IP Data Sheet

50mA 1.8V Voltage Regulator with Power-Good Signal

The TS_VR_1V8_X8 is a 1.8V linear voltage regulator (LDO) designed to supply the digital core of an ASIC. The LDO operates with an input voltage of 3.3V (supply voltage) and provides a regulated output voltage of 1.8V. It can provide a maximum DC load current of up to 50mA. The LDO features a power good output (READY signal) generated from an internal comparator. It requires a 2.2µF off-chip capacitor to be connected to the output pin.

The IP includes reference and biasing circuits.

A functional block diagram of LDO components is shown in Fig. 1.

Technology: XFAB XT018 - 0.18µm HV SOI CMOS

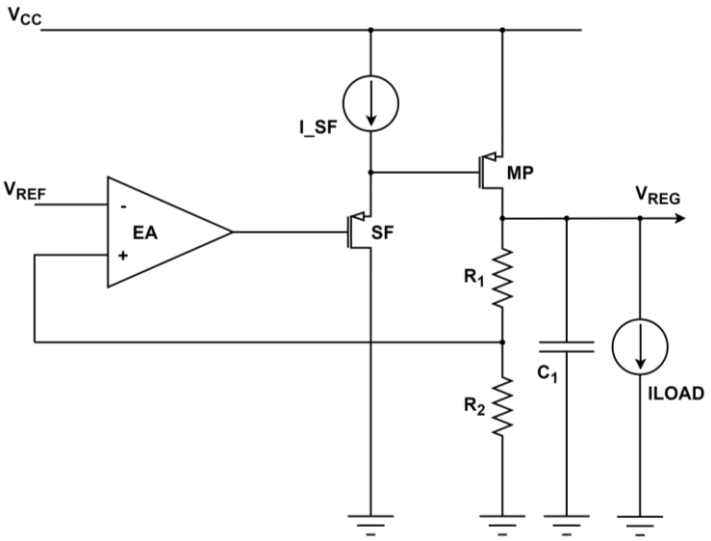

Fig. 1: 1V8 LDO Block Diagram

Sales & Marketing Contact

TES Electronic Solutions

sales@tes-dst.com

OPERATING CONDITIONS

Parameters	Values
Junction temperature range	-40°C to 150°C
Supply voltage VCC	3.2V to 3.4V
Reference voltage VREF	1.25V
Load current	ILOAD: 50mA max

Table 1: 1V8 LDO Operating Conditions

SPECIFICATION

Parameters	Values
Regulated DC output voltage	1.8V typical
Average current consumption with unloaded output	420µA max
Power-off leakage current	380nA max

Table 2: 1V8 LDO Specification

LAYOUT VIEW

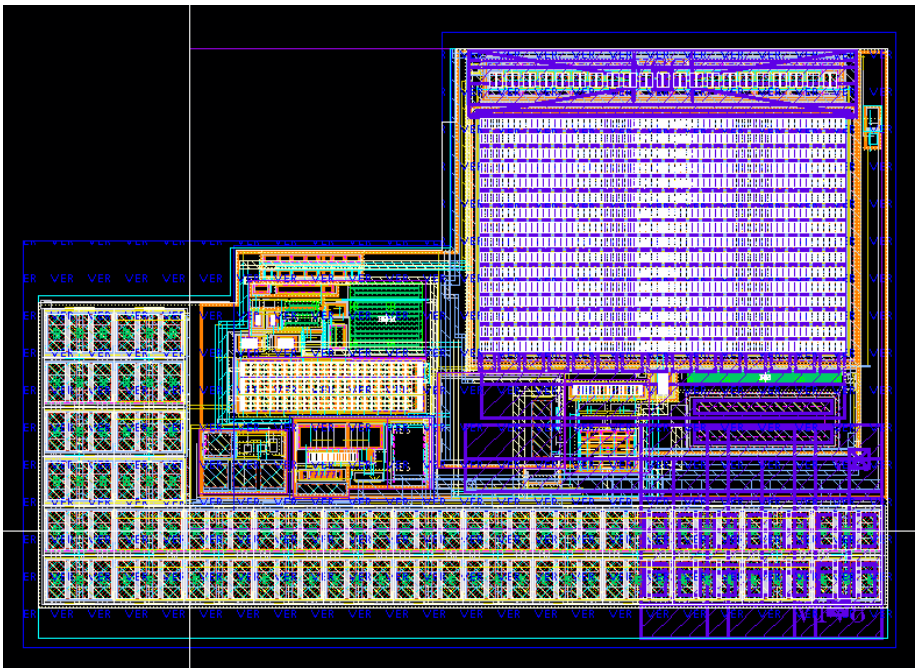

Fig. 2: 1V8 LDO Layout View