Ordering number : ENA0852A

SANYO Semiconductors
DATA SHEET

LA5797M — Monolithic Linear IC For Variable Capacitance Diodes Charge Pump Step-up Power Supply

Overview

The LA5797M 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}		30	V
Allowable power dissipation	Pd max	Mounted on the specified board. *	0.91	W
Operating temperature	Topr		-25 to +90	°C
Storage temperature	Tstg		-40 to +150	°C

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

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

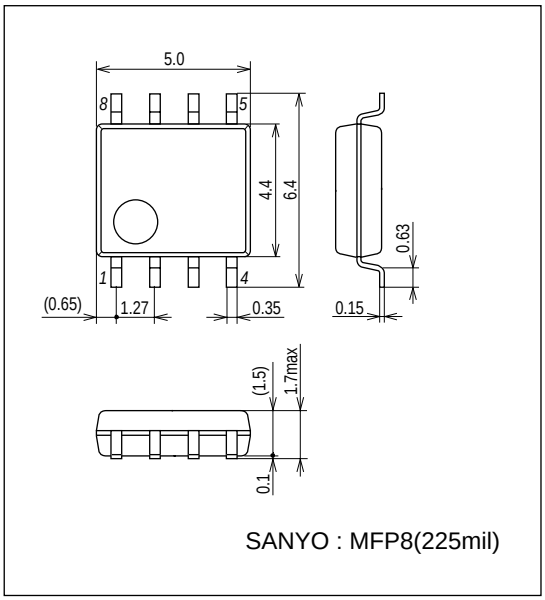
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Reference voltage	VFB	V_{IN} = 15V, I_O = 5mA	1.189	1.225	1.261	V
Switching frequency	f	V_{IN} = 7.5V to 28V	112	140	168	kHz
Thermal shutdown operating temperature	TSD	Designed target value. *		165		°C
Thermal shutdown Hysteresis width	ΔTSD	Designed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

* Design target value : No measurement made.

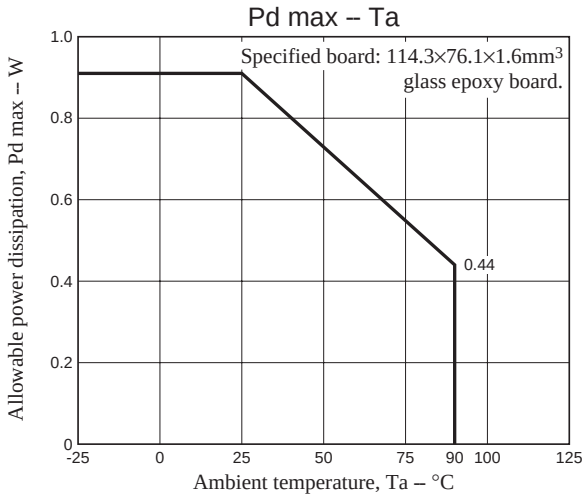
Package Dimensions

unit : mm (typ)

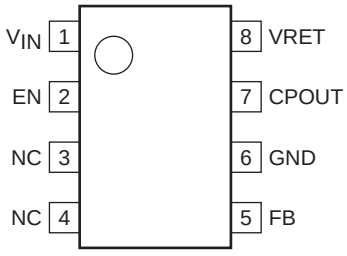
3032D



SANYO : MFP8(225mil)

