

FEATURES

- Low dropout performance, 1.3V max.
- Full current rating over line and temperature
- Fast transient response
- $\pm 2\%$ Total output regulation over line, load and temperature
- Adjust pin current max 90 μ A over temperature
- Fixed/adjustable output voltage
- Line regulation typically 0.015%
- Load regulation typically 0.05%
- TO-220 package

DESCRIPTION

The EZ1082 Series are high performance positive voltage regulators designed for use in applications requiring low dropout performance at full rated current. Additionally, the EZ1082 Series provides excellent regulation over variations due to changes in line, load and temperature. Outstanding features include low dropout performance at rated current, fast transient response, internal current limiting and thermal shutdown protection of the output device. The EZ1082 Series are three terminal regulators with fixed and adjustable voltage options available in popular packages.

DEVICE SELECTION GUIDE

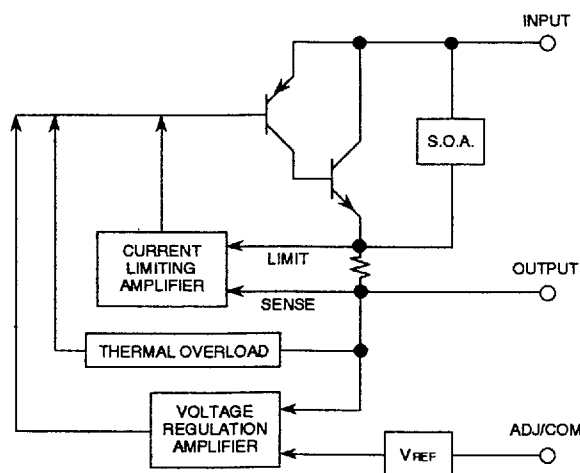
DEVICE	V _{OUT} VOLTS	PACKAGE
EZ1082CT	1.30 to 4.0	TO-220
EZ1082CT-3.3	3.3	
EZ1082CT-3.45	3.45	
EZ1082CP	1.30 to 4.0	TO-247
EZ1082CP-3.3	3.3	
EZ1082CP-3.45	3.45	

NOTE: Contact factory for additional voltage options.

ABSOLUTE MAXIMUM RATINGS

Parameter	Symbol	Maximum	Units
Input Voltage	V _{IN}	7	V
Power Dissipation	P _D	Internally Limited	W
Thermal Resistance Junction to Case TO-220, TO-247	θ_{JC}	1.6	°C/W
Thermal Resistance Junction to Ambient TO-220, TO-247	θ_{JA}	50	
Operating Junction Temperature Range	T _J	0 to 125	
Storage Temperature Range	T _{STG}	-65 to 150	°C
Lead Temperature (Soldering) 10 Sec.	T _{LEAD}	260	

BLOCK DIAGRAM



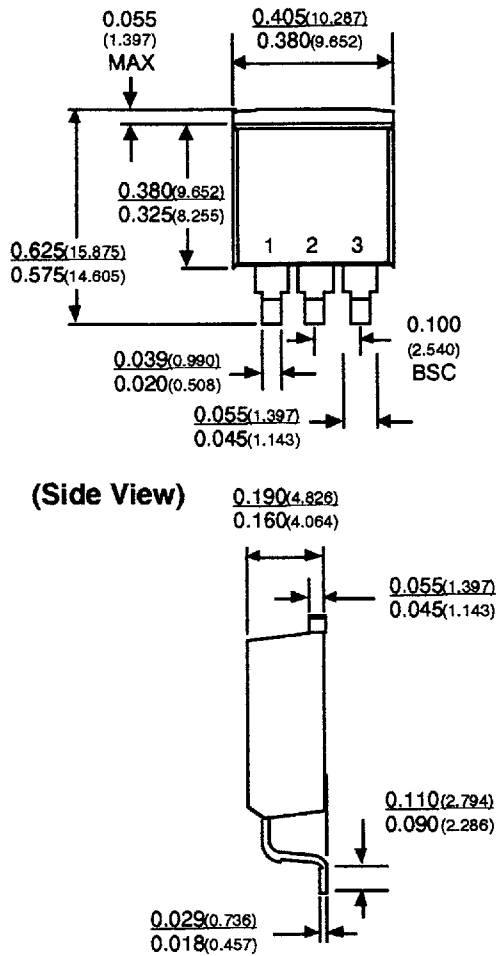
ELECTRICAL CHARACTERISTICS

Unless otherwise specified, Adj $V_{IN} = 2.75V$ to $7.0V$ and Adj $I_O = 10mA$ to $10.0A$;
Fixed $V_{IN} = 4.75V$ to $7.0V$ and Fixed $I_O = 0mA$ to $10.0A$

		Test Conditions			Test Limits				
PARAMETER	SYMBOL	V _{IN}	I _O	T _J (⁴)	MIN	TYP	MAX	UNITS	
Output Voltage(¹)	V _O	5V	0mA	25	0.99 V _O	V _O	1.01 V _O	V	
Fixed Voltage				Over Temp.	0.98 V _O		1.02 V _O		
Reference Voltage(¹)	V _{REF}	5V	10mA	25	1.238	1.250	1.262		V
Adj Voltage				Over Temp.	1.225		1.275		
Line Regulation(¹)	REG _(LINE)	5V	10mA	25		0.015	0.2	%	
				Over Temp.		0.035			
Load Regulation(¹)	REG _(LOAD)			25		0.05	0.3		
				Over Temp.		0.2	0.4		
Dropout Voltage	V _D			25		1		V	
ΔV _{OUT} , ΔV _{REF} = 1%				Over Temp.		1	1.3		
Current Limit	I _{CL}					Over Temp.	10.0	12	
Quiescent Current	I _Q	5V						12	14
Fixed Model									
Temperature Coefficient	T _C					0.005		%/°C	
Adjust Pin Current	I _{ADJ}			25		55		μA	
				Over Temp.					90
Adjust Pin Current Change	ΔI _{ADJ}						0.2	5	
Temperature Stability	T _S	5V	0.5A	Over Temp.			0.5		%
Minimum Load Current	I _O	5V						mA	
Adj Model						5	10		
RMS Output Noise(²)	V _N			25			0.003		%V _O
Ripple Rejection Ratio(³)	R _A	5V	10.0A	Over Temp.		60	72		dB

