MP6005

High Efficiency Flyback/Forward Controller with Primary-Side or Secondary-Side Regulate

The Future of Analog IC Technology

DESCRIPTION

The MP6005 is a high power, high efficiency flyback and forward controller. It is specifically designed for both low cost, small size isolated solution with primary-side regulate (PSR) flyback application, and high efficiency secondary-side regulate (SSR) active-clamped forward application. It also can be used in SSR flyback topology.

MP6005 senses the third winding waveform on primary side to regulate output in PSR mode, saves the traditional complex opto-isolator circuit, while the continuous-conduction-mode in heavy load provides high efficiency. Diode voltage drop compensation function supports good output regulation even it adopts primary side regulate. MP6005 can also be set as SSR mode, while the SYNC driver provides high efficiency solution for active-clamped forward topology.

The MP6005 also features with 2A GATE driver, frequency dithering, over load protection and over voltage protection.

The MP6005 is available in MSOP10 package.

FEATURES

- Primary-Side Regulated Flyback without Opto-Coupler Feedback
- Synchronous SYNC Driver for High Efficiency Active-clamped Forward Solution
- Wide 8V to 80V Input Voltage Range
- Internal Vcc Supply Compatible with 16V External Power
- 2A GATE and 0.8A SYNC Drivers
- 160mV Switching Current Sense Limit
- Output Diode Compensation in PSR Mode
- 250kHz Fixed Switching Frequency
- Hiccup Protection for OLP, SCP, OVP and Thermal Shutdown
- EMI Reduction with Frequency Dithering
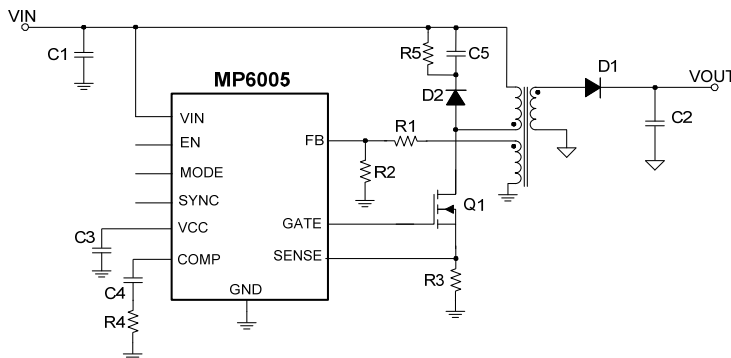- Available in MSOP10 Package

APPLICATIONS

- Security Camera
- Video Telephone
- Wireless AP
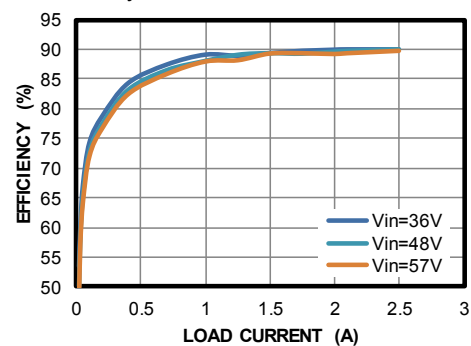- POS System
- Industrial Isolated Power Supply

All MPS parts are lead-free, halogen free, and adhere to the RoHS directive. For MPS green status, please visit MPS website under Quality Assurance.

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TYPICAL APPLICATION

Efficiency
PSR Fly-back, V_{OUT}=12V

ORDERING INFORMATION

Part Number*	Package	Top Marking
MP6005GK	MSOP10	*See Blew*

* For Tape & Reel, add suffix –Z (e.g. MP6005GK–Z)

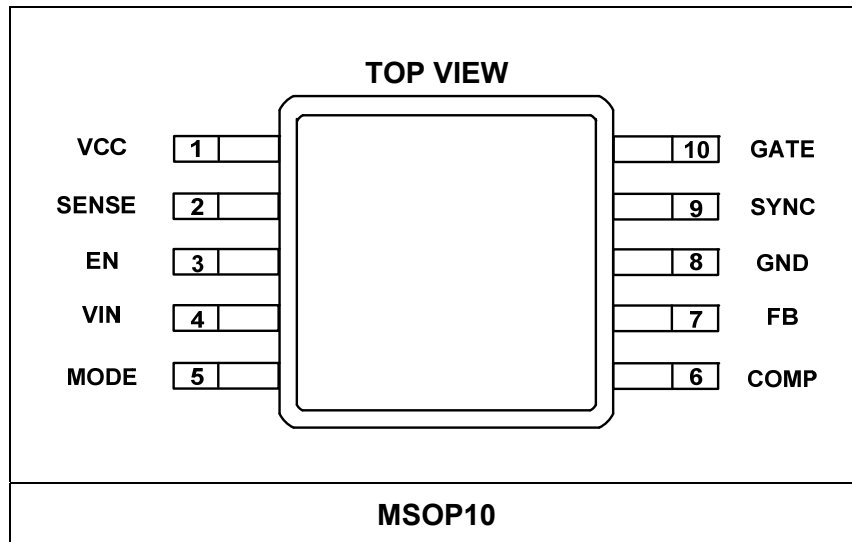# TOP MARKING

YWLLL
M6005

Y: Year code
W: Week code
LLL: Lot number
M6005: First five digits of the part number

PACKAGE REFERENCE

TOP VIEW

VCC	1		10	GATE
SENSE	2		9	SYNC
EN	3		8	GND
VIN	4		7	FB
MODE	5		6	COMP

MSOP10

Mouser Electronics

Authorized Distributor

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[Monolithic Power Systems (MPS)](#):
  [MP6005GK-Z](#)