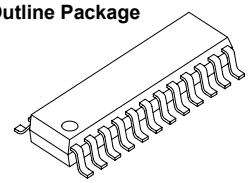
16-channel Constant Current LED Sink Driver

Features

- 16 constant-current output channels
- Constant output current invariant to load voltage change:
  Constant output current range:
  3 - 45 mA @ V_{DD}= 5V;
  3 - 30 mA @ V_{DD}= 3.3V
- Excellent output current accuracy:
  between channels: ±3% (max.), and
  between ICs: ±6% (max.)
- Output current adjusted through an external resistor
- Fast response of output current, $\overline{OE}$ (min.): 250 ns @V_{DD}= 5.0V
- Staggered output delay
- 25MHz clock frequency
- Schmitt trigger input
- 3.3V/ 5V supply voltage
- "Pb-free & Green" Package

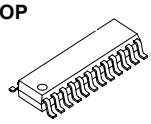
Small Outline Package



GD: SOP24-300-1.27

GF: SOP24-300-1.00

Shrink SOP



GP: SSOP24-150-0.64

Current Accuracy		Conditions
Between Channels	Between ICs	
< ±3%	< ±6%	I_{OUT}= 3 mA ~ 30 mA @V_{DS}= 0.8V ; V_{DD}= 3.3V I_{OUT}= 3 mA ~ 45 mA @V_{DS}= 0.8V ; V_{DD}= 5.0V

Product Description

With PrecisionDrive™ technology, MBI5025 is designed for LED displays which require to operate at low current and to match the luminous intensity of each channel. It provides supply voltage and accepts CMOS logic input at 3.3V and 5.0V to meet the trend of low power consumption. MBI5025 contains a serial buffer and data latches which convert serial input data into parallel output format. At MBI5025 output stage, sixteen regulated current ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of V_F variations.

MBI5025 provides users with great flexibility and device performance while using MBI5025 in their system design for LED display applications, e.g. LED panels. It accepts an input voltage range from 3V to 5.5V and maintains a constant current up from 3 mA to 45 mA determined by an external resistor, R_{ext}, which gives users flexibility in controlling the light intensity of LEDs. MBI5025 guarantees to endure maximum 17V at the output port. The high clock frequency, 25 MHz, also satisfies the system requirements of high volume data transmission.

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