

VS7906 Three-terminal negative voltage regulator

FEATURES

Maximum output current

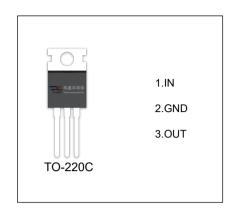
I_{OM}: 1.5 A

Output voltage

V_O:- 6V

Continuous total dissipation

 P_D : 1.5 W (T_a = 25 °C)



ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	Vi	-35	V
Thermal Resistance from Junction to Air	R _{θJA}	83.3	°C/W
Operating Junction Temperature Range	T _{OPR}	-40~+125	°C
Storage Temperature Range	T _{STG}	-65~+150	$^{\circ}$

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JINCTION TEMPERATURE (Vi=-11V, Io=500mA,Ci=2.2µF, Co=1µF, unless otherwise specified)

Symbol	Test conditions	Min	Тур	Max	Unit
1/0	T _J =25℃	-5.82	-6	-6.18	V
Output Voltage Vo	-8V≤V _i ≤-21V, Io=5mA-1A	-5.7	-6	-6.3	V
4)/0	lo=5mA-1.5A ,T _J =25℃		15	120	mV
Δνο	lo=250mA-750mA,T _J =25°C		5	60	mV
1)/0	-8V≤V _i ≤-25V ,T _J =25°C		12.5	120	mV
Line Regulation ΔVo	-9V≤V _i ≤-13V ,T _J =25°C		4	60	mV
lq	T _J =25℃		1.5	2	mA
Δlq	-8V≤V _i ≤-25V			1.3	mA
Δlq	5mA≤l _O ≤1A			0.5	mA
V_N	10Hz≤f≤100KHz ,T _J =25°C		150		μV/Vo
ΔVο/ΔΤ	I _o =5mA		-0.4		mV/℃
RR	-9V≤V _i ≤-19V,f=120Hz	54	60		dB
Vd	lo=1A ,T _J =25°C		1.1		V
lpk	T _J =25℃		2.1		А
	Vo ΔVo ΔVo Iq ΔIq ΔIq V _N ΔVo/ΔT RR Vd	$Vo \begin{tabular}{lll} $T_J = 25 ^\circ C$ \\ & -8V \le V_i \le -21V, \ lo = 5mA - 1A$ \\ & lo = 5mA - 1.5A \ , $T_J = 25 ^\circ C$ \\ & lo = 250mA - 750mA \ , $T_J = 25 ^\circ C$ \\ & -8V \le V_i \le -25V \ , $T_J = 25 ^\circ C$ \\ & -9V \le V_i \le -13V \ , $T_J = 25 ^\circ C$ \\ & lq & T_J = 25 ^\circ C$ \\ & \Delta lq & -8V \le V_i \le -25V$ \\ & \Delta lq & 5mA \le l_0 \le 1A$ \\ & V_N & 10Hz \le f \le 100KHz \ , $T_J = 25 ^\circ C$ \\ & \Delta Vo/\Delta T & l_0 = 5mA$ \\ & RR & -9V \le V_i \le -19V, f = 120Hz$ \\ & Vd & lo = 1A \ , $T_J = 25 ^\circ C$ \\ \hline \end{tabular}$	$Vo \begin{tabular}{lll} $T_J = 25 ^{\circ}$C & -5.82 \\ \hline $-8V \le V_i \le -21$V, $Io = 5mA - 1A$ & -5.7 \\ \hline ΔVo & $Io = 5mA - 1.5A \ , $T_J = 25 ^{\circ}$C & \\ \hline $Io = 250mA - 750mA \ , $T_J = 25 ^{\circ}$C & \\ \hline ΔVo & $-8V \le V_i \le -25$V \ , $T_J = 25 ^{\circ}$C & \\ \hline ΔIq & $T_J = 25 ^{\circ}$C & \\ \hline ΔIq & $-8V \le V_i \le -25$V & \\ \hline ΔIq & $5mA \le I_O \le 1A$ & \\ \hline V_N & $10Hz \le f \le 100$KHz \ , $T_J = 25 ^{\circ}$C & \\ \hline $\Delta Vo/\Delta T$ & $I_O = 5mA$ & \\ \hline RR & $-9V \le V_i \le -19$V, $f = 120$Hz & 54 \\ \hline Vd & $Io = 1A \ , $T_J = 25 ^{\circ}$C & \\ \hline Vd & $Io = 1A \ , $T_J = 25 ^{\circ}$C & \\ \hline Vd & $Io = 1A \ , $T_J = 25 ^{\circ}$C & \\ \hline Vd & $Io = 1A \ , $T_J = 25 ^{\circ}$C & } \\ \hline \end{tabular}$	$Vo \begin{tabular}{cccccccccccccccccccccccccccccccccccc$	$Vo \begin{array}{c ccccccccccccccccccccccccccccccccccc$

^{*} Pulse test.

TYPICAL APPLICATION

