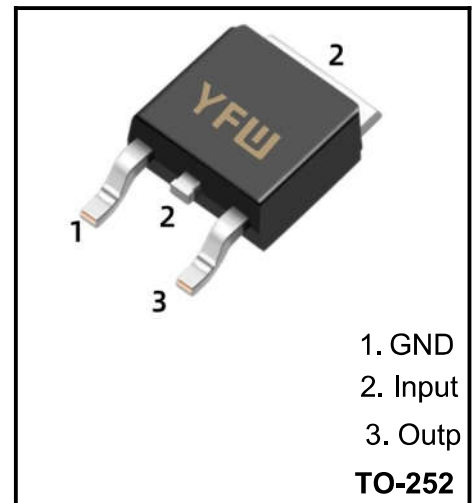


3-Terminal 1.5A Negative Voltage Regulator

Description

The 7915 three-terminal negative regulators is available in TO-252 packages and several fixed output voltages, making it useful in a wide range of applications. These regulators can provide local on-card regulation, eliminating the distribution problems associated with single point regulation; furthermore, having the same voltage as the 7815 positive, they are particularly suited for split power supplies. If adequate heat sinking is provided, they can deliver over 1.5 A output current.

Although designed primarily as fixed voltage regulators, these devices can be used with external components to obtain adjustable voltages and currents.

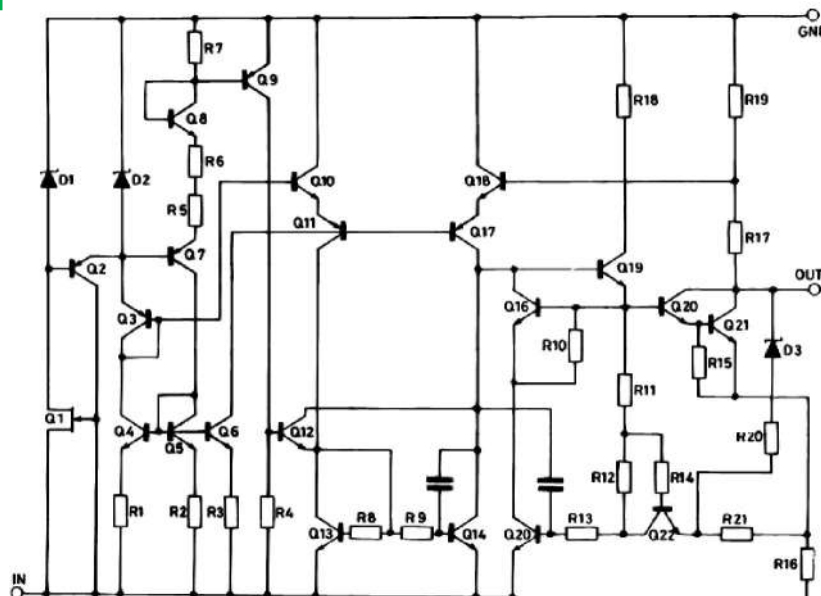


1. GND
2. Input
3. Outp
TO-252

Features

- ◆ Output Current up to 1.5A
- ◆ Output Voltages of -15V
- ◆ Thermal Overload Protection
- ◆ Short Circuit Protection
- ◆ Output transition SOA protection

Schematic diagram



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Input Voltage	V_{IN}	-35	V
Output current	I_O	-1.5	A
Operating Junction Temperature Range	T_{OPR}	0 ~ +125	°C
Storage Temperature Range	T_{STG}	-55 ~ +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 (Ta = 25°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 circuits , $I_O = -750mA$, $V_I = -23V$, $C_I = 2.2\mu F$, $C_O = 1\mu F$ unless otherwise specified

Parameter	Symbol	Conditions		Value			Unit
				Min	Typ	Max	
Output Voltage	V _O	T _j = 25°C		-14.40	-15.0	-12.60	V
		I _O = -5mA ~ -1.5A, P _O ≤15W V _I = -17.5 ~ -30V		-14.25	-15.0	-15.75	V
Line Regulation(Note)	ΔV _O	T _j = 25°C	V _I = -17.5V ~ -30V			300	mV
			V _I = -20V ~ -26V			150	
Load Regulation(Note)	ΔV _O	T _j = 25°C	I _O = -5mA ~ -1.5A			300	mV
			I _O = -0.25A ~ -0.75A			150	
Quiescent Current	I _Q	T _j = 25°C				8.0	mA
Quiescent Current Change	ΔI _Q	I _O = -5mA ~ -1.5A				0.5	mA
		I _O = -17.5V ~ -30.5V				1.0	
Output Voltage Drift	ΔV /ΔT	I _O = 5mA			-0.9		mV/°C
Output Noise Voltage	V _N	f = 10Hz ~ 100KHz, T _j = 25°C			250		μV
Ripple Rejection	RR	f = 120Hz, ΔV _I = 10V			60		dB
Dropout Voltage	V _D	I _O = 1.5A ,T _j =25°C			2		V
Short Circuit Current	I _{SC}	V _I = -35V, T _j =25°C			300		mA
Peak Current	I _{PK}	T _j =25°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

