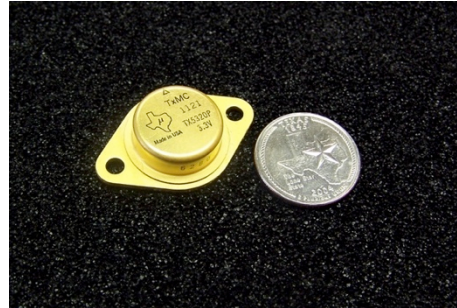




High Temperature, 3-Terminal, Positive Regulator

BENEFITS

- 200 °C operation
- Output Current up to 1.5A
- Fixed Output Voltage: 3.3V
- Low Dropout Voltage
- Short Circuit Protected
- Input Voltage up to 26Vdc
- TO-3 Hermetic Metal Package



APPLICATIONS

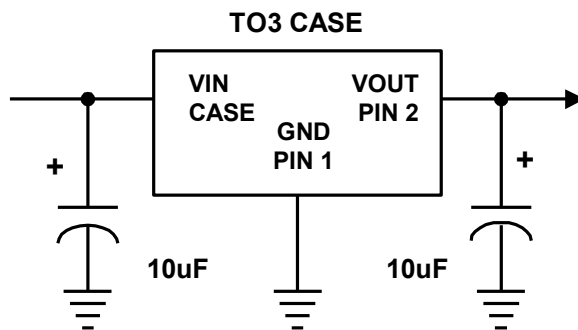
- High temperature applications
- Downhole applications
- Turbine Engine control
- Avionics / Space Systems

The TX5320P-3.3 is a member of a family of hybrid linear regulators specifically designed for sustained high temperature applications. All parts are 100% screened and tested to eliminate infant mortality.

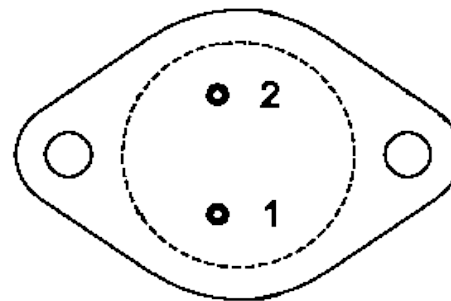
The TX5320P-3.3 is a precision regulator with voltage output settings trimmed to specific voltage within $\pm 0.5\%$. The TX5320P-3.3 is self-protected against prolonged short circuits at any temperature within its operating range. Only two 10uF external capacitors are necessary to insure unit stability and to improve high frequency load regulation. The low voltage dropout feature enhances functionality by maintaining the output voltage with input voltages only 0.8 volts greater than the output.

The TX5320P-3.3 is also designed to shut down to a minimum current level in the presence of an output short circuit and recovers when the short is removed. This is designed to protect both the regulator and system components.

TX5320P-3.3 Typical Application



Pin Configuration



Bottom View

TX5320P-3.3 Specifications

Absolute Maximum Ratings*

Parameter	Value	Unit
Power Dissipation	4.0	W
Input Voltage	+26	V _{dc}
Operating Case Temperature Range	-55 to +200	°C
Storage Temperature Range	-55 to +200	°C
Lead Soldering Temperature (60 seconds)	+300	°C

* CAUTION: Stresses above those listed in "Absolute Maximum Ratings" may cause permanent damage to the device

Electrical Characteristics (unless otherwise indicated: T_{case} = 25°C)

Parameter	Conditions	Typ	Unit
Line Regulation	I _{out} = 450mA 6V ≤ V _{in} ≤ 12V	0.50	%
Load Regulation	V _{in} = 6V _{dc} 50mA ≤ I _{out} ≤ 1.5A	0.50	%
Dropout Voltage	I _{out} = 50mA, T _{case} = 25°C	3.40	V
	I _{out} = 1.5A, T _{case} = 25°C	4.10	V
	I _{out} = 50mA, T _{case} = 200°C	3.50	V
	I _{out} = 1.5A, T _{case} = 200°C	4.20	V
Quiescent Current	V _{in} = 6V _{dc} and T _{case} = 25°C T _{case} = 200°C	4.0	mA
		5.0	mA
Short Circuit Current (I _{sc})	V _{in} = 6V _{dc}	50	mA
Current Limit	V _{in} = 6V _{dc}	1.70 (Nom)	A
Turn on Time / Overshoot		<4	Ms
Temperature Stability	V _{in} = 6V _{dc} @ 25°C to 200°C	2.5	%
Thermal Resistance	Junction to Case	8.7	°C/W

TX5320P-3.3 Performance Graphs

Figure 1

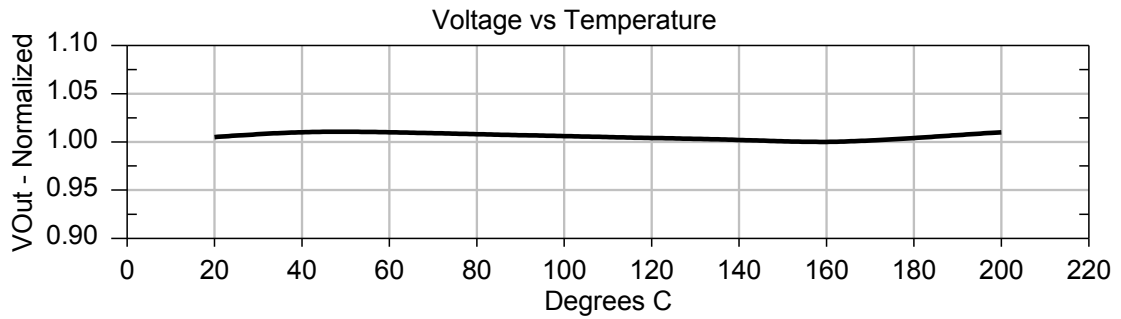


Figure 2

Figure 2 . Max Output Current vs Input Voltage

