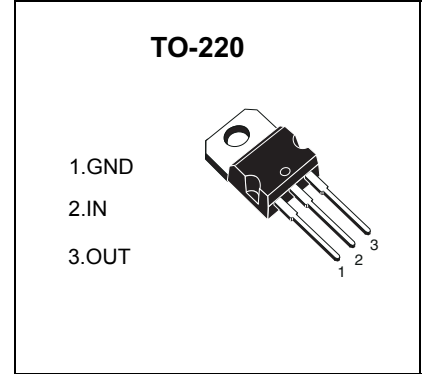


## TO-220 Plastic-Encapsulate Voltage Regulators

### L7905CV 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 ( $T_c = 25^\circ\text{C}$ )



#### 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	$^\circ\text{C}/\text{W}$
Thermal Resistance from Junction to Case	$R_{\theta JC}$	8.33	$^\circ\text{C}/\text{W}$
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 ( $V_i = -10\text{V}, I_o = 500\text{mA}, C_i = 2.2\mu\text{F}, C_o = 1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$25^\circ\text{C}$	-4.8	-5	-5.2	V
		$-7\text{V} \leq V_i \leq -20\text{V}, I_o = 5\text{mA} - 1\text{A}, P \leq 15\text{W}$ $0 - 125^\circ\text{C}$	-4.75	-5	-5.25	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{mA} - 1.5\text{A}$ $25^\circ\text{C}$		15	100	mV
		$I_o = 250\text{mA} - 750\text{mA}$ $25^\circ\text{C}$		5	50	mV
Line Regulation	$\Delta V_o$	$-7\text{V} \leq V_i \leq -25\text{V}$ $25^\circ\text{C}$		12.5	50	mV
		$-8\text{V} \leq V_i \leq -12\text{V}$ $25^\circ\text{C}$		4	15	mV
Quiescent Current	$I_q$	$25^\circ\text{C}$		1.5	2	mA
Quiescent Current Change	$\Delta I_q$	$-7\text{V} \leq V_i \leq -25\text{V}$ $0 - 125^\circ\text{C}$			0.5	mA
	$\Delta I_q$	$5\text{mA} \leq I_o \leq 1\text{A}$ $0 - 125^\circ\text{C}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$ $25^\circ\text{C}$		125		$\mu\text{V}$
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	$V_d$	$I_o = 1\text{A}$ $25^\circ\text{C}$		1.1		V
Peak Current	$I_{pk}$	$25^\circ\text{C}$		2.1		A

#### TYPICAL APPLICATION

