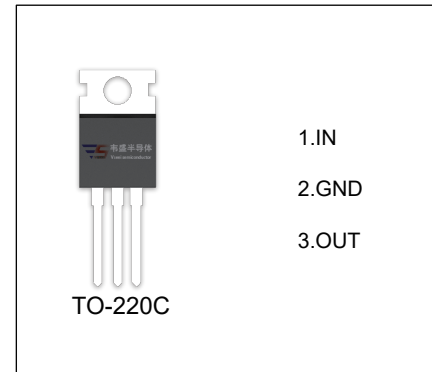


## VS7912 Three-terminal negative voltage regulator

### FEATURES

- Maximum output current  
 $I_{OM}: 1.5\text{ A}$
- Output voltage  
 $V_O: -12\text{ V}$
- Continuous total dissipation  
 $P_D: 1.5\text{ W}$  ( $T_a = 25\text{ }^\circ\text{C}$ )



### 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	$R_{\theta JA}$	83.3	$^\circ\text{C/W}$
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 ( $V_i = -19\text{V}$ , $I_o = 500\text{mA}$ , $C_i = 2.2\mu\text{F}$ , $C_o = 1\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_J = 25^\circ\text{C}$	-11.64	-12	-12.36	V
		$-14.5\text{V} \leq V_i \leq -27\text{V}$ , $I_o = 5\text{mA} - 1\text{A}$	-11.4	-12	-12.6	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{mA} - 1.5\text{A}$ , $T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	15	200	mV
		$I_o = 250\text{mA} - 750\text{mA}$ , $T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	5	75	mV
Line Regulation	$\Delta V_o$	$-14.5\text{V} \leq V_i \leq -30\text{V}$ , $T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	5	80	mV
		$-16\text{V} \leq V_i \leq -22\text{V}$ , $T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	3	30	mV
Quiescent Current	$I_q$	$T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	2	3	mA
Quiescent Current Change	$\Delta I_q$	$-14.5\text{V} \leq V_i \leq -30\text{V}$			0.5	mA
	$\Delta I_q$	$5\text{mA} \leq I_o \leq 1\text{A}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{Hz} \leq f \leq 100\text{KHz}$		300		$\mu\text{V}/V_o$
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5\text{mA}$		-0.8		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-15\text{V} \leq V_i \leq -25\text{V}$ , $f = 120\text{Hz}$	54	60		dB
Dropout Voltage	$V_d$	$I_o = 1\text{A}$ , $T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	1.1		V
Peak Current	$I_{pk}$	$T_J = 25^\circ\text{C}$	25 $^\circ\text{C}$	2.1		A

\* Pulse test.

### TYPICAL APPLICATION