- (1) Low duty cycle pulse testing with Kelvin connections required.
- (2) Bandwidth of 10Hz to 10kHz.
- (3) 120Hz input ripple (C_{ADJ} for ADJ) = $25\mu F$.
- (4) Over Temp. = over specified operating junction temperature range.

TO-263



UNIT: Inches (mm)

EZ1086	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

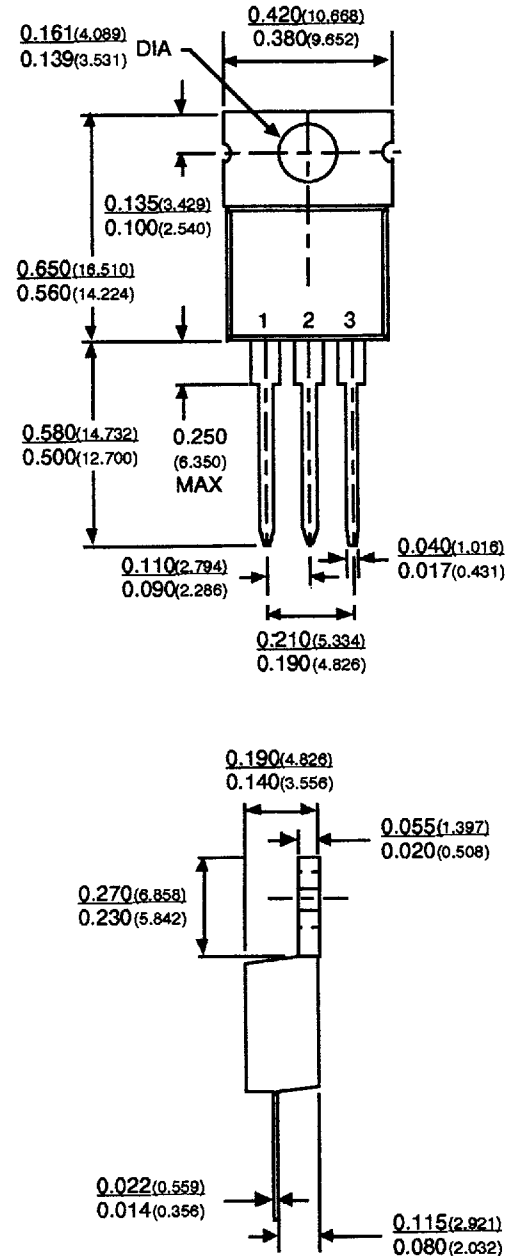
EZ1085	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

EZ1084	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

EZ1083	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

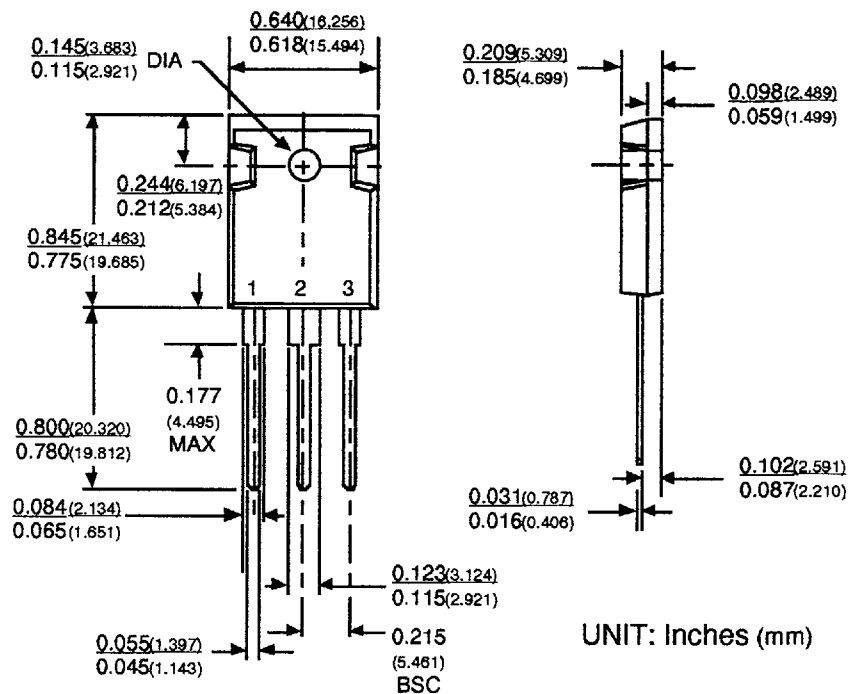
EZ1082	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

TO-220



UNIT: Inches (mm)

TO-247



EZ1083	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	

EZ1082	
PIN	FUNCTION
1	ADJ/GND
2	OUTPUT
3	INPUT
TAB IS OUTPUT	