MC79L15ACDR2G

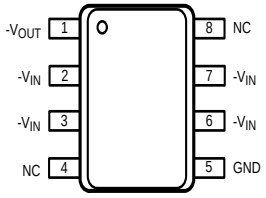
Low Dropout Linear Regulator

Description

This series of fixed-voltage monolithic integrated circuitvoltage regulators is designed for a wide range ofapplications. These applications include on-cardregulation for elimination of noise and distributionproblemsassociated with single-point regulation. Inaddition, they can be used with power-pass elements tomake high-current voltage regulators. Each of theseregulators can deliver up to 100mA of output current. Theinternal limiting and termal shutdown features of theseregulators make them essentially immune to overload.When used as a replacement for a Zener diode-resistor combination , an effectiveimprovement in output impedance can be obtained together with lower-bias current.

Pin Configuration

SOP-8(SOIC-8)



Features

·3-Terminal Regulators
·OutputCurrentUpto100mA
·NoExternalComponents
·InternalThermalOverloadProtection
Internal Short-Circuit Limiting

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_I	Input voltage	-35	V
I_{CM}	Maximum output current	-100	mA
P_D	Power dissipation	500	mW
T_{OPR}	Operating junction temperature	0 to +125	℃
T_j,T_{stg}	Storage temperature range	-40 to +150	℃

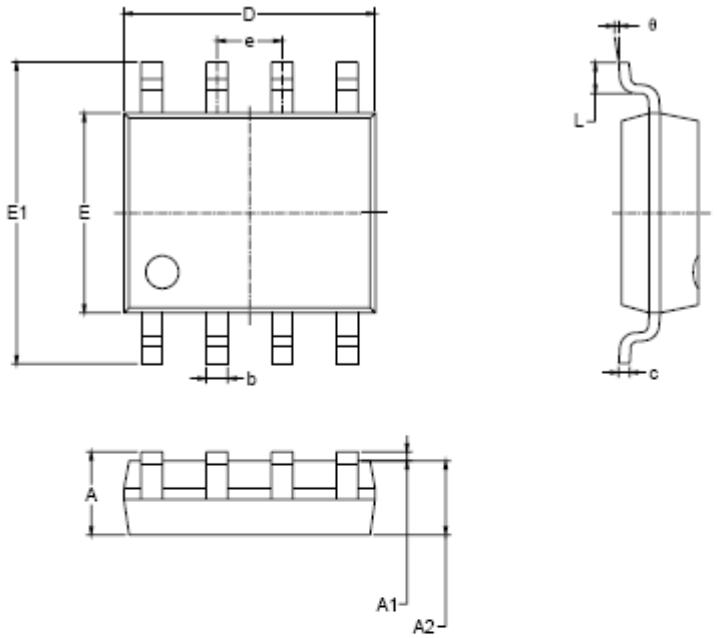
Electrical Characteristics V_I=-26V, I_O=40mA

PARAMETER	TEST CONDITIONS*		MIN	TYP	MAX	UNIT
Output voltage**		25°C	-17.3	-18	-18.7	V
	I_O=1mA to 40mA V_I=-20.5V to -33V	0 to 125 °C	-17.1	-18	-18.9	
	I_O=1mA to 70mA		-17.1	-18	-18.9	
Input regulation	V_I=-20.5V to -33V	25°C		70	325	mV
	V_I=-22V to -33V			60	275	
Ripple rejection	V_I=-21.5V to -31.5V, f=120Hz	25°C	33	48		dB
Output regulation	I_O=1mA to 100mA	25°C		27	170	mV
	I_O=1mA to 40mA			19	85	
Output noise voltage	f=10Hz-100Hz	25°C		150		μV
Dropout voltage		25°C		1.7		V
Bias current		25°C			6.5	mA
		125°C			6	
Bias current change	V_I=-22V to -33V	0 to 125 °C			1.5	
	I_O=1mA to 40mA				0.1	

*Pulse testing techniques are used to maintain the junction temperature as close to the ambient temperature as possible. Thermal effects must be taken into account separately. All characteristics are measured with a 0.33μF capacitor across the input and a 0.1μF capacitor across the output.

**This specification applies only for dc power dissipation permitted by absolute maximum ratings.

SOP-8(SOIC-8) Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MIN	MAX	MIN	MAX
A	1.350	1.750	0.053	0.069
A1	0.100	0.250	0.004	0.010
A2	1.350	1.550	0.053	0.061
b	0.330	0.510	0.013	0.020
c	0.170	0.250	0.006	0.010
D	4.700	5.100	0.185	0.200
E	3.800	4.000	0.150	0.157
E1	5.800	6.200	0.228	0.244
e	1.27 BSC		0.050 BSC	
L	0.400	1.270	0.016	0.050
θ	0°	8°	0°	8°

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