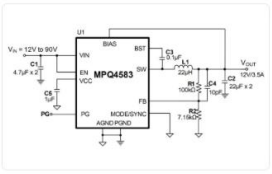
MPQ4583-AEC1

MPQ4583-AEC1

90V, 3.5A, 9μA I_Q, Synchronous Step-Down DC/DC Converter, AEC-Q100 Qualified | Active | Datasheet



Description

The MPQ4583-AEC1 is a 9μA quiescent current (I_Q), synchronous step-down converter with integrated high-side and low-side MOSFETs (HS-FET and LS-FET, respectively). It supports up to 3.5A of output current (I_{OUT}) with internal compensation.

High power conversion efficiency across a wide load range is achieved through power-save mode (PSM) and a low I_Q under light-load conditions to reduce the switching and gate driver losses.

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Features & Benefits

- 4.5V to 90V Input Voltage (V_{IN}) Range
- 9μA Quiescent Current (I_Q)
- Fixed 400kHz Switching Frequency (f_{SW}) with Frequency Dithering
- Selectable Power-Save Mode (PSM) or Forced Continuous Conduction Mode (FCCM)
- 0.8V to 35V Output Voltage (V_{OUT}) Range
- V_{OUT} Discharge Function during Output Over-Voltage Protection (OVP) and Enable (EN) Shutdown
- 170mΩ/80mΩ Internal MOSFETs
- Power Good (PG) Indication
- VCC Voltage (V_{CC}) Power from BIAS if the BIAS Voltage (V_{BIAS}) > 4.25V for High Efficiency

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Active Part Numbers:

MPQ4583GQVE-AEC1-Z MPQ4583GQVE-AEC1-P MPQ4583GQVE-5-AEC1-Z MPQ4583GQVE-5-AEC1-P MPQ4583GQVE-12-AEC1-Z MPQ4583GQVE-12-AEC1-P

Meaning of P & Z

Related Products



EVQ4583-QVE-00A 90V, 3.5A, 9μA I_Q, Synchronous Step-Down DC/DC Converter Evaluation Board

The EVQ4583-QVE-00A evaluation board is designed to demonstrate the capabilities of the MPQ4583-AEC1, a 9μA quiescent current (I_Q), synchronous step-down converter with integrated high-side and low-side MOSFETs (HS-FET and LS-FET, respectively). It supports up to 3.5A of output current (I_{OUT}) with internal compensation.

$25.00
+ tax

Learn more

MPQ4583-AEC1 Resources

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HEAD UNITS (HIGH-END) — APPLICATION — Automotive head unit designs have evolved from the traditional hardware...

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MPQ4583GQVE-AEC1-Z
MPQ4583GQVE-AEC1-P
Package: QFN-19 (3x5)
5,000 per Reel

Buy Now Price

Quantity	Unit Price
1	$3.55
10	$3.17
100	$2.66
250	$2.54
500	$2.22
1K	$1.69

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Lead Time For Additional Quantities
Additional quantities estimated to ship by 04 Aug, 2026

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MPQ4583GQVE-12-AEC1-P

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