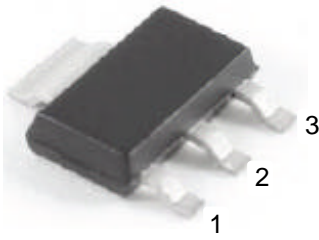


ADJUSTABLE VOLTAGE REGULATOR

LM317EMP



- Pin. 1. ADJ
- Pin. 2. OUTPUT
- Pin. 3. INPUT

- SOT-223**
- Surface Mount**
- Plastic Package**

FEATURES :

- 1) Output voltage adjustable from 1.3V ~ 37V
- 2) Output current in excess of 1A.
- 3) Internal short circuit protection.
- 4) Internal over temperature protection.
- 5) Output transistor safe area compensation.

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C, unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Input - Output Voltage Difference	V _{IN} - V _{OUT}	40	v
Power Dissipation	PD	Internal Limited	
Junction Temperature	T _J	+125	°C
Operating Temperature	T _{OPR}	-40 ~ +85	
Storage Temperature	T _{STG}	-40 ~ +150	

Note: 1. Absolute maximum ratings are stress ratings only and functional device operation is not implied. The device could be damaged beyond Absolute maximum ratings.

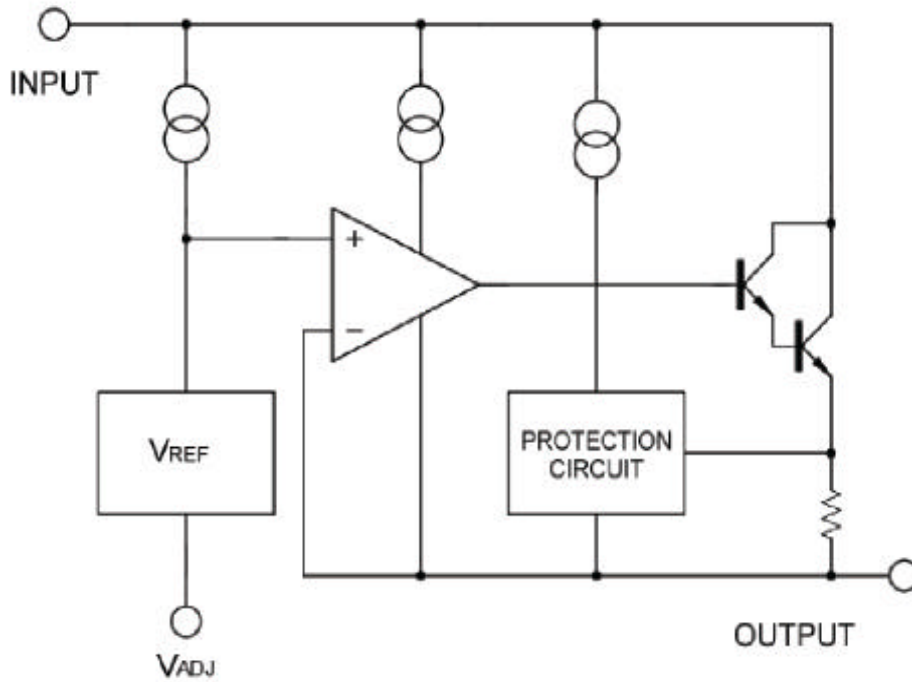
ELECTRICAL CHARACTERISTICS

(V_{IN} - V_{OUT} = 5v , I_{OUT} = 10mA, Ta = 25°C, unless otherwise specified.)

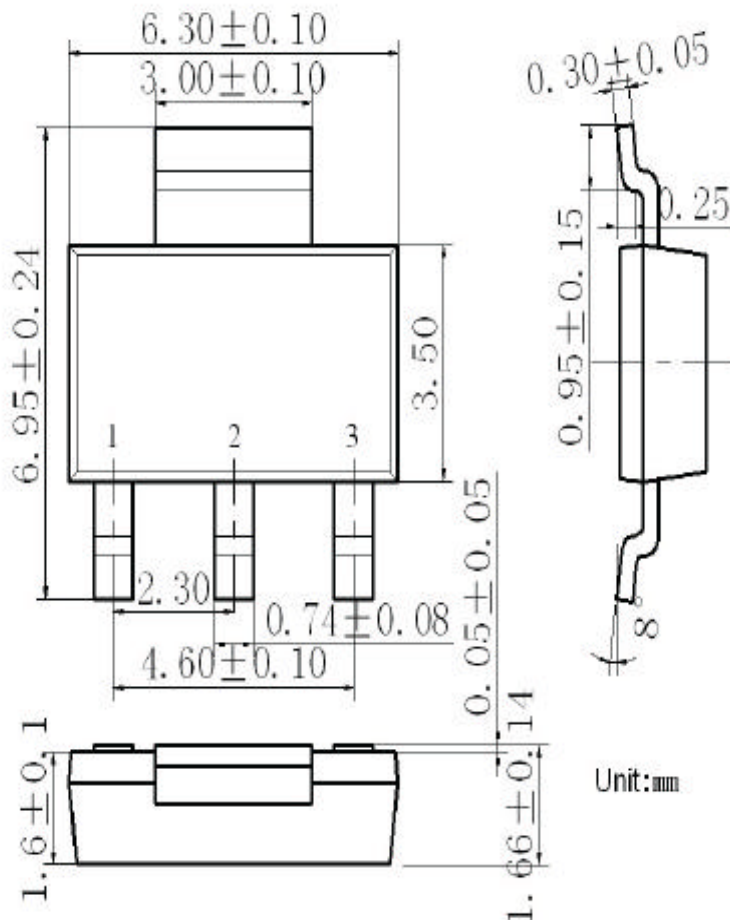
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Line Regulation	$\Delta V_{OUT}/\Delta V_{IN}$	$3V \leq V_{IN} - V_{OUT} \leq 40V$		0.01	0.04	%/V
Load Regulation	ΔV_{OUT}	$10mA \leq I_{OUT} \leq 1A$		5	25	mV
				0.1	0.5	%
Adjustable Pin Current	I _{ADJ}			50	100	μA
Adjustable Pin Current Change	ΔI_{ADJ}	$3V \leq V_{IN} - V_{OUT} \leq 40V,$ $10mA \leq I_{OUT} \leq 1A, PD \leq 20W$		0.2	5	
Reference Voltage	V _{REF}	$3V \leq V_{IN} - V_{OUT} \leq 40V,$	1.20	1.25	1.30	V
		$10mA \leq I_{OUT} < 1A, PD \leq 20W$				
Temperature Stability		T _{MIN} ≤ T _J ≤ T _{MAX}		0.7		%/V _{OUT}
Minimum Load Current for Regulation	I _{L(MIN)}	V _{IN} - V _{OUT} = 40V		3.5	10	mA
Maximum Output Current	I _{O(MAX)}	V _{IN} - V _{OUT} = 40V, PD ≤ 20W	0.2	0.3		A
RMS Noise vs. % of V _{OUT}	eN	10Hz ≤ f ≤ 10KHZ		0.003		%/V _{OUT}
Ripple Rejection	RR	V _{OUT} = 10V, f = 120Hz	C _{ADJ} = 0	65		dB
			C _{ADJ} = 10 μF	66	80	

Note : C_{ADJ} is connected between Adjust pin and Ground.

BLOCK DIAGRAM



SOT-223 PACKAGE OUTLINE AND DIMENSION



- Pin. 1. ADJ
- Pin. 2. OUTPUT
- Pin. 3. INPUT

Unit: mm



Continental Device India Limited

An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company



Customer Notes

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

DISCLAIMER

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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