

Panasonic

New

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.

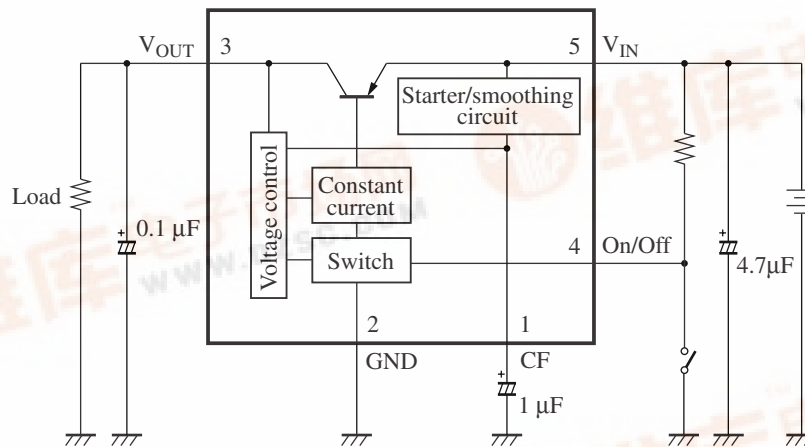
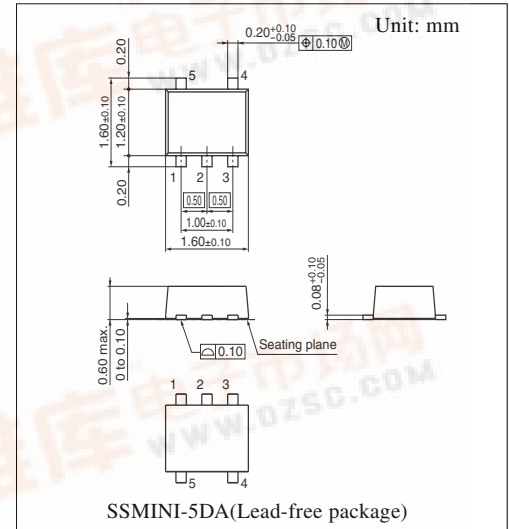
Features

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

Applications

- Cellular phones and others

Block Diagram



■ 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}	$V_{IN} = 3.0\text{ V}$, $I_{OUT} = -1\text{ }\mu\text{A}$	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}	$V_{IN} = 3.0\text{ V}$, $I_{OUT} = -1\text{ }\mu\text{A}$	-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	$V_{IN} = 3.0\text{ V}$, $I_{OUT} = -1\text{ }\mu\text{A}$ to -15 mA	0	120	220	mV
Consumption current against load change	I_{REG}	$V_{IN} = 3.0\text{ V}$, $I_{OUT} = -1\text{ }\mu\text{A}$ to -15 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}	$V_{IN} = 4.3\text{ V}$, On/Off = 0 V	—	—	1	μA