

/ Descriptions

TO-263 Voltage Regulator in a TO-263 Plastic Package.

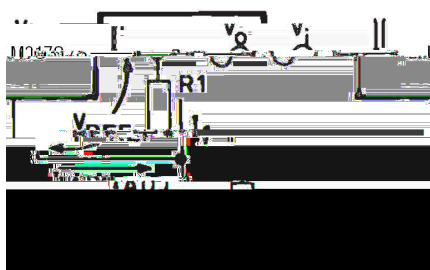
/ Features

1.5A, 1.2 37V
3-Terminal regulators ,output current in excess of 1.5 A, output voltage adjustable over a 1.2-37V.

/ Applications

Voltage Regulator.

/ Equivalent Circuit or Application Circuit



/ Pinning



PIN1 ADJ PIN 2 4 OUT PIN 3 IN

/ Marking

See marking instructions.

/ Absolute Maximum Ratings(Ta=25)

Parameter	Symbol	Rating	Unit
Input voltage	V_{i-o}	40	V
Output current	I_o	Internally Limited	
Operating virtual Junction temperature	T_j	0 125	
Power Dissipation	P_{tot}	Internally Limited	
Storage temperature range	T_{stg}	-55 150	

/ Electrical Characteristics(Ta=25)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Output voltage	V_o	$T_j=25$		0.01	0.04	%/V
		$I_o=5mA$ to 1A $V_i=-20V$ to -7V		0.02	0.07	%/V
Load Regulation	V_o	V_o 5V $T_j=25$ $I_o=10mA$ to I_{MAX}		5	25	mV
		V_o 5V $I_o=10mA$ to I_{MAX}		20	70	mV
		V_o 5V $T_j=25$ $I_o=10mA$ to I_{MAX}		0.1	0.5	%
		V_o 5V $I_o=10mA$ to I_{MAX}		0.3	1.5	%
Adjustable Pin Current	I_{ADJ}			50	100	A
Adjustable Pin Current Change	I_{ADJ}	$V_i-V_o=2.5$ to 40V $I_o=10mA$ to I_{MAX}		0.2	5.0	A
Reference Voltage	V_{REF}	$V_i-V_o=2.5$ to 40V $I_o=10mA$ to I_{MAX} P_D P_{MAX}	1.2	1.25	1.3	V
Line Regulation	$\frac{V_o}{V_o}$			1		%
Minimum Load Current for Regulation	$I_{o(min)}$	$V_i-V_o=40V$		3.5	10	mA
Maximum Output Current	$I_{O(max)}$	V_i-V_o 15V P_D P_{MAX}	1.5	2.2		A
		$V_i-V_o=40V$ P_D P_{MAX} $T_j=25$		0.4		A
RMS Noise vs. %of VOUT	e_N	B=10Hz to 10KHz $T_j=25$		0.003		%
Ripple Rejection	SVR	$T_j=25$ $f=120Hz$ $C_{ADJ}=0$		65		dB
		$T_j=25$ $f=120Hz$ $C_{ADJ}=10$ F	66	80		dB

