Ordering number : ENA2086

SANYO Semiconductors
DATA SHEET

An ON Semiconductor Company

Monolithic Linear IC

LA5797MC — For Variable Capacitance Diodes Charge Pump Step-up Power Supply

Overview

The LA5797MC is a charge pump step-up power supply for Variable capacitance diodes.

Features

- By using charge pump, no coils are necessary.
- Time-base generator (140kHz) incorporated.
- Thermal shutdown circuit incorporated.

Specifications

Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	V_{IN} max		30	V
Allowable power dissipation	Pd max	Mounted on the specified board. *	0.75	W
Operating temperature	Topr		-25 to +90	°C
Storage temperature	Tstg		-40 to +150	°C
Junction temperature	Tjmax		150	°C

* Specified board: 114.3mm × 76.1mm × 1.6mm, glass epoxy board.

Caution 1) Absolute maximum ratings represent the value which cannot be exceeded for any length of time.

Caution 2) Even when the device is used within the range of absolute maximum ratings, as a result of continuous usage under high temperature, high current, high voltage, or drastic temperature change, the reliability of the IC may be degraded. Please contact us for the further details.

Recommended Operating Conditions at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage range	V_{IN}		7.5 to 28	V

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Electrical Characteristics at Ta = 25°C

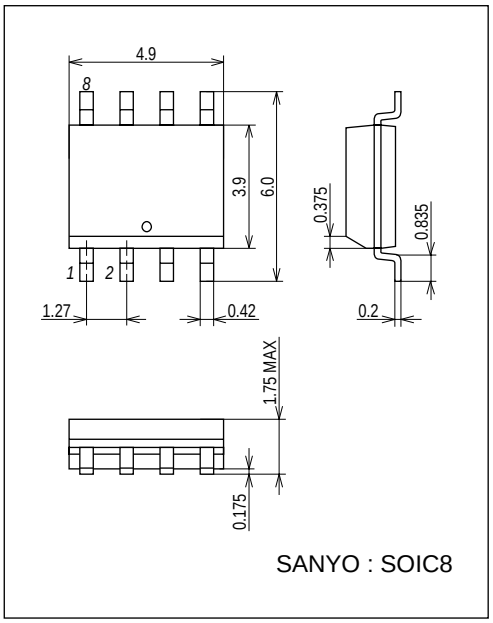
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reference voltage	VFB	V_{IN} = 15V, I_O = 5mA	1.189	1.225	1.261	V
Switching frequency	f	V_{IN} = 7.5V to 28V	112	140	168	kHz
Thermal shutdown operating temperature	TSD	Designed target value. *		165		°C
Thermal shutdown Hysteresis width	ΔTSD	Designed target value. *		15		°C

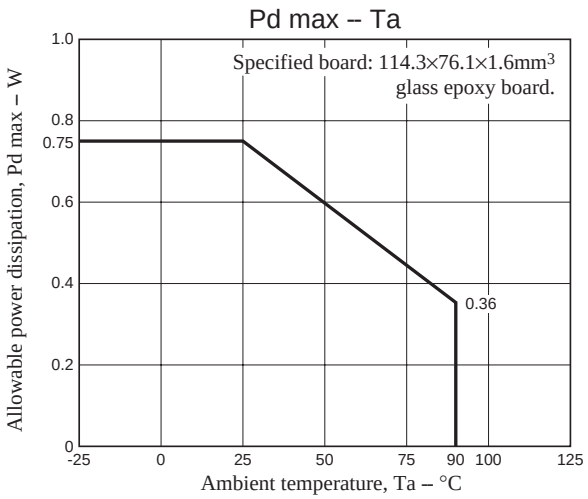
* Design target value: No measurement made.

Package Dimensions

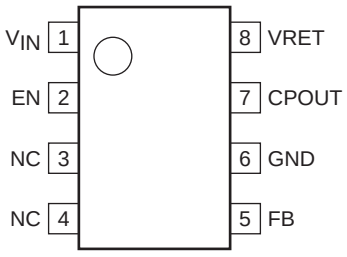
unit : mm (typ)

