## Features:

➢ Dropout voltage 1.2V
➢ Line regulation typically at 0.2% max
➢ Load regulation typically at 0.4% max
➢ Current limiting and Thermal protection
➢ Adjustable Output Voltage or Fixed 1.25V,1.5V, 1.8V,2.5V,2.85V,3.3V,5V
➢ Standard 3-pin Power Packages
➢ Maximum Input Voltage −15V
➢ Operating Junction Temperature Range − 0 to + 150℃

ABSOLUTE MAXIMUM RATINGS

➢ Power Dissipation 12W
➢ Input Voltage   12V-(V_O=1.5V,1.8V,2.5V,3.3V)
                            15V-(V_O=5.0V,adjustable)
➢ Operating Junction Temperature Range 0 to +150℃
➢ Storage Temperature − 65℃   to +150℃

| TO-252 | TO-126 | I-Pak |
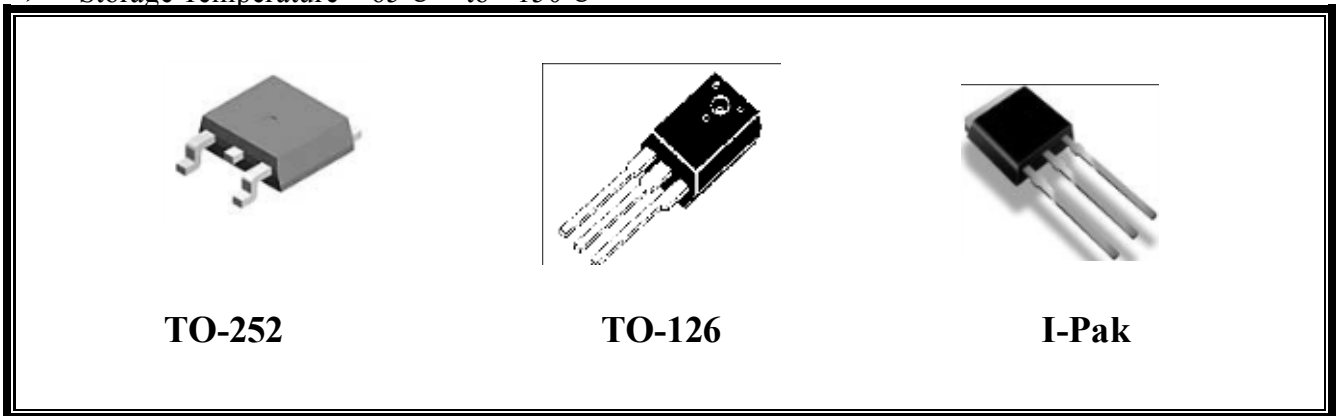
APPLICATION INFORMATION
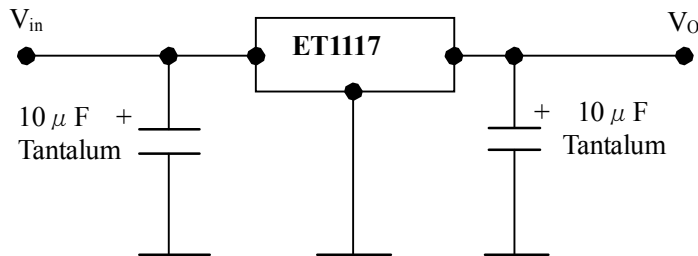
FIGURE 1. Fixed-Voltage Model −Basic Connections.

$$V_O = V_{ref}(1+R_2/R_1)+I_{adj}R_2$$
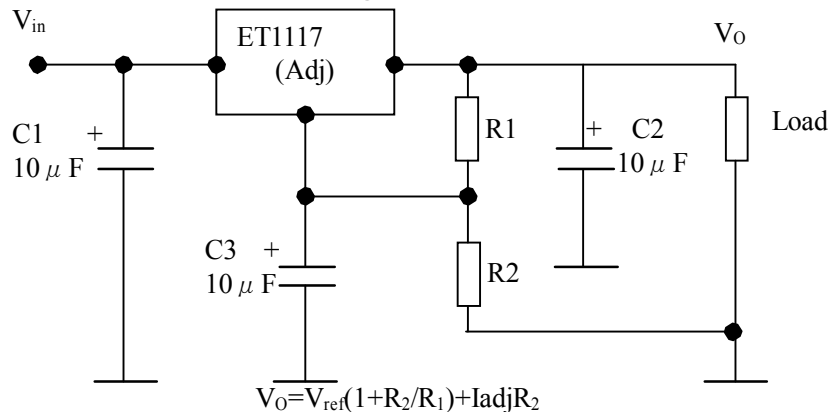
FIGURE 1.Adjustable-Voltage Model-Basic Connections

ELECTRICAL CHARACTERISTICS

(T_j=+25℃,unless otherwise noted)

