



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 $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings	Unit
Input voltage	V_{IN}		30	V
Allowable power dissipation	$P_d \text{ max}$	Mounted on the specified board. *	0.91	W
Operating temperature	T_{opr}		-25 to +90	$^\circ\text{C}$
Storage temperature	T_{stg}		-40 to +150	$^\circ\text{C}$

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

Recommended Operating Conditions at $T_a = 25^\circ\text{C}$

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

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SANYO Semiconductor Co., Ltd.

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110-8534 JAPAN

LA5797M

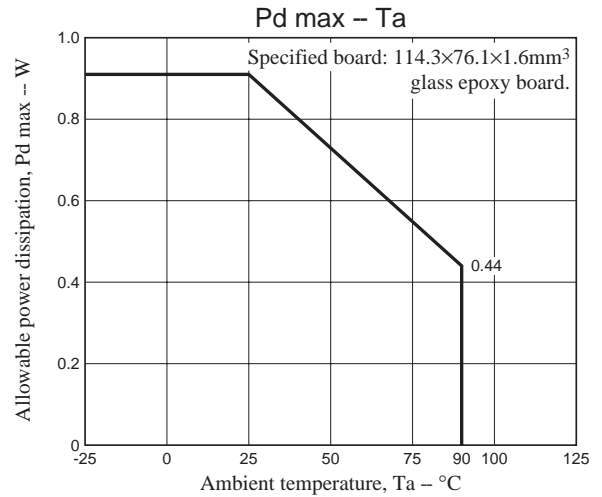
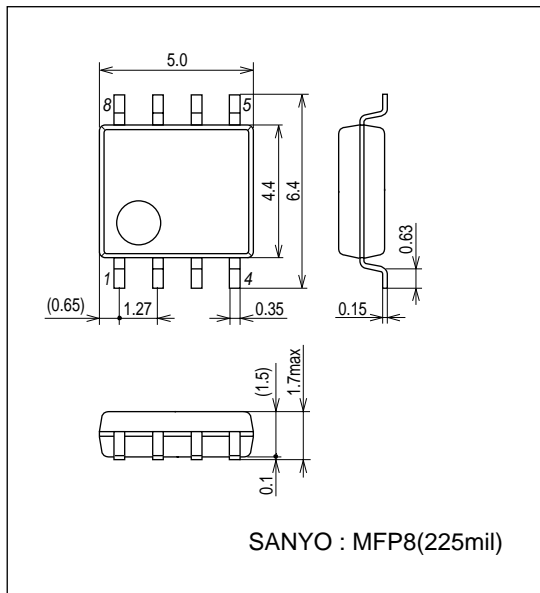
Electrical Characteristics at $T_a = 25^\circ\text{C}$

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

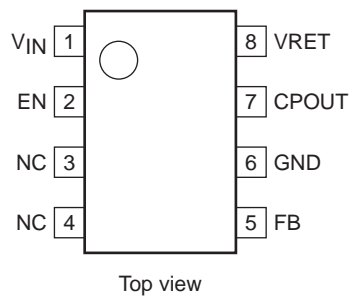
* Design target value : No measurement made.

Package Dimensions

unit : mm (typ)
3032D

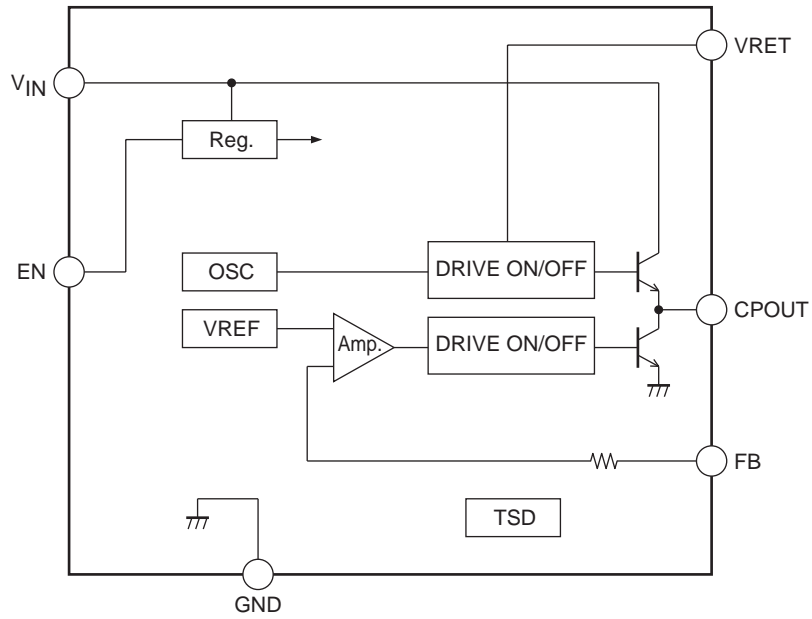


Pin Assignment



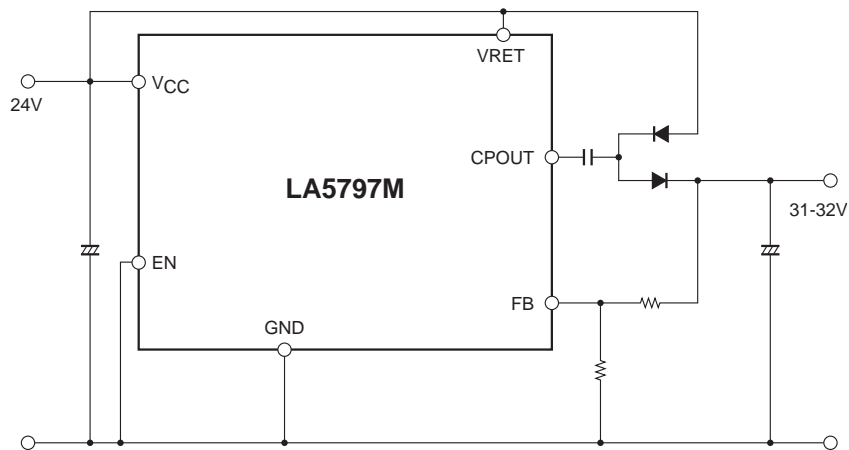
LA5797M

Block Diagram

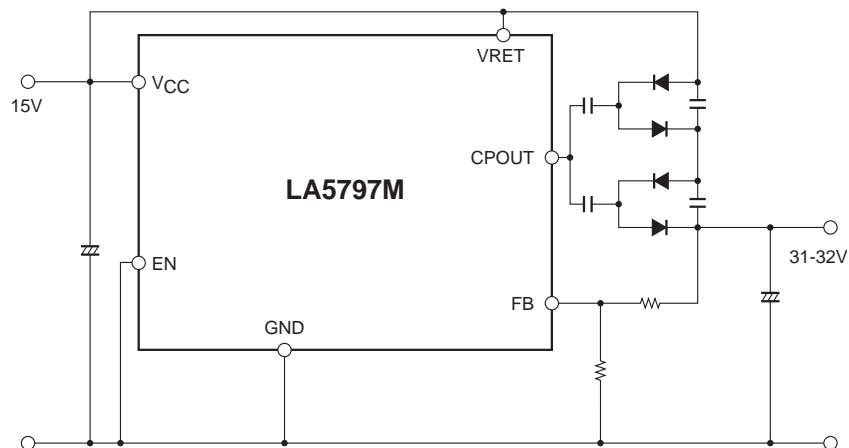


Application Circuit Example

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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