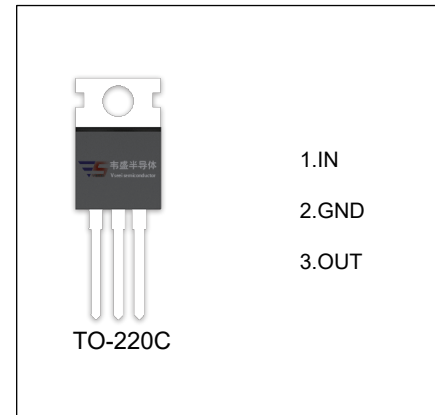


VS7915 Three-terminal negative voltage regulator

FEATURES

- Maximum output current
 $I_{OM}: 1.5\text{ A}$
- Output voltage
 $V_O: -15\text{ V}$
- 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 ($V_i = -23\text{ V}$, $I_o = 500\text{ mA}$, $C_i = 2.2\mu\text{F}$, $C_o = 1\mu\text{F}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_J = 25^\circ\text{C}$	-14.55	-15	-15.45	V
		$-17.5\text{ V} \leq V_i \leq -30\text{ V}$, $I_o = 5\text{ mA} - 1\text{ A}$	-14.25	-15	-15.75	V
Load regulation	ΔV_o	$I_o = 5\text{ mA} - 1.5\text{ A}$, $T_J = 25^\circ\text{C}$		15	200	mV
		$I_o = 250\text{ mA} - 750\text{ mA}$, $T_J = 25^\circ\text{C}$		5	75	mV
Line regulation	ΔV_o	$-17.5\text{ V} \leq V_i \leq -30\text{ V}$, $T_J = 25^\circ\text{C}$		5	100	mV
		$-20\text{ V} \leq V_i \leq -26\text{ V}$, $T_J = 25^\circ\text{C}$		3	50	mV
Quiescent current	I_q	$T_J = 25^\circ\text{C}$		2	3	mA
Quiescent current change	ΔI_q	$-17.5\text{ V} \leq V_i \leq -30\text{ V}$			0.5	mA
	ΔI_q	$5\text{ mA} \leq I_o \leq 1\text{ A}$			0.5	mA
Output noise voltage	V_N	$10\text{ Hz} \leq f \leq 100\text{ kHz}$, $T_J = 25^\circ\text{C}$		375		$\mu\text{V}/V_o$
Output voltage drift	$\Delta V_o / \Delta T$	$I_o = 5\text{ mA}$		-1		$\text{mV}/^\circ\text{C}$
Ripple rejection	RR	$-18.5\text{ V} \leq V_i \leq -28.5\text{ V}$, $f = 120\text{ Hz}$	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

