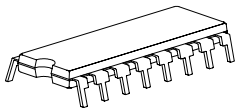
8-bit Constant Current LED Sink Driver

Features

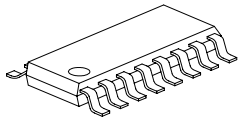
- 8 constant-current output channels
- Constant output current invariant to load voltage change
- Excellent output current accuracy:
  between channels: < ±3% (max.), and
  between ICs: < ±6% (max.)
- Output current adjusted through an external resistor
- Constant output current range: 5 -120 mA
- Fast response of output current,
  $\overline{OE}$ (min.): 200 ns @I_{out} < 60mA
  $\overline{OE}$ (min.): 400 ns @I_{out} = 60~100mA
- 25MHz clock frequency
- Schmitt trigger input
- 3.3V~ 5V supply voltage
- Optional for “Pb-free & Green” Package

Dual In-Line Package



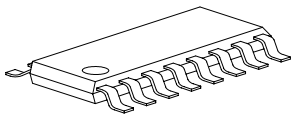
P-DIP16-300-2.54 Weight : 1.02g

Small Outline Package



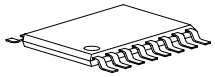
SOP16-150-1.27 Weight : 0.13g

Wide-body SOP



SOP16-300-1.27 Weight : 0.37g

Shrink SOP



SSOP16-150-0.64 Weight : 0.07g

Current Accuracy		Conditions
Between Channels	Between ICs	
< ±3%	< ±6%	I_{OUT} = 10 ~ 100 mA, V_{DS} = 0.8V, V_{DD}= 5.0V

Product Description

MBI5168 is designed for LED display applications. As an enhancement of its predecessor, MBI5001, MBI5168 exploits PrecisionDrive™ technology to enhance its output characteristics. MBI5168 contains a serial buffer and data latches, which convert serial input data into parallel output format. At MBI5168 output stage, eight regulated current ports are designed to provide uniform and constant current sinks for driving LEDs within a large range of Vf variations.

MBI5168 provides users with great flexibility and device performance while using MBI5168 in their system design for LED display applications, e.g. LED panels. Users may adjust the output current from 5 mA to 120 mA through an external resistor R_{ext}, which gives users flexibility in controlling the light intensity of LEDs. MBI5168 guarantees to endure maximum 17V at the output ports. The high clock frequency up to 25 MHz also satisfies the system requirements of high volume data transmission.

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