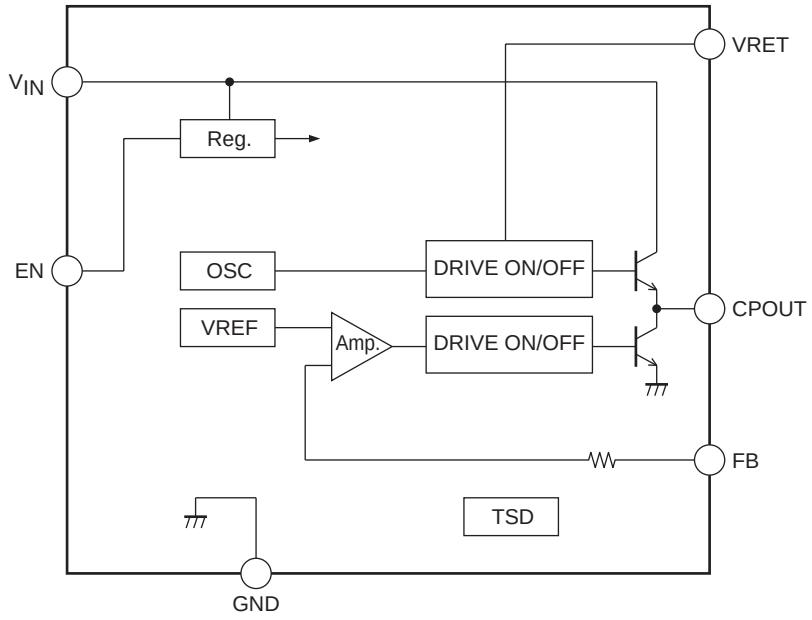


Pin Assignment



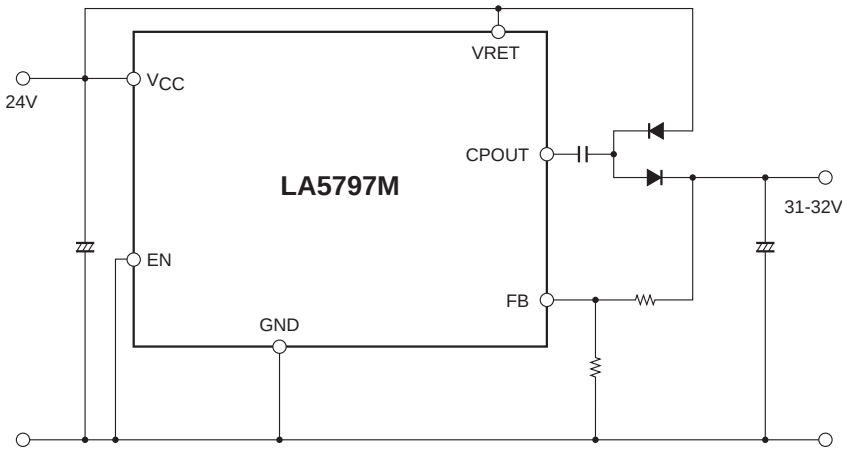
Top view

Block Diagram

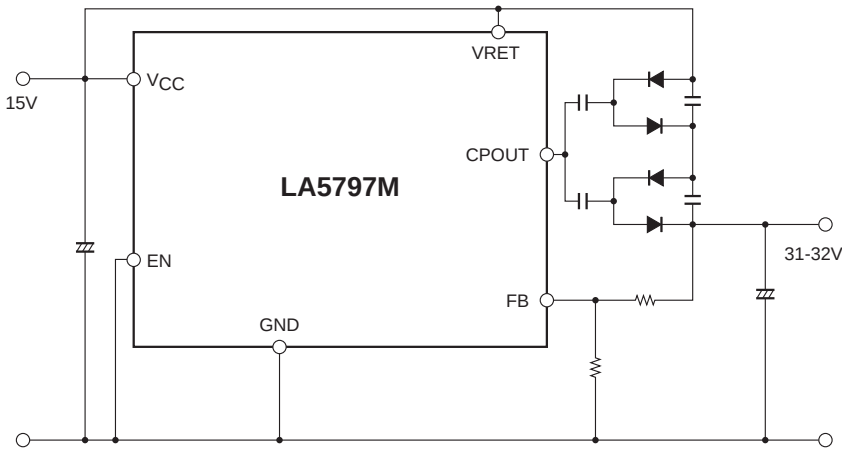


Application Circuit Example

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}.