/ Equivalent Circuit

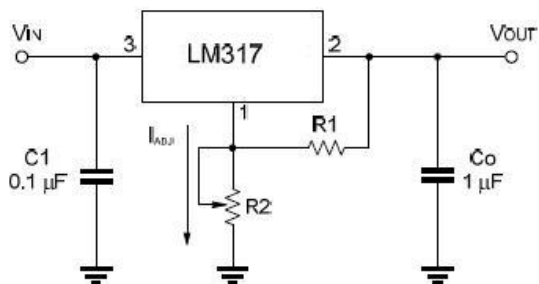


Fig.1 Programmable voltage regulator

$$V_{OUT} = 1.25V \cdot \left(1 + \frac{R2}{R1}\right) + I_{ADJ} \cdot R2$$

C1 is required when regulator is located
an appreciated distance from power

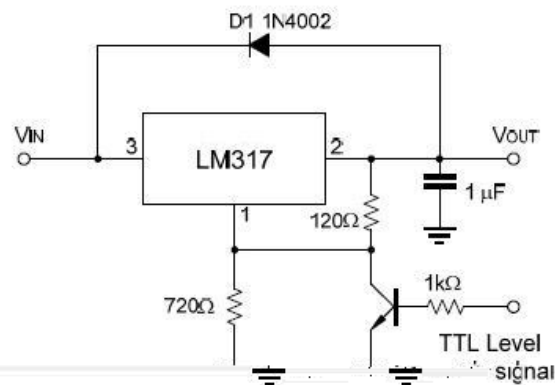
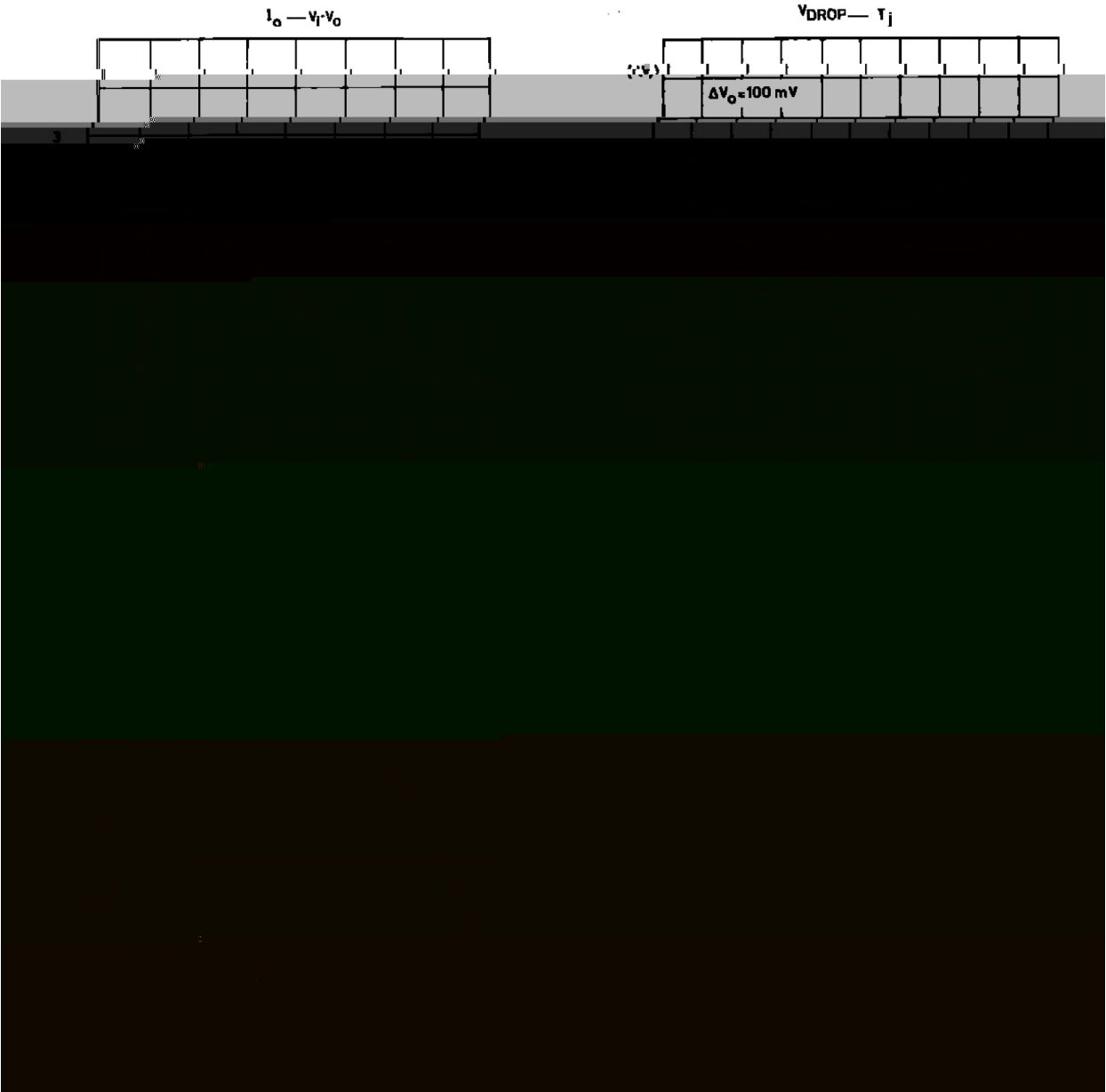
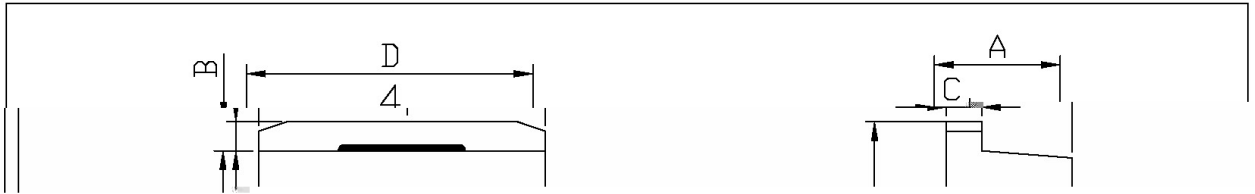


