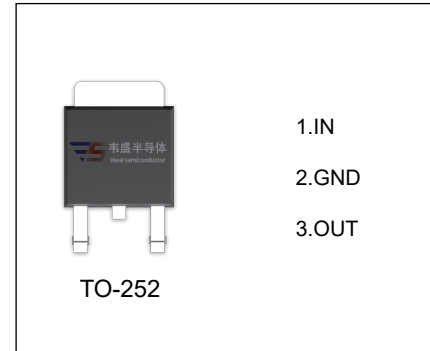


## VS7908 Three-terminal negative voltage regulator

### FEATURES

- Maximum output current  
 $I_{OM}: 1.5\text{ A}$
- Output voltage  
 $V_O: -8\text{ V}$
- 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 ( $V_i = -14\text{ V}$ , $I_o = 500\text{ mA}$ , $C_i = 2.2\mu\text{F}$ , $C_o = 1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_J = 25^\circ\text{C}$	-7.76	-8	-8.24	V
		$-10.5\text{ V} \leq V_i \leq -23\text{ V}$ , $I_o = 5\text{ mA} - 1\text{ A}$	-7.6	-8	-8.4	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{ mA} - 1.5\text{ A}$ , $T_J = 25^\circ\text{C}$		15	160	mV
		$I_o = 250\text{ mA} - 750\text{ mA}$ , $T_J = 25^\circ\text{C}$		5	80	mV
Line Regulation	$\Delta V_o$	$-10.5\text{ V} \leq V_i \leq -25\text{ V}$ , $T_J = 25^\circ\text{C}$		12.5	160	mV
		$-11\text{ V} \leq V_i \leq -17\text{ V}$ , $T_J = 25^\circ\text{C}$		4	80	mV
Quiescent Current	$I_q$	$T_J = 25^\circ\text{C}$		1.5	2	mA
Quiescent Current Change	$\Delta I_q$	$-10.5\text{ V} \leq V_i \leq -25\text{ V}$			1	mA
	$\Delta I_q$	$5\text{ mA} \leq I_o \leq 1\text{ A}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{ Hz} \leq f \leq 100\text{ KHz}$ , $T_J = 25^\circ\text{C}$		200		$\mu\text{V}/V_o$
Output Voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{ mA}$		-0.6		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-11.5\text{ V} \leq V_i \leq -21.5\text{ V}$ , $f = 120\text{ Hz}$	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

