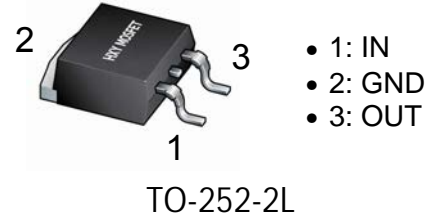




Features

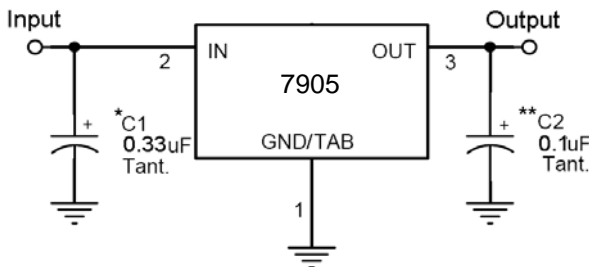
- Output Voltage: -5
- Output current up to 1A
- No external components required
- Internal thermal overload protection
- Internal short-circuit current limiting
- Output transistor safe-area compensation
- Output voltage offered in 4% tolerance



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
7905	TO-252-2L	79M05	2500

Standard Application Circuit



A common ground is required between the input and the output voltages. The input voltage must remain typically 2.0V above the output voltage even during the low point on the Input ripple voltage.

* = Cin is required if regulator is located an appreciable distance from power supply filter.

** = Co is not needed for stability; however, it does improve transient response.

Absolute Maximum Rating (Ta = 25°C unless otherwise noted)

Parameter	Symbol	Limit	Unit
Input Voltage	V_{IN}	-35	V
Power Dissipation	P_D	Internal Limited	W
Junction Temperature	T_J	+150	°C
Storage Temperature Range	T_{STG}	-65~+150	°C
Thermal Resistance - Junction to Case	$R_{\theta JC}$	5	°C/W
Thermal Resistance - Junction to Ambient	$R_{\theta JA}$	60	°C/W

Note: * Follow the derating curve



7905 Electrical Characteristics

($V_{in} = -10V$, $I_{out} = 500mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$, $C_{in} = 0.33\mu F$, $C_{out} = 0.1\mu F$; unless otherwise specified.)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit	
Output voltage	V_{out}	$T_j = 25^{\circ}C$	-4.80	-5	-5.20	V	
		$-7.5V \leq V_{in} \leq -20V$, $10mA \leq I_{out} \leq 1A$, $PD \leq 15W$	-4.75	-5	-5.25		
Line Regulation	REG _{line}	$T_j = 25^{\circ}C$	$-7.5V \leq V_{in} \leq -25V$	--	3	100	mV
			$-8V \leq V_{in} \leq -12V$	--	1	50	
Load Regulation	REG _{load}	$T_j = 25^{\circ}C$	$10mA \leq I_{out} \leq 1A$	--	15	100	
			$250mA \leq I_{out} \leq 750mA$	--	5	50	
Quiescent Current	I_q	$I_{out} = 0$, $T_j = 25^{\circ}C$	--	4	8	mA	
Quiescent Current Change	ΔI_q	$-7.5V \leq V_{in} \leq -25V$	--	--	1.3		
		$10mA \leq I_{out} \leq 1A$	--	--	0.5		
Output Noise Voltage	V_n	$10Hz \leq f \leq 100KHz$, $T_j = 25^{\circ}C$	--	40	--	μV	
Ripple Rejection Ratio	RR	$f = 120Hz$, $-8V \leq V_{in} \leq -18V$	62	74	--	dB	
Voltage Drop	V_{drop}	$I_{out} = 1A$, $T_j = 25^{\circ}C$	--	2	--	V	
Output Short Circuit Current	I_{os}	$T_j = 25^{\circ}C$	--	750	--	mA	
Peak Output Current	$I_{o peak}$	$T_j = 25^{\circ}C$	--	2.1	--	A	
Temperature Coefficient of Output Voltage	$\Delta V_{out} / \Delta T_j$	$I_{out} = 10mA$, $0^{\circ}C \leq T_j \leq 125^{\circ}C$	--	-0.1	--	mV/ $^{\circ}C$	

- Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible, and thermal effects must be taken into account separately.
- This specification applies only for DC power dissipation permitted by absolute maximum ratings.



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