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
ET1117(Adjustable)	I_O=10mA,V_{in}-V_O=2V	1.238	1.250	1.262	V
	I_O=10mA to1A, V_{in}-V_O=1.5 to 13.75V	1.232	1.250	1.268	V
ET1117-1.5	I_O=10mA,V_{in}=3.5V	1.485	1.500	1.515	V
	I_O=0 to 1A,V_{in} =3.0V to 12V	1.477	1.500	1.522	V
ET1117-1.8	I_O=10mA,V_{in}=3.8V	1.782	1.800	1.818	V
	I_O=0 to 1A,V_{in} =3.3V to 12V	1.773	1.800	1.827	V
ET1117-2.5	I_O=10mA,V_{in}=4.5V	2.475	2.500	2.525	V
	I_O=0 to 1A,V_{in} =4.0V to 12V	2.462	2.500	2.538	V
ET1117-2.85	I_O=10mA,V_{in}=4.85V	2.820	2.850	2.880	V
	I_O=0 to 1A,V_{in} =4.4V to 12V	2.807	2.850	2.893	V
ET1117-3.3	I_O=10mA,V_{in}=5.3V	3.270	3.300	3.330	V
	I_O=0 to 1A,V_{in} =4.8V to 12V	3.250	3.300	3.350	V
ET1117-5.0	I_O=10mA,V_{in}=7V	4.950	5.000	5.050	V
	I_O=0 to 1A,V_{in} =6.5V to 15V	4.925	5.000	5.075	V
OUTPUT VOLTAGE	T_j=0℃ to +125℃				
ET1117(Adjustable)	I_O=10mAto1A,V_{in}-V_O=1.5to13.75V	1.225	1.250	1.280	V
ET1117-1.5	I_O=0 to 1A,V_{in}=3.0V to 12V	1.470	1.500	1.530	V
ET1117-1.8	I_O=0 to 1A,V_{in}=3.3V to 12V	1.764	1.800	1.836	V
ET1117-2.5	I_O=0 to 1A,V_{in}=4.0V to 12V	2.450	2.500	2.550	V
ET1117-2.85	I_O=0 to 1A,V_{in}=4.4V to 12V	2.790	2.850	2.910	V
ET1117-3.3	I_O=0 to 1A,V_{in}=4.8V to 12V	3.240	3.300	3.360	V
ET1117-5.0	I_O=0 to 1A,V_{in}=6.5V to 15V	4.900	5.000	5.100	V
LINE REGULATION					
ET1117(Adjustable)	I_O=10mA,V_{in}-V_O=1.5 to 13.75V		0.1	0.2	%
ET1117-1.5	I_O=0,V_{in}=3.0V to 12V		2	7	mV
ET1117-1.8	I_O=0,V_{in}=3.3V to 12V		2	7	mV
ET1117-2.5	I_O=0,V_{in}=4.0V to 12V		2	7	mV
ET1117-2.85	I_O=0,V_{in}=4.4V to 12V		2	7	mV
ET1117-3.3	I_O=0,V_{in}=4.8V to 12V		3	7	mV
ET1117-5.0	I_O=0,V_{in}=6.5V to 15V		4	10	mV
LOAD REGULATION					
ET1117(Adjustable)[1]	I_O=10mA to 1A,V_{in}-V_O=2V		0.2	0.4	%
ET1117-1.5	I_O=1 to 1A,V_{in}=3.5V		3	10	mV
ET1117-1.8	I_O=1 to 1A,V_{in}=3.8V		3	10	mV
ET1117-2.5	I_O=1 to 1A,V_{in}=4.5V		3	10	mV
ET1117-2.85	I_O=1 to 1A,V_{in}=4.85V		3	10	mV
ET1117-3.3	I_O=1 to 1A,V_{in}=5.3V		4	12	mV
ET1117-5.0	I_O=1 to 1A,V_{in}=7.0V		5	15	mV
DROPOUT VOLTAGE[2]					
All Models	I_O=800mA		1.10	1.20	V
	I_O=1A		1.2	1.30	V
	I_O=1A(T_j=0℃ to +125		1.2	1.48	V
CURRENT LIMIT	V_{in} -V_O=5V	1000	1250	1600	mA
MINIMUM LOAD CURRENT Adjustable	V_{in}-V_O=12V		5	10	mA

QUIESCENT CURRENT	V_{in} -V_O=5V		5.2	10	MA
Adjust PIN Current vs Load Current, ET1117	I_O=10mA, V_{in}-V_O=1.5V to 12V I_O=10mA to 1A, V_{in}-V_O=1.5V to 12V		50 0.5	120 5	uA uA
TEMPERATURE DRIFT	T_j=0℃ to+125℃		0.5		%

NOTES: (1)AMS1117 adjustable versions require a minimum load current for $\pm$3% regulation.

        (2) Dropout voltage is the input voltage minus output voltage that produces a 1% decrease in output voltage.