# MPQ86960

## 50A, Monolithic Half-Bridge Intelli-Phase™ Solution in LGA-38 (5mmx6mm) Package, AEC-Q100

## DESCRIPTION

The MPQ86960 is a monolithic half-bridge with built-in internal power MOSFETs and gate drivers. It can achieve up to 50A of continuous output current ($I_{OUT}$) across a wide input voltage ($V_{IN}$) range.

The integrated MOSFETs and drivers achieve high efficiency through an optimized dead time (DT) and reduced parasitic inductance.

This device is compatible with tri-state output controllers. It also includes a general-purpose current sensing and temperature sensing.

The MPQ86960 is ideal for autonomous driving applications where efficiency and compact size are at a premium. It is available in an LGA-38 (5mmx6mm) package.

## FEATURES

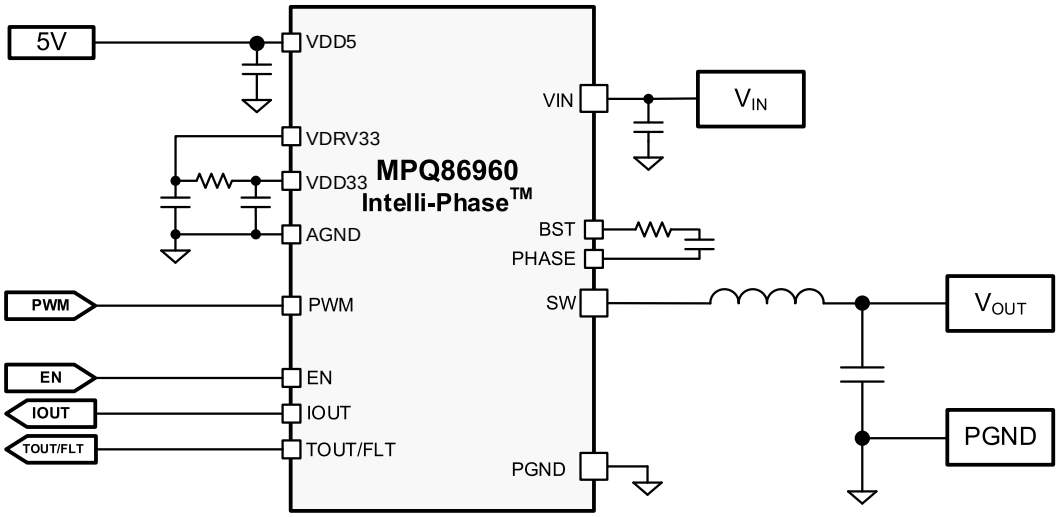
- Wide Operating Input Voltage ($V_{IN}$) Range
- 50A Output Current ($I_{OUT}$)
- Accepts Tri-State PWM Signal
- Built-In Switch for Bootstrap (BST)
- Accu-Sense™ Current Sense
- Temperature Sense
- Current-Limit Protection and Fault Flag
- Over-Temperature Protection (OTP) and Fault Flag
- Catastrophic Protection and Fault Flag
- Used for Multi-Phase Operation
- Available in an LGA-38 (5mmx6mm) Package
- Available in AEC-Q100 Grade 1

## APPLICATIONS

- Autonomous Driving System-on-Chips (SoCs)
- Infotainment Systems

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## TYPICAL APPLICATION





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## ORDERING INFORMATION

| Part Number* | Package | Top Marking | MSL Rating |
|---|---|---|---|
| MPQ86960GMJT-AEC1 | LGA-38 (5mmx6mm) | *See Below* | 3 |

* For Tape & Reel, add suffix -Z (e.g. MPQ86960GMJT-AEC1-Z).

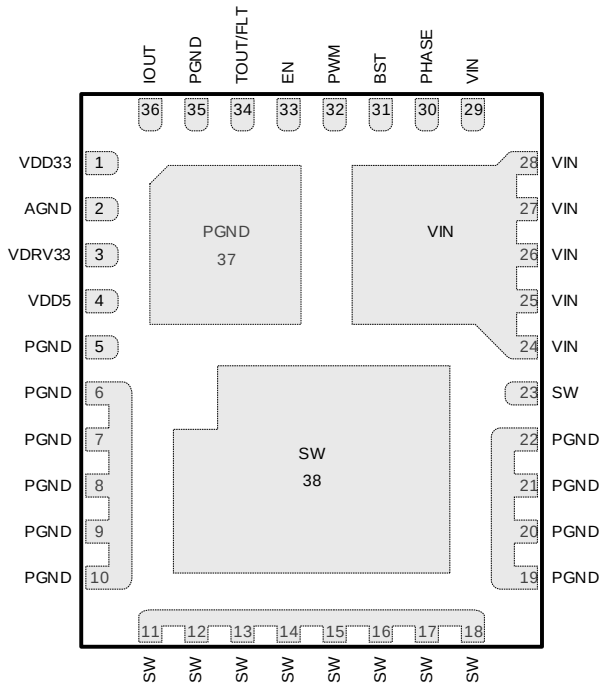
## TOP MARKING

MPSYYWW
MP86960
LLLLLLL
T

MPS: MPS prefix
YY: Year code
WW: Week code
MP86960: Part number
LLLLLLL: Lot number
M: Module
T: Thin

## PACKAGE REFERENCE

**TOP VIEW**




**LGA-38 (5mmx6mm)**

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