



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Voltage Regulator

CJ7815 Three-terminal positive voltage regulator

FEATURES

Maximum Output current I_{OM} : 1.5 A

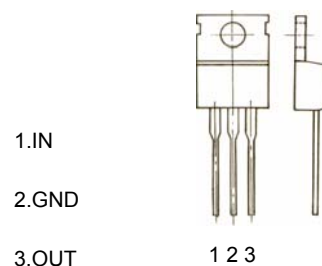
Output voltage V_o : 15 V

Continuous total dissipation

P_D : 2 W ($T_J = 25^\circ\text{C}$)

15 W ($T_C = 25^\circ\text{C}$)

TO-220



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

Parameter	Symbol	Value	Unit
Input Voltage	V_i	35	V
Thermal resistance junction-air	$R_{\theta JA}$	65	$^\circ\text{C/W}$
Thermal resistance junction-cases	$R_{\theta JC}$	5	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	0-150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS($V_i=23\text{V}$, $I_o=500\text{mA}$, $0^\circ\text{C}<T_J<125^\circ\text{C}$, $C_i=0.33\mu\text{F}$, $C_o=0.1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	$T_J=25^\circ\text{C}$	14.4	15	15.6	V
		$17.5\text{V}\leq V_i\leq 30\text{V}$, $I_o=5\text{mA}-1\text{A}$, $P\leq 15\text{W}$	14.25	15	15.75	V
Load Regulation	ΔV_o	$T_J=25^\circ\text{C}$, $I_o=5\text{mA}-1.5\text{A}$		12	300	mV
		$T_J=25^\circ\text{C}$, $I_o=250\text{mA}-750\text{mA}$		3	150	mV
Line regulation	ΔV_o	$17.5\text{V}\leq V_i\leq 30\text{V}$, $T_J=25^\circ\text{C}$		12	300	mV
		$20\text{V}\leq V_i\leq 26\text{V}$, $T_J=25^\circ\text{C}$		4	150	mV
Quiescent Current	I_q	$T_J=25^\circ\text{C}$		4.3	8	mA
Quiescent Current Change	ΔI_q	$17.5\text{V}\leq V_i\leq 30\text{V}$			1	mA
	ΔI_q	$5\text{mA}\leq I_o\leq 1\text{A}$			0.5	mA
Output voltage drift	$\Delta V_o/\Delta T$	$I_o=5\text{mA}$		-1		mV/ $^\circ\text{C}$
Output Noise Voltage	V_N	$10\text{Hz}\leq f\leq 100\text{KHz}$		90		μV
Ripple Rejection	RR	$18.5\text{V}\leq V_i\leq 28.5\text{V}$, $f=120\text{Hz}$, $T_J=25^\circ\text{C}$	54	70		dB
Dropout Voltage	V_d	$T_J=25^\circ\text{C}$, $I_o=1\text{A}$		2		V
Output resistance	R_o	$f=1\text{KHz}$		19		m Ω
Short Circuit Current	I_{sc}	$T_J=25^\circ\text{C}$		230		mA
Peak Current	I_{pk}	$T_J=25^\circ\text{C}$		2.1		A

TYPICAL APPLICATION

