75		dB
Dropout Voltage	V_d	$T_j=25^\circ C, I_o=1A$		2		V
Short Circuit Current	I_{sc}	$V_i=35V, T_a=25^\circ C$		550		mA
Peak Current	I_{pk}	$T_j=25^\circ C$		2.2		A

TYPICAL APPLICATION

