



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

## TO-220F Plastic-Encapsulate voltage regulator

### **CJ7809F** Three-terminal positive voltage regulator

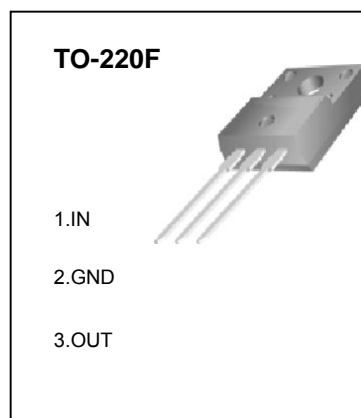
#### FEATURES

Maximum Output current

$I_{OM}$ : 1.5 A

Output voltage

$V_o$  : 9 V



#### ABSOLUTE MAXIMUM RATINGSO (perating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	35	V
Operating Junction Temperature Range	$T_{OPR}$	0-+150	°C
Storage Temperature Range	$T_{STG}$	-65-+150	°C

#### ELECTRICAL CHARACTERISTICS ( $V_i=16V, I_o=500mA, 0^{\circ}C < T_J < 125^{\circ}C, C_i=0.33 \mu F, C_o=0.1 \mu F$ , unless otherwise specified )

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	$V_o$	$T_J=25^{\circ}C$	8.65	9	9.35	V
		$11.5V \leq V_i \leq 24V, I_o=5mA-1A, P \leq 15W$	8.55	9	9.45	V
Load Regulation	$\Delta V_o$	$T_J=25^{\circ}C, I_o=5mA-1.5A$		12	180	mV
		$T_J=25^{\circ}C, I_o=250mA-750mA$		4	90	mV
Line regulation	$\Delta V_o$	$11.5V \leq V_i \leq 27V, T_J=25^{\circ}C$		7	180	mV
		$13V \leq V_i \leq 19V, T_J=25^{\circ}C$		2	90	mV
Quiescent Current	$I_q$	$T_J=25^{\circ}C$		4.3	8	mA
Quiescent Current Change	$\Delta I_q$	$11.5V \leq V_i \leq 27V$			1	mA
	$\Delta I_q$	$5mA \leq I_o \leq 1A$			0.5	mA
Output Noise Voltage	$V_N$	$10Hz \leq f \leq 100KHz$		60		$\mu V$
Ripple Rejection	RR	$12V \leq V_i \leq 22V, f=120Hz, T_J=25^{\circ}C$	55	70		dB
Dropout Voltage	$V_d$	$T_J=25^{\circ}C, I_o=1A$		2		V
Short Circuit Current	$I_{sc}$	$T_a=25^{\circ}C$		400		mA
Peak Current	$I_{pk}$	$T_J=25^{\circ}C$		2.2		A

#### TYPICAL APPLICATION

