

Features

- Output Voltage Range: 1.2V to 37V
- Output Current In Excess of 1.5A
- Moisture Sensitivity Level 1
- Halogen Free."Green"Device^(Note1)
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings

Parameter	Symbol	Value	Unit
Input –Output Voltage Differential	$V_I - V_O$	40	V
Power Dissipation	P_D	Internally Limited	W
Operating Junction Temperature Range	T_{OPR}	0~125	°C
Storage Temperature Range	T_{STG}	-65~125	°C
Temperature Coefficient of Output Voltage	$\Delta V_O / \Delta T$	±0.02	%/°C
Lead Temperature	T_{LEAD}	230	°C

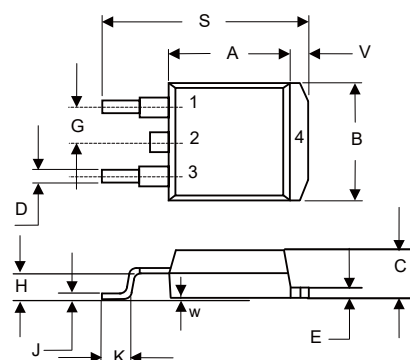
Note:

1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Marking Code:LM317

Adjustable Voltage Regulators

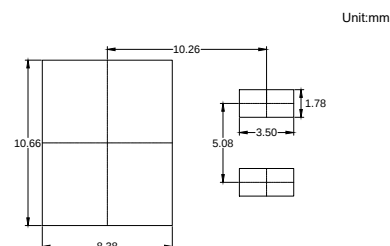
D²-PAK



DIMENSIONS

DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.331	0.370	8.40	9.40	
B	0.378	0.417	9.60	10.60	
C	0.165	0.189	4.20	4.80	
D	0.027	0.037	0.68	0.94	
E	0.045	0.055	1.14	1.40	
G	0.10		2.54		TYP.
H	0.096	0.134	2.43	3.40	
J	0.011	0.025	0.28	0.64	
K	0.071	0.131	1.80	3.32	
S	0.575	0.625	14.60	15.87	
V	0.042	0.058	1.07	1.47	
W	0.000	0.010	0.00	0.25	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C ($V_i - V_o = 5V$, $I_o = 500mA$, $I_{MAX} = 1.5A$, $P_{MAX} = 20W$ Unless Otherwise Specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reference Input Voltage	V_{ref}	$3V \leq V_i - V_o \leq 40V$, $10mA \leq I_o \leq I_{max}$	1.20	1.25	1.30	V
Load Regulation	Rload	$10mA \leq I_o \leq I_{max}$, $V_o < 5v$	-	18	25 mV%V	mV%V
		$V_o \geq 5v$	-	0.4	0.5 mV%V	mV%V
		$10mA \leq I_o \leq I_{max}$, $V_o < 5v$	-	40	70 mV%V	mV%V
		$V_o \geq 5v$	-	0.8	1.5 mV%V	mV%V
Load Regulation	Rline	$3V \leq V_i - V_o \leq 40V$	-	0.01	0.04	%/V
		$3V \leq V_i - V_o \leq 40V$	-	0.02	0.07	%/V
Adjustment Pin Current	I_Q		-	46	100	μA
Adjustment Pin Current Charge	$I_{q(V)}$	$V_i - V_o = 3V$ to $40V$, $I_o = 10mA$ to I_{max}	-	2	5	μA
Minimun Load Current to Main Regulation	II	$V_i - V_o = 40V$	-	3.5	12	mA
Ripple Rejection	RR	$V_o = 10V$ $F = 120Hz$, $C_{ADJ} = 10\mu F$	66	60	-	dB
				75		
Temperature Stability	ST_T		-	$0.7\%/V_o$	-	
RMS Noise, % of V_{OUT}	eN	10Hz-10kHz	-	$0.003\%/V_o$	$0.01\%/V_o$	
Longterm, $T_J = T_{HIGH}$	ST	$T_a = 25^\circ C$ for end point measurements, 1000HR	-	0.3%	1%	
Thermal Resistance Junction to Case	R_{JC}	-	-	5	-	$^\circ C/W$

Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:800pcs/Reel
Part Number-BP	Bulk: 50pcs/Box

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