

3.3 V OUTPUT, 0.5 A LVR

(SC1020-0)

DATA SHEET

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PRODUCT DESCRIPTION:

The SC1020-0 3.3 V output, 500 mA full load current LVR provides a fixed output voltage of 3.3 V for a wide range of input operating voltage from 3.7 V to 6 V. The LVR is stable with an external capacitor not lower than 4.7uF of ESR 0.1 ohm to 10 ohm. SC1020-0 is mainly intended for integration with digital, analog and RF chips.

FEATURES:

- **Line voltage: 3.7 V to 6 V**
- **Fixed output voltage 3.3 V**
- **500 mA maximum load current**
- **Low quiescent current of <1 mA**
- **Over temperature shut down mechanism**
- **Short circuit fold-back current limiting feature**
- **SCL 0.18μ CMOS technology**

APPLICATION:

- Battery operated systems
- Integrated solutions for analog, RF and digital chips

DEVICE SUMMARY:

Reference	Package	pins	Lead Finish	Description
SC1020-0	COB	4	Gold (ENIG)	Engineering Model

Table 1: Device Summary

BLOCK DIAGRAM:

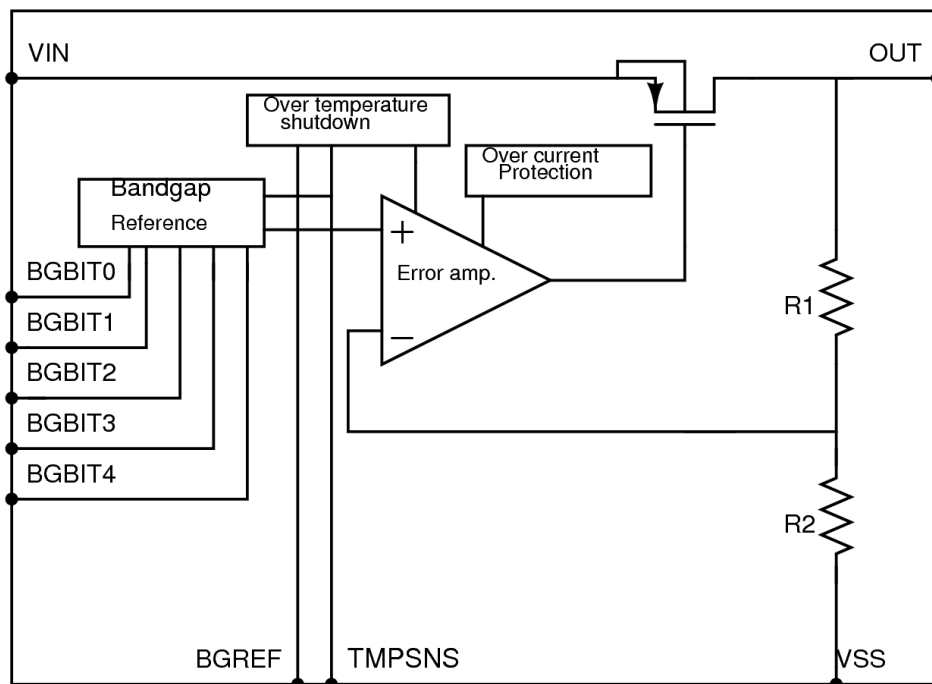


Figure-1: Device Pin Diagram



PAD CONFIGURATION:

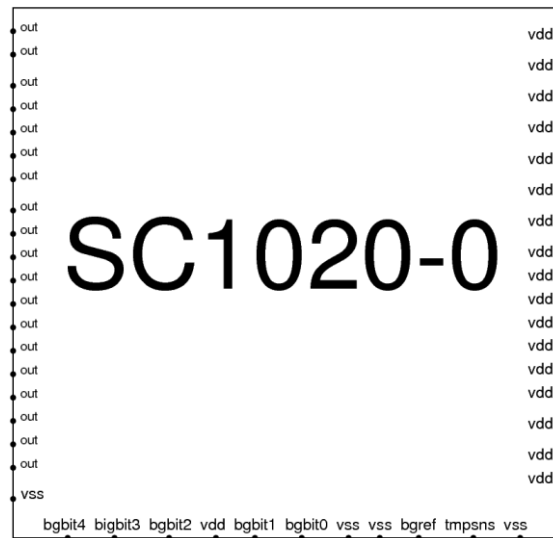


Figure-2: Device Pad Diagram

PIN DESCRIPTION:

Pin Name	Function	Remarks
bgbit4	Digital trimming bit, MSB	Digital trimming bits for varying bandgap reference output voltage. Voltages of vss or vdd to be applied.
bgbit3	Digital trimming bit	
bgbit2	Digital trimming bit	
bgbit1	Digital trimming bit	
bgbit0	Digital trimming bit, LSB	
vss	0V LVR ground	
vdd	3.4 V to 6 V LVR input	
out	3.3 V LVR output	Ceramic capacitor of 10uF with ESR 0.1 ohm to 10 ohm to be placed at the output.
bgref	Bandgap reference output	
tmpsns	Temperature sensor output	

Table 2: Pin Details



DC ELECTRICAL SPECIFICATIONS

Test condition: All Specifications: VIN =3.7V-6V, CIN = 1uF, COUT = 10µF, BGBIT = 11111 (MSB to LSB), unless otherwise specified. Full Load (FL) = 0.5A

Table with 5 columns: PARAMETER, TEST CONDITIONS, SC1020-0 (MIN, MAX), and UNITS. Rows include Nominal Voltage, Initial Accuracy, Load Regulation, Line Regulation, Dropout Voltage, Fold-back Current (IIN), Shutdown Temp. (simulated value), and Quiescent Current.

Table 3: DC Electrical Specification

Note: All parameters are calculated by using VNOM at VIN = 3.7V. Device will go in to Short circuit fold-back at twice of FL, i.e., 1A.

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