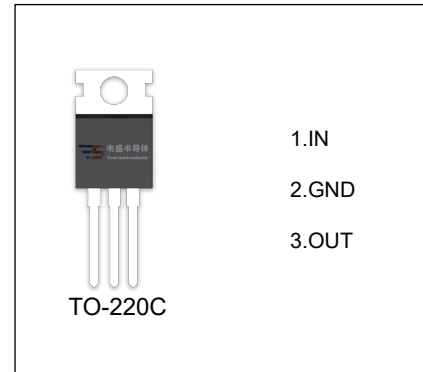


## VS7906 Three-terminal negative voltage regulator

### FEATURES

- Maximum output current  
 $I_{OM}: 1.5\text{ A}$
- Output voltage  
 $V_O: -6\text{ V}$
- 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 ( $V_i = -11\text{ V}$ , $I_o = 500\text{ mA}$ , $C_i = 2.2\text{ }\mu\text{F}$ , $C_o = 1\text{ }\mu\text{F}$ , unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output Voltage	$V_o$	$T_J = 25^\circ\text{C}$	-5.82	-6	-6.18	V
		$-8\text{ V} \leq V_i \leq -21\text{ V}$ , $I_o = 5\text{ mA} - 1\text{ A}$	-5.7	-6	-6.3	V
Load Regulation	$\Delta V_o$	$I_o = 5\text{ mA} - 1.5\text{ A}$ , $T_J = 25^\circ\text{C}$		15	120	mV
		$I_o = 250\text{ mA} - 750\text{ mA}$ , $T_J = 25^\circ\text{C}$		5	60	mV
Line Regulation	$\Delta V_o$	$-8\text{ V} \leq V_i \leq -25\text{ V}$ , $T_J = 25^\circ\text{C}$		12.5	120	mV
		$-9\text{ V} \leq V_i \leq -13\text{ V}$ , $T_J = 25^\circ\text{C}$		4	60	mV
Quiescent Current	$I_q$	$T_J = 25^\circ\text{C}$		1.5	2	mA
Quiescent Current Change	$\Delta I_q$	$-8\text{ V} \leq V_i \leq -25\text{ V}$			1.3	mA
	$\Delta I_q$	$5\text{ mA} \leq I_o \leq 1\text{ A}$			0.5	mA
Output Noise Voltage	$V_N$	$10\text{ Hz} \leq f \leq 100\text{ KHz}$ , $T_J = 25^\circ\text{C}$		150		$\mu\text{V}/V_o$
Output Voltage Drift	$\Delta V_o/\Delta T$	$I_o = 5\text{ mA}$		-0.4		$\text{mV}/^\circ\text{C}$
Ripple Rejection	RR	$-9\text{ V} \leq V_i \leq -19\text{ V}$ , $f = 120\text{ Hz}$	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

