TIGER ELECTRONIC CO.,LTD

Product specification

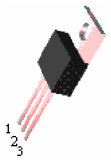
5A LOW DROPOUT POSITIVE REGULATOR

LM1084-XX

Features

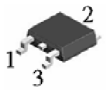
1. Dropout Voltage 1.3V at 5A Output Current.
2. Fast Transient Response.
3. Extremely Tight Line and Load Regulation.
4. Current Limiting and Thermal Protection.
5. Adjustable Output Voltage or Fixed 1.5V, 1.8V, 2.5V, 3.3V, 5.0V.
6. Standard 3-Pin Power Packages.

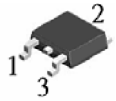
TO-220 TO-263





TO-252 TO-263-2L





1. Adj(COM) 2. Output 3. Input

DESCRIPTION

The LM1084 is a low dropout three terminal regulator with 5A output current capability. The output voltage is adjustable with the use of a resistor divider or fixed 1.5V, 1.8V, 2.5V, 3.3V and 5.0V. Dropout voltage is guaranteed to be at maximum of 1.4V with the maximum output current. Its low dropout voltage and fast transient response make it ideal for low voltage microprocessor applications. Current limit and thermal protection provide protection against any overload condition that would create excessive junction temperatures.

Electrical Characteristics (Ta = 25 °C)

(VIN=5V, TJ=25° C, IO=10mA, unless otherwise specified) (Note1)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reference Voltage	LM1084 (ADJ)	1.225	1.25	1.275	
Output Voltage	LM1084-15, V_{IN}=4.5V	1.470	1.50	1.530	V
	LM1084-18, V_{IN}=4.8V	1.764	1.80	1.836	
	LM1084-25, V_{IN}=5.5V	2.450	2.50	2.55	
	LM1084-33, V_{IN}=6.3V	3.235	3.30	3.365	
	LM1084-50, V_{IN}=7.0V	4.90	5.00	5.10	
Line Regulation	ADJ : 2.65V≤ V_{IN} ≤7V V_{OUT}=1.25V	-	0.015	0.2	%
	Fix : V_{OUT}+1.4V≤ V_{IN} ≤7V				
Load Regulation	10mA < I_O < 5A			0.6	%
Dropout Voltage	Δ V_{OUT}, Δ V_{REF}=1% 10mA ≤ I_O ≤ 5A		1.3	1.4	V
Current Limit		5.0	6.0		A
GND Current (Fix)	2.65V ≤ V_{IN} ≤ 7V	2.0		10	mA
Adjusted Pin Current	2.65V ≤ V_{IN} ≤ 7V		55	120	uA
Adjusted Pin Current Change (Δ IADJ)	2.65V ≤ V_{IN} ≤ 7V		0.2	5.0	uA
Temperature Stability	I_O=0.5A		0.5		%
Minimum Load Current			5.0	10	mA
RMS Output Noise (% of V_{OUT})			0.003		%
Ripple Rejection Ratio	120Hz input ripple C_{OUT}=25 μ F (V_{IN} -V_{OUT})=3V	60	72		dB

Note:
Specifications are production tested at TA=25° C. Specifications over the -40° C to 85° C operating temperature range are assured by design, characterization and correlation with Statistical Quality Controls (SOC).