



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-220 Plastic-Encapsulate Voltage Regulator

CJ7905 Three-terminal negative voltage regulator

FEATURES

Maximum Output current I_{OM} : 1.5 A

Output voltage V_o : - 5V

Continuous total dissipation

P_D : 1.5 W ($T_a = 25^\circ\text{C}$)

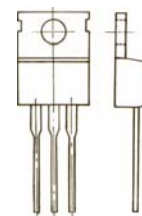
15 W ($T_c = 25^\circ\text{C}$)

TO-220

1 GND

2. IN

3. OUT



1 2 3

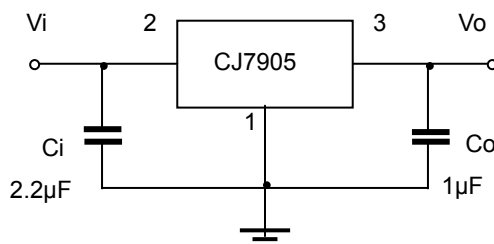
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	-35	V
Thermal resistance junction-air	$R_{\theta JA}$	65	$^\circ\text{C}/\text{W}$
Thermal resistance junction-cases	$R_{\theta JC}$	5	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	0-125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65-150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE ($V_i = -10\text{V}$, $I_o = 500\text{mA}$, $C_i = 2.2\mu\text{F}$, $C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output voltage	V_o	25°C	-4.8	-5	-5.2	V
		$-7\text{V} \leq V_i \leq -20\text{V}$, $I_o = 5\text{mA} - 1\text{A}$, $P \leq 15\text{W}$	-4.75	-5	-5.25	V
Load Regulation	ΔV_o	$I_o = 5\text{mA} - 1.5\text{A}$, 25°C		15	100	mV
		$I_o = 250\text{mA} - 750\text{mA}$, 25°C		5	50	mV
Line regulation	ΔV_o	$-7\text{V} \leq V_i \leq -25\text{V}$, 25°C		12.5	50	mV
		$-8\text{V} \leq V_i \leq -12\text{V}$, 25°C		4	15	mV
Quiescent Current	I_q	25°C		1.5	2	mA
Quiescent Current Change	ΔI_q	$-7\text{V} \leq V_i \leq -25\text{V}$, $0 - 125^\circ\text{C}$			0.5	mA
	ΔI_q	$5\text{mA} \leq I_o \leq 1\text{A}$, $0 - 125^\circ\text{C}$			0.5	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$, 25°C		125		μV
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$, $0 - 125^\circ\text{C}$		-0.4		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-8\text{V} \leq V_i \leq -18\text{V}$, $f = 120\text{Hz}$, $0 - 125^\circ\text{C}$	54	60		dB
Dropout Voltage	V_d	$I_o = 1\text{A}$, 25°C		1.1		V
Peak Current	I_{pk}	25°C		2.1		A

