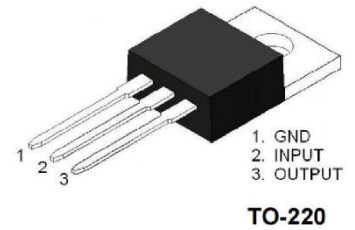


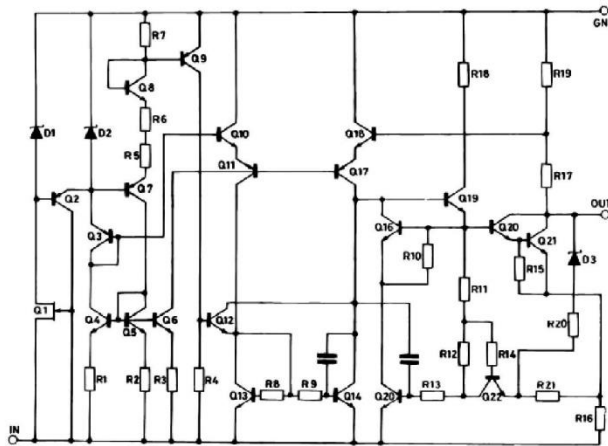
L7915 Three-terminal negative voltage regulator

FEATURES

- Maximum Output Current I_{OM} : 1.5A
- Output Voltage V_O : -15V
- Thermal Overload Protection
- Short Circuit Protection
- Output transition SOA protection



SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Value	UNIT
Input Voltage	V_i	-35	V
Output Current	I_O	-1.5	A
Operating Junction Temperature Range	T_{OPR}	0 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which damage to the device may occur. Functional operation under these condition is not implied.

Thermal Resistances ($T_A=25^\circ\text{C}$)

Parameter	Symbol	Value	UNIT
Thermal Resistance Junction – Case	$R_{\theta JC}$	5	°C/W
Thermal Resistance Junction – Air	$R_{\theta JA}$	65	°C/W

ELECTRICAL CHARACTERISTICS

(Refer to the test circuit, $V_i = -23V$, $I_o = -750mA$, $C_i = 2.2\mu F$, $C_o = 1\mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Output Voltage	V_o	$T_j = 25^\circ C$	-14.40	-15.0	-12.60	V
		$-17.5V \leq V_i \leq -30V$, $P_o \leq 15W$, $I_o = 5mA \sim 1.5A$	-14.25	-15.0	-15.75	
Load Regulation*	ΔV_o	$I_o = -5mA \sim -1.5A$			300	mV
		$I_o = -250mA \sim -750mA$			150	
Line Regulation*	ΔV_o	$-17.5V \leq V_i \leq -30V$	$T_j = 25^\circ C$		300	mV
		$-20V \leq V_i \leq -26V$			150	
Quiescent Current	I_q	$T_j = 25^\circ C$			8.0	mA
Quiescent Current Change	ΔI_q	$-17.5V \leq V_i \leq -30.5V$			0.5	mA
		$-5mA \leq I_o \leq -1.5A$			1.0	
Output Noise Voltage	V_N	$10Hz \leq F \leq 100KHz$, $T_j = 25^\circ C$		250		μV
Output Voltage Drift	$\Delta V_o / \Delta T$	$I_o = 5mA$		-0.9		mV/ $^\circ C$
Ripple Rejection	RR	$F = 120Hz$, $\Delta V_i = 10V$		60		dB
Dropout Voltage	V_D	$I_o = 1.5A$, $T_j = 25^\circ C$		2		V
Short Circuit Current	I_{SC}	$V_i = -35V$, $T_j = 25^\circ C$		300		mA
Peak Current	I_{PK}	$T_j = 25^\circ C$		2.2		A

* Notes: Load and line regulation are specified at constant junction temperature. Changes in V_o due to heating effects must be taken into account separately. Pulse testing with low duty cycle is used.

APPLICATION INFORMATION

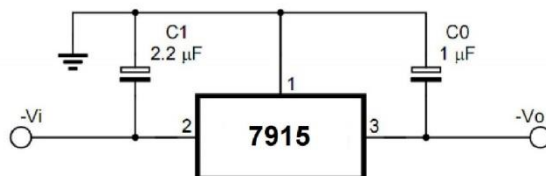


Figure 1. Fixed Output regulator

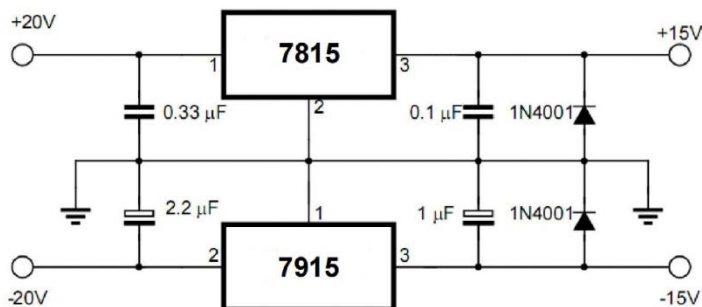


Figure 2. Split power supply ($\pm 15V$, $-1.5A$)

TO-220-3L Package Outline Dimensions

TO-220AB

TO-220AB	Dim	Millimeter		Inches	
		Min.	Max.	Min.	Max.
	A	4.30	4.70	0.169	0.185
	A1	0.00	0.15	0.000	0.006
	b	0.71	0.91	0.028	0.036
	b1	1.17	1.37	0.046	0.054
	c	0.30	0.50	0.012	0.020
	c1	1.17	1.37	0.046	0.054
	D	9.90	10.20	0.390	0.402
	E	8.50	8.90	0.335	0.350
	E1	12.00	12.50	0.472	0.492
	e	2.44	2.64	0.096	0.104
	e1	4.88	5.28	0.192	0.208
	F	2.60	2.80	0.102	0.110
	L	13.20	13.80	0.520	0.543
	L1	3.80	4.20	0.150	0.165
	Φ	3.60	3.96	0.142	0.156

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise.