

## Ripple Filter IC AN1281SSM

### Overview

The AN1281SSM is a ripple filter IC that rejects the ripple component superimposed on the regulator output. Use for the VCO bias of cellular phones improves C/N and S/N.

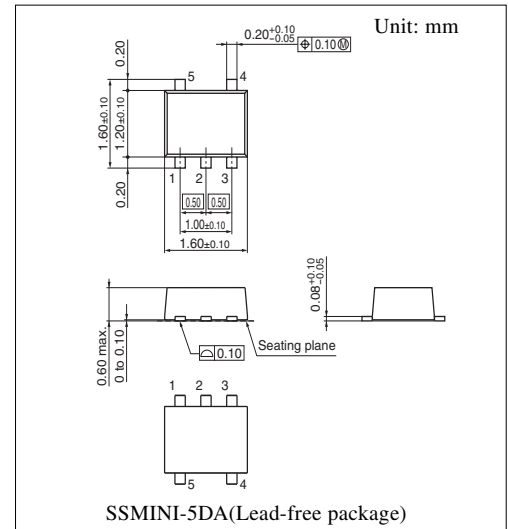
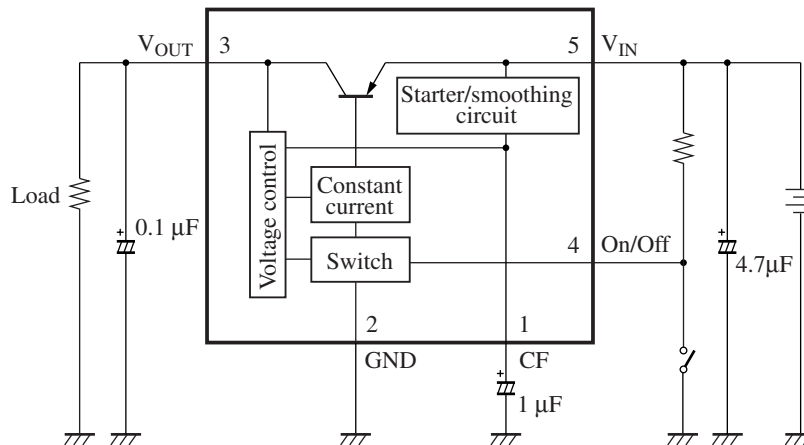
### Features

- Small I/O voltage difference
- The mounting area is reduced by adopting the SSmini-type package

### Applications

- Cellular phones and others

### Block Diagram



¶ The products and specifications are subject to change without any notice. Please ask for the latest product standards to guarantee the satisfaction of your product requirements.

## ■ Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply voltage	$V_{IN}$	4.5	V
Supply current	$I_{CC}$	20	mA
Power dissipation *2	$P_D$	60	mW
Operating ambient temperature *1	$T_{opr}$	-25 to +75	°C
Storage temperature *1	$T_{stg}$	-40 to +125	°C
Output current	$I_O$	-15	mA
Allowable application voltage for on/off pin *3	$V_{ON/OFF}$	$V_{IN}$	V
Allowable maximum capacitance for CF pin	CF	10	μF

Note) 1. Do not apply external currents or voltages to any pins not specifically mentioned.

For circuit currents, '+' denotes current flowing into the IC, and '-' denotes current flowing out of the IC.

2. \*1: Except for the power dissipation, the operating ambient temperature and storage temperature, all ratings are for  $T_a = 25^\circ\text{C}$ .

\*2: The power dissipation shown is the value for  $T_a = 75^\circ\text{C}$ .

\*3: Do not over the supply voltage.

## ■ Recommended Operating Range

Parameter	Symbol	Range	Unit
Supply voltage	$V_{CC}$	2.5 to 4.3	V

## ■ Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Output voltage 1	$V_{O1}$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -1\ \mu\text{A}$	2.62	2.82	—	V
Output voltage 2	$V_{O2}$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -15\text{ mA}$	2.55	2.70	—	V
Consumption current 1	$I_{CC1}$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -1\ \mu\text{A}$	-735	-565	—	μA
Consumption current 2	$I_{CC2}$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -15\text{ mA}$	-670	-515	—	μA
Load regulation	$REG_L$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -1\ \mu\text{A to } -15\text{ mA}$	0	120	220	mV
Consumption current against load change	$I_{REG}$	$V_{IN} = 3.0\text{ V}, I_{OUT} = -1\ \mu\text{A to } -15\text{ mA}$	0	51	110	μA
Ripple rejection ratio 1	$RR_1$	$V_{IN} = 3\text{ V} \pm 0.1\text{ V}, I_{OUT} = -15\text{ mA}$ $f = 1\text{ kHz}$	26.5	29.5	—	dB
Ripple rejection ratio 2	$RR_2$	$V_{IN} = 3\text{ V} \pm 0.1\text{ V}, I_{OUT} = -15\text{ mA}$ $f = 25\text{ kHz}$	30.5	33.5	—	dB
Ripple rejection ratio 3	$RR_3$	$V_{IN} = 3\text{ V} \pm 0.1\text{ V}, I_{OUT} = -15\text{ mA}$ $f = 100\text{ kHz}$	26.5	29.1	—	dB
Consumption current at off	$I_{OFF}$	$V_{IN} = 4.3\text{ V}, \text{On/Off} = 0\text{ V}$	—	—	1	μA