Fig.2 Regulator with On-off control

/ Electrical Characteristic Curve



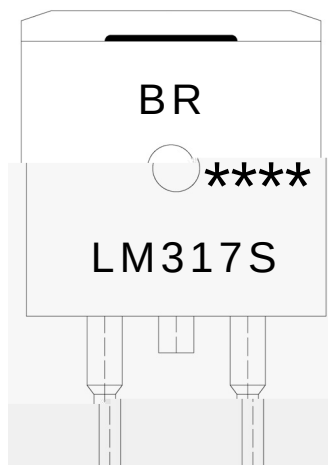
/ Package Dimensions



单位: mm

Symbol			Dimensions in Millimeters		Symbol			Dimensions in Millimeters	
			Min	Max				Min	Max
A _L			4.30	4.70	E _L			0.00	0.40
B _L			1.30	1.40	e ₁			2.34	2.74
b _L			0.70	0.90	e ₂			4.88	5.28
b ₁			1.15	1.35	J ₁			15.00	16.00
b ₂			0.40	0.60	J ₂			2.24	2.64
C			1.20	1.40	L ₃			1.20	1.60
D			9.80	10.20					
TP-263									

/ Marking Instructions



BR

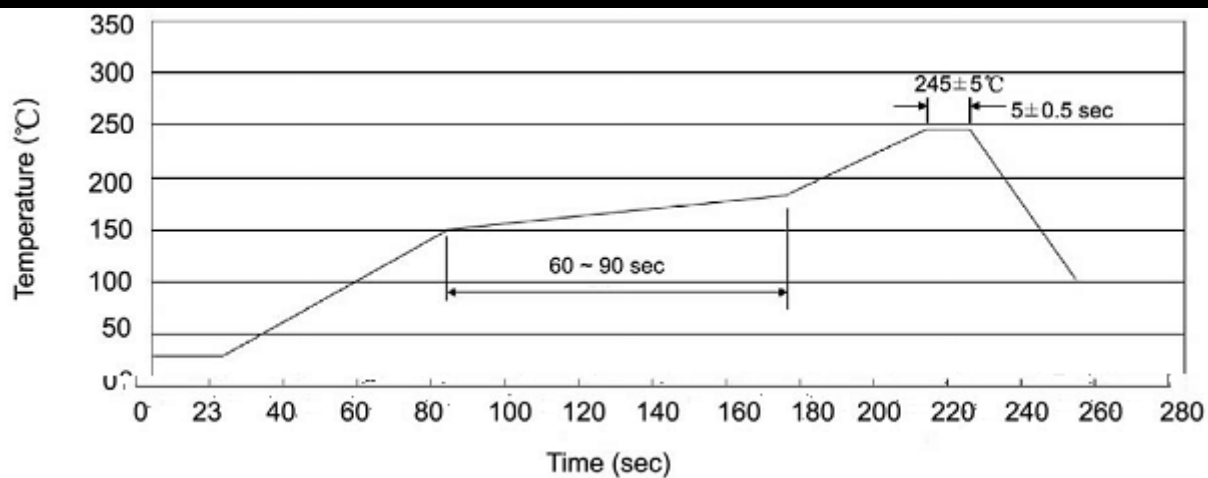
LM317S

Note:

BR: Company Code.

LM317S: Product Type.

****: Lot No. Code, code change with Lot No.



Note:

- | | | | | | |
|---|----|-----|----|--------|--------------------------------------|
| 1 | 25 | 150 | 60 | 90sec; | 1.Preheating:25~150 , Time:60~90sec. |
| 2 | | | | | |