



Micro Commercial Components

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 20736 Marilla Street Chatsworth
 CA 91311
 Phone: (818) 701-4933
 Fax: (818) 701-4939

LM317DT

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Marking: LM317
- Output voltage range: 1.2V to 37V
- Output current in excess of 1.5A

Maximum Ratings @ $T_A=25^\circ\text{C}$, Unless Otherwise Noted

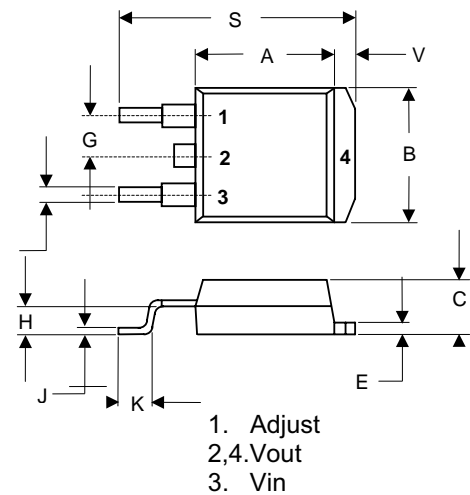
Parameter	Symbol	Value	Unit
Input-Output Voltage Differential	$V_i - V_o$	40	V
Operating Ambient Temperature	P_D	Internally Limited	W
Operating Junction Temperature	T_{OPR}	0---+125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65---+125	$^\circ\text{C}$
Temperature Coefficient of Output Voltage	$\Delta V_o/\Delta T$	± 0.02	$\%/^\circ\text{C}$
Lead Temperature	T_{LEAD}	230	$^\circ\text{C}$

Electrical Characteristics ($V_i - V_o = 5\text{V}$, $I_o = 500\text{mA}$, $I_{MAX} = 1.5\text{A}$, $P_{MAX} = 20\text{W}$, unless otherwise specified)

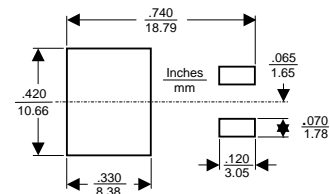
Parameter	Sym	Min	Typ	Max	Test conditions
Reference Voltage	V_{REF}	1.2V	1.25V	1.3V	$3\text{V} \leq V_i - V_o \leq 40\text{V}$ $10\text{mA} \leq I_o \leq I_{MAX}$
Load regulation	R_{load}	---	18	25mV/V	$10\text{mA} \leq I_o \leq I_{MAX}$, $V_o < 5\text{V}$
		---	0.4	0.5 mV/V	$V_o \geq 5\text{V}$
Line regulation	R_{line}	---	40	70 mV/V	$10\text{mA} \leq I_o \leq I_{MAX}$, $V_o < 5\text{V}$
		---	0.8	1.5 mV/V	$V_o \geq 5\text{V}$
Adjustment pin current	I_{adj}	---	0.01%/V	0.04%/V	$3\text{V} \leq V_i - V_o \leq 40\text{V}$
		---	0.02%/V	0.07%/V	$3\text{V} \leq V_i - V_o \leq 40\text{V}$
Adjustment pin current charge	$I_{q(V)}$	---	46uA	100 μA	$V_i - V_o = 3\text{V}$ to 40V , $I_o = 10\text{mA}$ to I_{MAX}
Minimum Load Current to Main Regulation	I_L	---	2uA	5 μA	$V_i - V_o = 40\text{V}$
Ripple rejection	RR	66dB	60dB	75dB	$V_o = 10\text{V}$ $F = 120\text{Hz}$, $C_{ADJ} = 10 \mu\text{F}$
Temperature Stability	ST_T	---	0.7%/N _O	---	---
RMS Noise, % of V_{OUT}	e_N	---	0.003%/V _O	0.01%/V _O	10Hz-10kHz
Longterm, $T_J = T_{HIGH}$	ST	---	0.3%	1%	$T_A = 25^\circ\text{C}$ for end point measurements, 1000H R
Thermal Resistance Junction to Case	R_{JC}	---	5 $^\circ\text{C}/\text{W}$	---	---

Adjustable Voltage Regulators

D2-PACK



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.320	.359	8.13	9.14	
B	.380	.411	9.65	10.45	
C	.160	.190	4.06	4.83	
D	.020	.035	0.51	0.89	
E	.045	.055	1.14	1.40	
G	.095	.105	2.41	2.67	
H	.096	.120	2.43	3.03	
J	.014	.021	0.35	0.53	
K	.090	.110	2.29	2.79	
S	.575	.625	14.60	15.80	
V	.045	.055	1.14	1.40	





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Ordering Information

Device	Packing
LM317DT-TP	Tape&Reel;800pcs/Reel
LM317DT-BP	Bulk;50pcs/Box

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