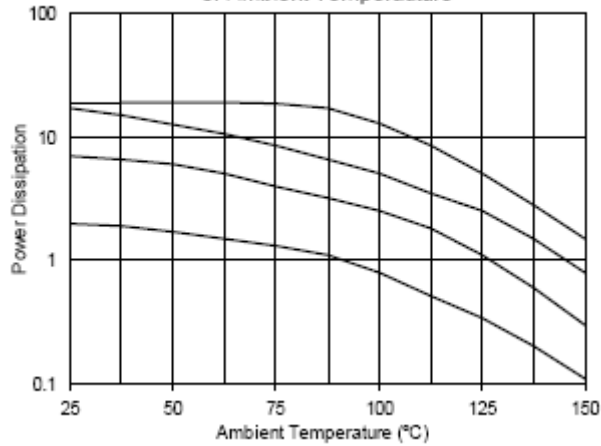
TYPICAL APPLICATION



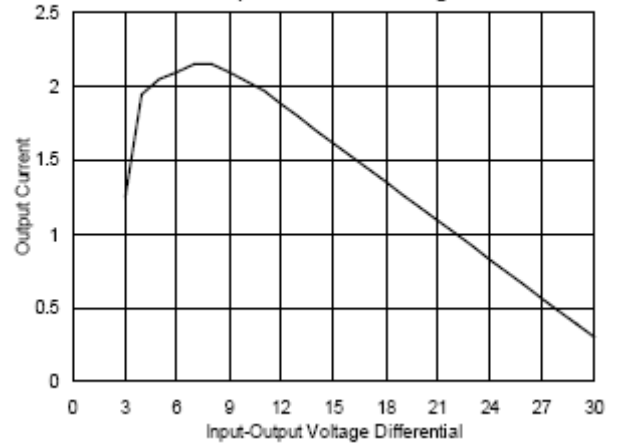
Typical Characteristics

CJ79XX

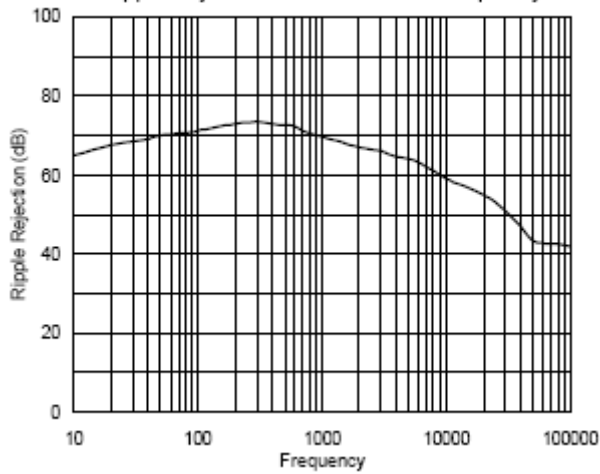
Average Case Power Dissipation as A Function of Ambient Temperature



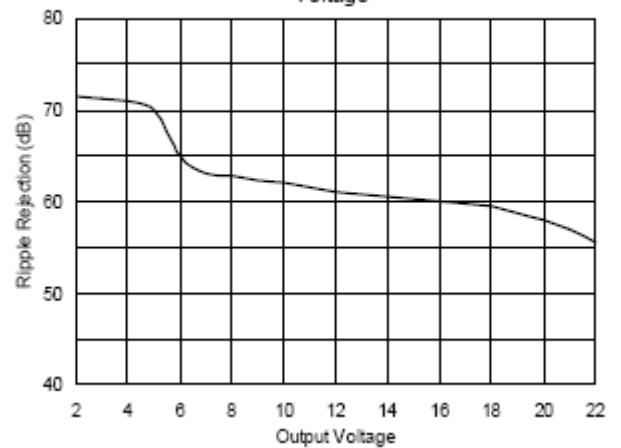
Peak Output Current as A Function of Input-Output Differential Voltage



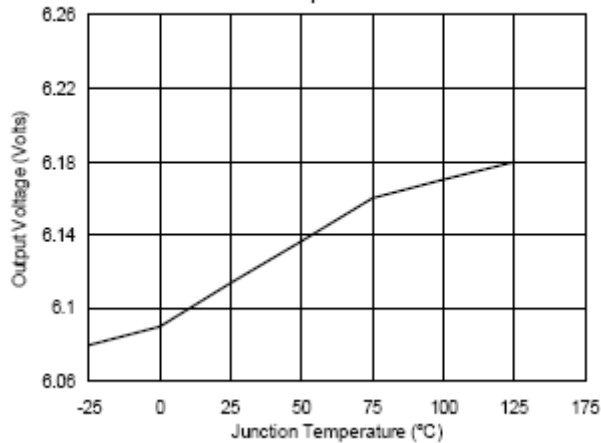
Ripple Rejection as A Function of Frequency



Ripple Rejection as A Function of Output Voltage



Output Voltage as A Function of Junction Temperature



PD-TA