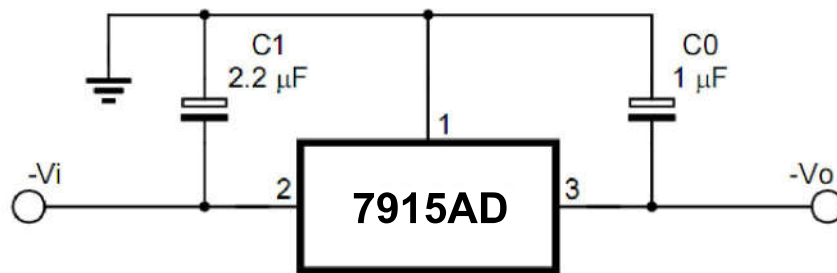


Figure 1.Fixed Output regulator

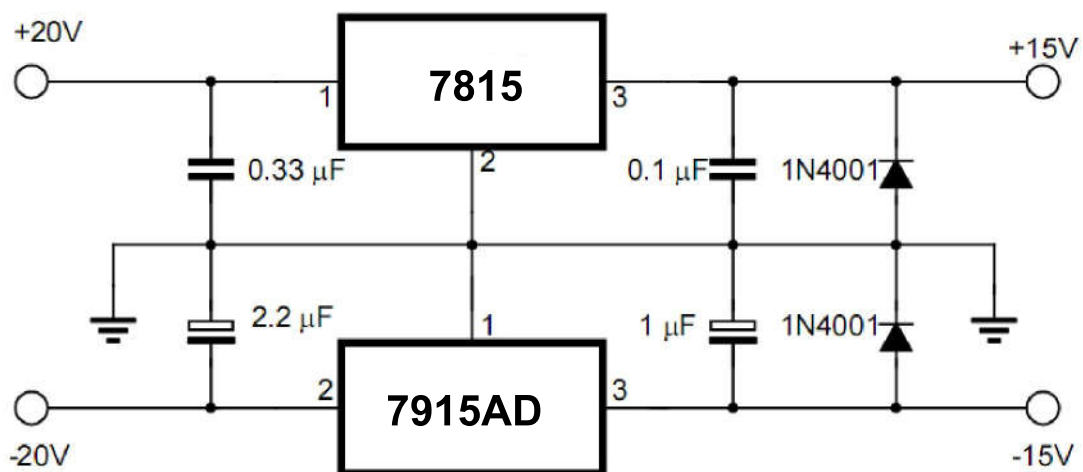
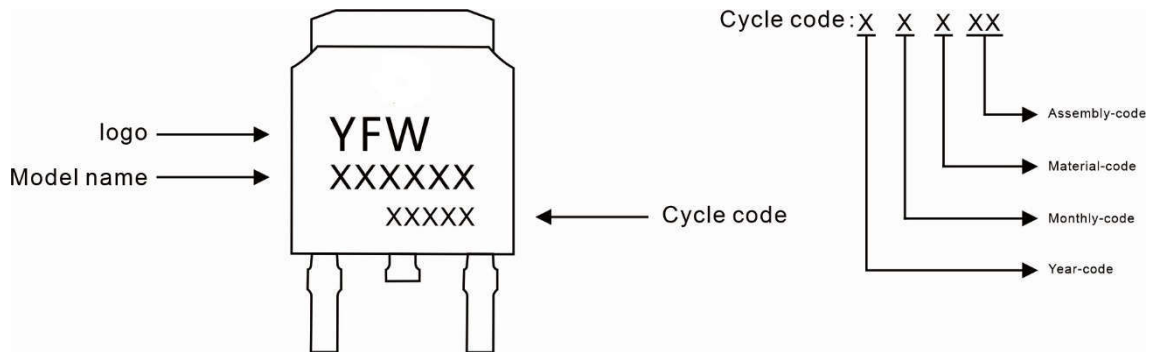


Figure 2. Split power supply ($\pm 15\text{ V}$, -1.5 A)

Marking Diagram



Ordering information

Model name	Package	Unit Weight	Base Quantity	Packing Quantity
7915AD	TO-252	0.011oz(0.32g)	2500pcs/reel	5000pcs/box 25000pcs/Carton

Package Dimensions

TO-252

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.098
A1	0.00	0.12	0.000	0.005
A2	2.20	2.40	0.087	0.094
B	1.20	1.60	0.047	0.063
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.35	6.65	0.250	0.262
D1	5.20	5.40	0.205	0.213
E	5.40	5.70	0.213	0.224
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	10.00	11.00	0.393	0.433
L1	2.70	3.10	0.106	0.122
L2	1.40	1.80	0.055	0.071
L3	0.90	1.50	0.035	0.059

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