



LM317MDT

Features

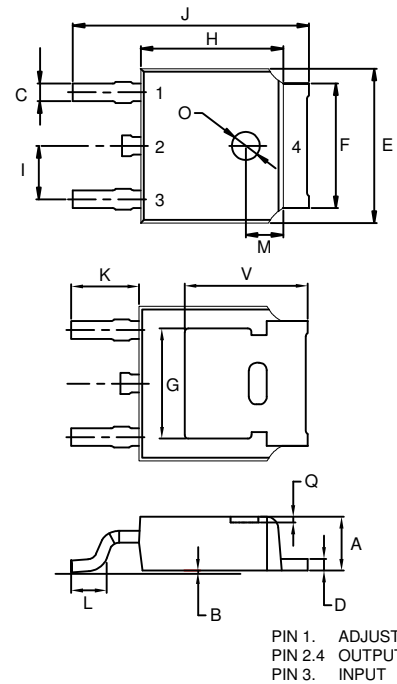
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: LM317
- Output voltage range: 1.2V to 37V
- Output current in excess of 1.5A
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings @ T_A=25°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	°C
Storage Temperature Range	T _{STG}	-65---+125	°C
Temperature Coefficient of Output Voltage	ΔV _O /ΔT	±0.02	%/°C

Adjustable Voltage Regulators

DPAK



Electrical Characteristics (V_I-V_O=5V, I_O=500mA, I_{MAX}=1.5A, P_{MAX}=20W, unless otherwise specified)

Parameter	Sym	Min	Typ	Max	Test conditions
Reference Voltage	V _{REF}	1.2V	1.25V	1.3V	3V ≤ V _I -V _O ≤ 40V 10mA ≤ I _O ≤ I _{max}
Load regulation	R _{load}	---	18 0.4	25mV%/V 0.5 mV%/V	10mA ≤ I _O ≤ I _{max} , V _O < 5v V _O ≥ 5v
		---	40 0.8	70 mV%/V 1.5 mV%/V	10mA ≤ I _O ≤ I _{max} , V _O < 5v V _O ≥ 5v
Line regulation	R _{line}	---	0.01%/V	0.04%/V	3V ≤ V _I -V _O ≤ 40V
		---	0.02%/V	0.07%/V	3V ≤ V _I -V _O ≤ 40V
Adjustment pin current	I _{ADJ}	---	46μA	100 μ A	---
Adjustment pin current charge	I _{ADJ}	---	2μA	5 μ A	V _I -V _O =3V to 40V, I _O =10mA to I _{max}
Minimum Load Current to Main Regulation	I _L	---	3.5mA	12mA	V _I -V _O =40v
Ripple rejection	RR	66dB	60dB 75dB	---	V _O =10V F=120Hz, C _{ADJ} =10 μ F
Temperature Stability	ST _T	---	0.7%/V _O	---	---
RMS Noise, % of V _{OUT}	eN	---	0.003%/V _O	0.01%/V _O	10Hz-10kHz
Longterm, T _J =T _{HIGH}	ST	---	0.3%	1%	T _A =25°C for end point measurements, 1000H R
Thermal Resistance Junction to Case	R _{JC}	---	5°C/W	---	---

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		

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Typical Performance Characteristics

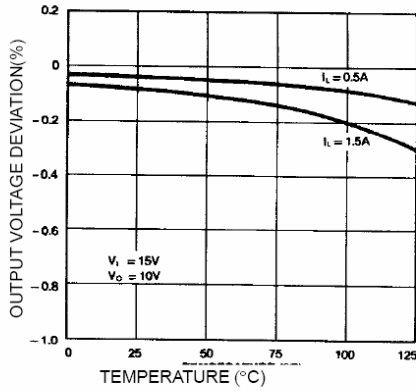


Figure 1. Load Regulation

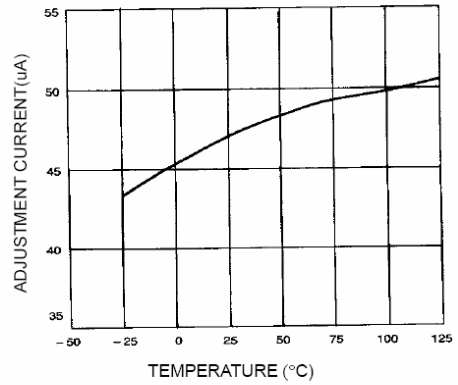


Figure 2. Adjustment Current

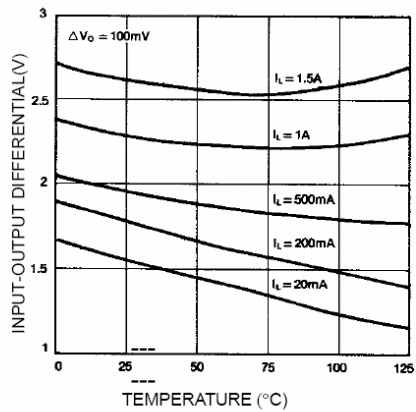


Figure 3. Dropout Voltage

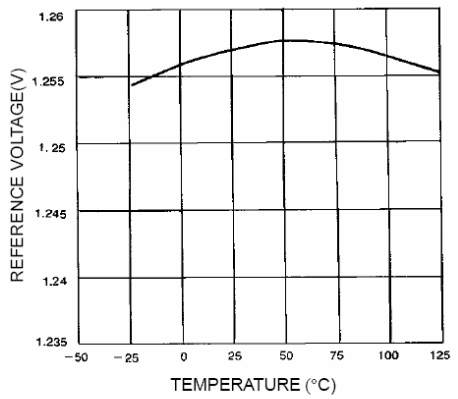


Figure 4. Reference Voltage



TM

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Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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