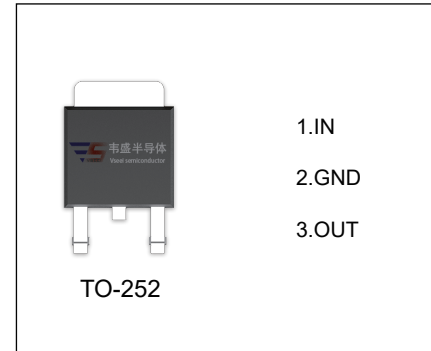


VS7905 Three-terminal negative voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 1.5\text{ A}$
- Output voltage
 $V_O: -5\text{ V}$
- Continuous total dissipation
 $P_D: 1.25\text{ W}$ ($T_a = 25\text{ }^\circ\text{C}$)



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 Air	$R_{\theta JA}$	100	$^\circ\text{C/W}$
Operating Junction Temperature Range	T_{OPR}	-40~+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65~+150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	V_o	$T_J = 25^\circ\text{C}$	-4.85	-5	-5.15	V
		$-7\text{ V} \leq V_i \leq -20\text{ V}, I_o = 5\text{ mA} - 1\text{ A}$	-4.75	-5	-5.25	V
Load Regulation	ΔV_o	$I_o = 5\text{ mA} - 1.5\text{ A}, T_J = 25^\circ\text{C}$		15	100	mV
		$I_o = 250\text{ mA} - 750\text{ mA}, T_J = 25^\circ\text{C}$		5	50	mV
Line Regulation	ΔV_o	$-7\text{ V} \leq V_i \leq -25\text{ V}, T_J = 25^\circ\text{C}$		12.5	50	mV
		$-8\text{ V} \leq V_i \leq -12\text{ V}, T_J = 25^\circ\text{C}$		4	15	mV
Quiescent Current	I_q	$T_J = 25^\circ\text{C}$		1.5	2	mA
Quiescent Current Change	ΔI_q	$-7\text{ V} \leq V_i \leq -25\text{ V}$			0.5	mA
	ΔI_q	$5\text{ mA} \leq I_o \leq 1\text{ A}$			0.5	mA
Output Noise Voltage	V_N	$10\text{ Hz} \leq f \leq 100\text{ KHz}, T_J = 25^\circ\text{C}$		125		$\mu\text{V}/V_o$
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{ mA}$		-0.4		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-8\text{ V} \leq V_i \leq -18\text{ V}, f = 120\text{ Hz}$	54	60		dB
Dropout Voltage	V_d	$I_o = 1\text{ A}, T_J = 25^\circ\text{C}$		1.1		V
Peak Current	I_{pk}	$T_J = 25^\circ\text{C}$		2.1		A

* Pulse test.

TYPICAL APPLICATION

