

Triple 150mA Linear LED Controller

Advance Product Information - Dec 1, 2014

E522.80/81/82/83



Features

- Three independent Linear Current Drivers (3*150mA)
- Parallel Output Operation for up to 450mA
- Low Power Standby / Sleep Mode
- Thermal Management Option per Channel
- Operating Input Voltage Range 5V to 25V, max. 40V
- External Reference Voltage / Derating Supported
- PWM Dimming (All channels or separate Channels)
- Diagnostic Functionalities (LED Driver Open/Short, IR Config Open/Short, Junction Temperature, Supply Voltage)
- Diagnostic Bus to link ICs
- Selectable "Failure Feedback Mode" or "Single Lamp Behaviour"
- AEC-Q100 Qualification

Applications

- Automotive LED Lighting, Rear Lighting
- Turn Indicator Driver
- Medium Current Interior Lighting
- Industrial LED Applications or RGB Drivers

Ordering Information

Ordering-No.:	Temp _{Junc} Range	Package
E52280A97D	-40°C to +150°C	SOIC16N-EP
E52281A97D	-40°C to +150°C	SOIC16N-EP
E52282A97D	-40°C to +150°C	SOIC16N-EP
E52283A97D	-40°C to +150°C	SOIC16N-EP

General Description

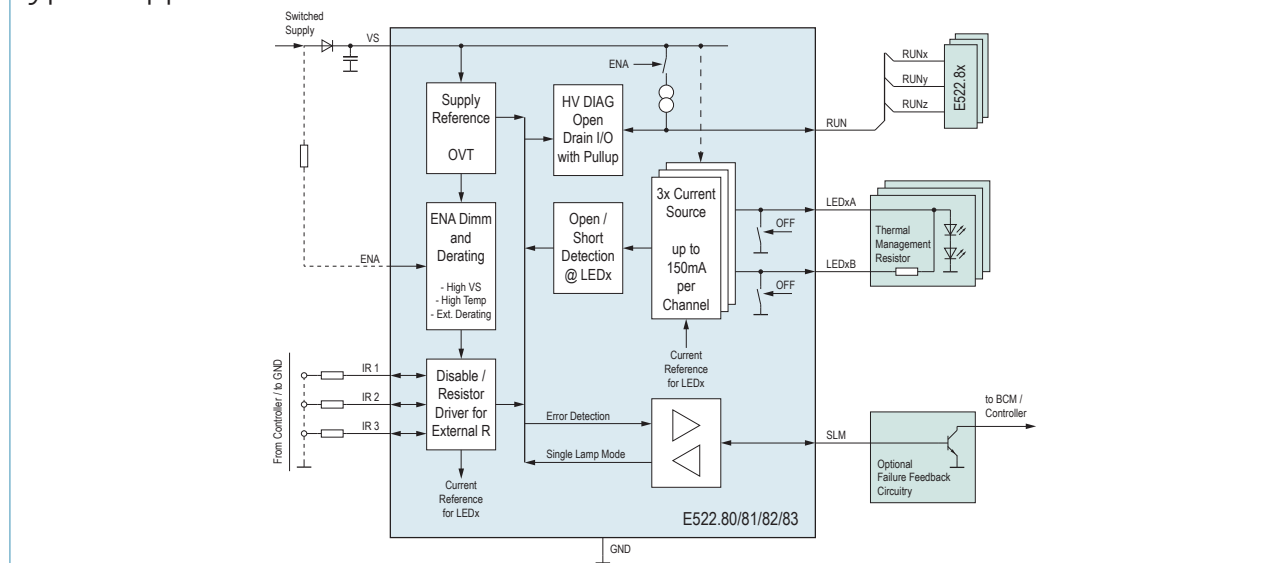
E522.80/81/82/83 family devices provide independent triple linear current controller for LED driving (standalone driver or LED cluster). Diagnostic features are provided to meet automotive requirements, together with a communication interface "RUN" to link ICs to generate more than three channels, supporting individual current configuration and independent digital PWM dimming per channel (e.g. for RGB).

Two external configurable modes of operation allow - either "Failure Feedback Mode" FFM (operating channels in case of errors, with error signalization) - or in "Single Lamp Mode" (turning all linked E522.8x's channels "off" in case of errors)

An intelligent power management system is provided using an external shunt resistor to share power distribution between IC package and external heat sink. Hotspot generation can be avoided by flexible heat spreading on the printed board. Internal derating for reference voltage and over-temperature shutdown for extreme temperatures >180°C protect E522.8x in case of abnormal operation conditions.

A high voltage capable input ENA can be used to either digitally enable or disable E522.8x. In addition, this input may be used as analog reference voltage input to realize e.g. thermal derating.

Typical Application Circuit



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