3424



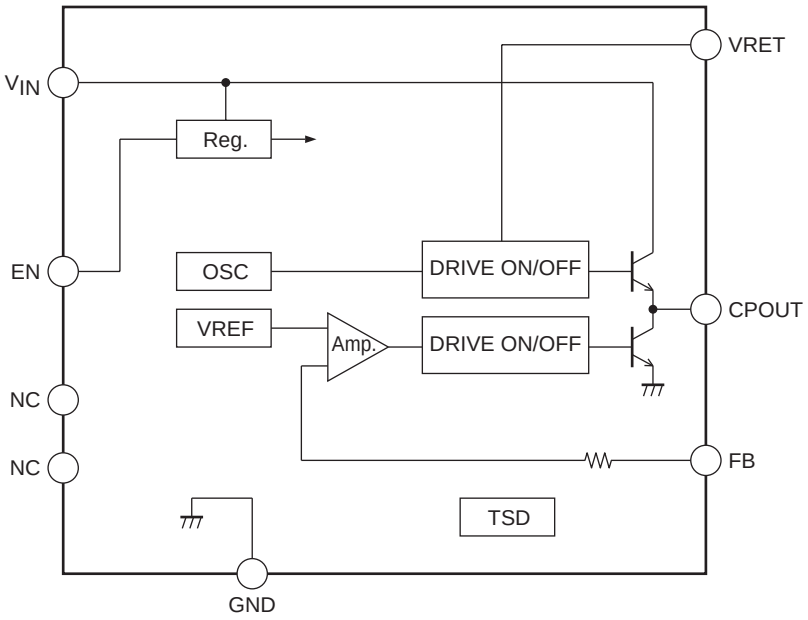


Pin Assignment



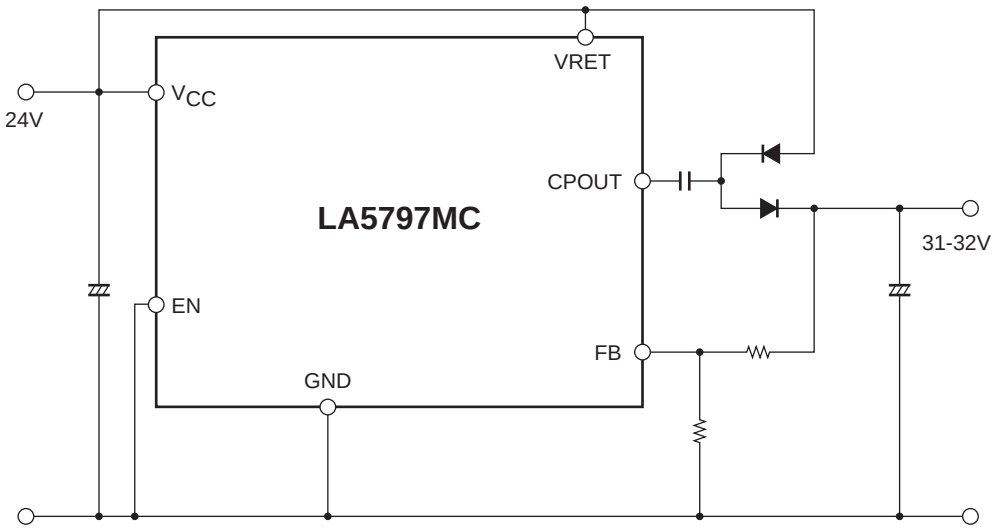
Top view

Block Diagram

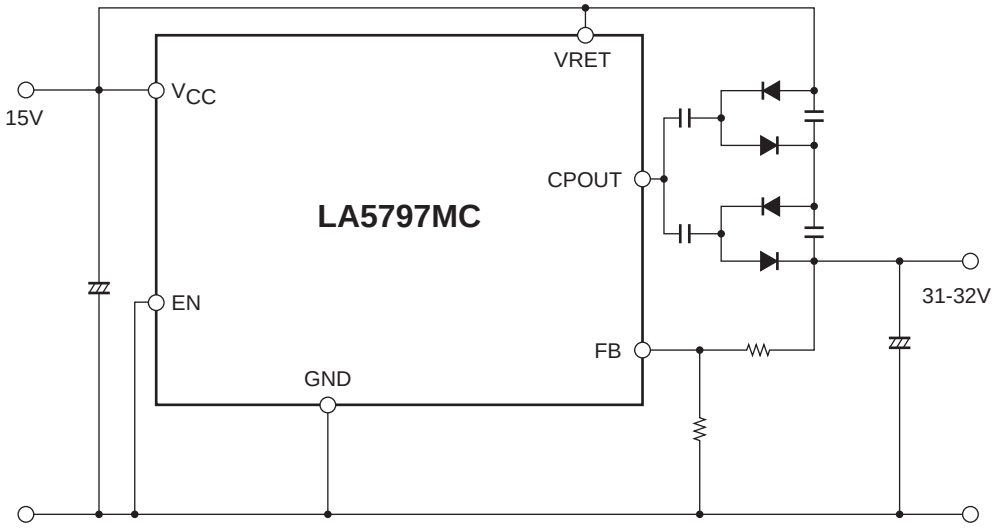


Application Circuit Example

External circuit diagram (V_{CC} = 24V)



External circuit diagram (V_{CC} = 15V)



Note : The IC is made active when the EN pin is pulled down to GND. The charge pump operation is stopped when the EN pin is pulled up to V_{IN}.

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