

SOT-23 LDO 低落差稳压 IC

SOT-23

1. V_{SS}
2. V_{out}
3. V_{in}



■ Absolute Maximum Ratings 最大额定值

(T_A=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Input Voltage 输入电压	V _{in}	V _{out} +0.3~V _{out} +7	V
Operating Current 工作电流	I _O	300	mA
Output Voltage 输出电压	V _{out}	1.5、1.8、2.5、2.8、3、3.3、5	V
Power dissipation 耗散功率	P _D	300	mW
Operating Temperature 工作温度	T _A	-40~+85	℃
Storage Temperature 储藏温度	T _{stg}	-55to+150℃	

■ Device Marking 产品字标

FS6206-1.5V=65E9

FS6206-1.8V=65K5

FS6206-2.5V=65T5

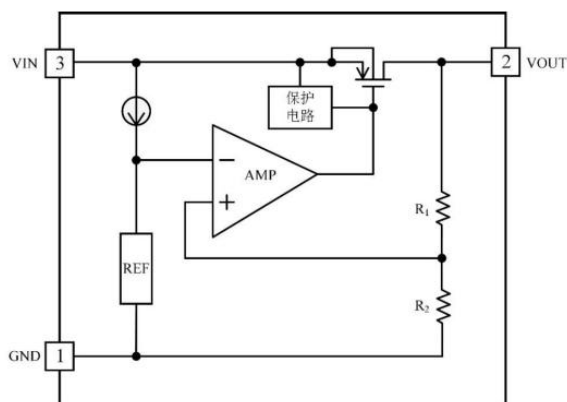
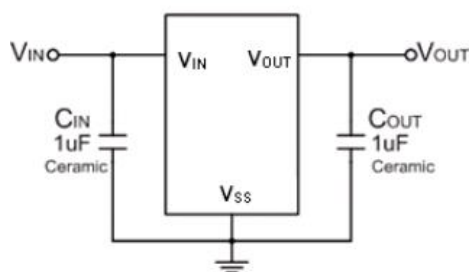
FS6206-2.8V=65X5

FS6206-3V=65Z5

FS6206-3.3V=662K

FS6206-5V=66MX

Circuit&Block 电路与框图



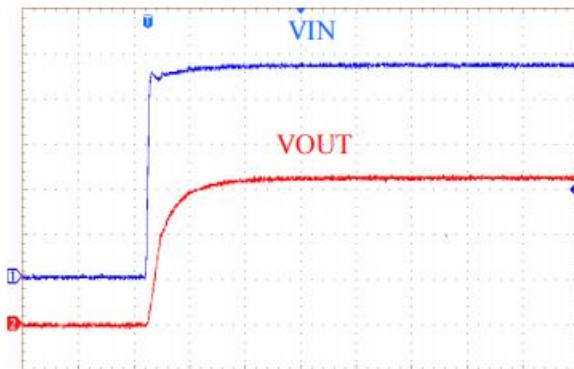
■Electrical Characteristics 电特性

(Ci=1uF Co=1uF TA=25°C unless otherwise noted 如无特殊说明)

Characteristic 特性参数	Symbol 符号	Test Condition 测试条件	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Output Voltage 输出电压	V_O	$V_{in}=V_{out}+1V$ $I_O=10mA$	$V_{out}(S)$ $\times 0.98$	$V_{out}(S)$	$V_{out}(S)$ $\times 1.02$	V
Output Current 输出电流	I_O	$V_I=V_{out}(S)+1V$		100		mA
Dropout Voltage 落差电压	V_D	$I_O=100mA$		160	350	mV
Quiescent Current 静态电流	I_q	$V_I=V_{out}(S)+1V$		3.5	6.5	μA
Load Regulation 负载调整	ΔV_O	$V_I=V_{out}(S)+1V$ $1mA \leq I_O \leq 80mA$		15	30	mV
Line Regulation 线性调整	ΔV_O	$I_O=40mA$ $V_{out}(S)+1V \leq V_I \leq 6V$		0.05	0.2	%mV
Input Voltage 输入电压	V_I		$V_{out}+0.3$		$V_{out}+6$	V
Output Noise Voltage 噪声电压	V_N	$10Hz \leq f \leq 100kHz$		30		μV
Ripple Rejection 纹波抑制	RR	$V_I=V_{out}(S)+1V$ $f=1KHz, I_O=10mA$		50		dB

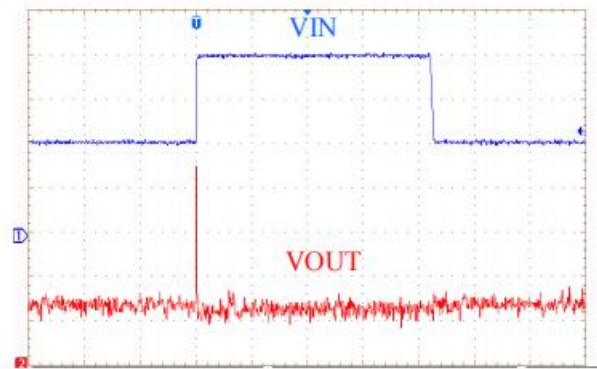
■ Typical Characteristic Curve 典型特性曲线

Power Up Response



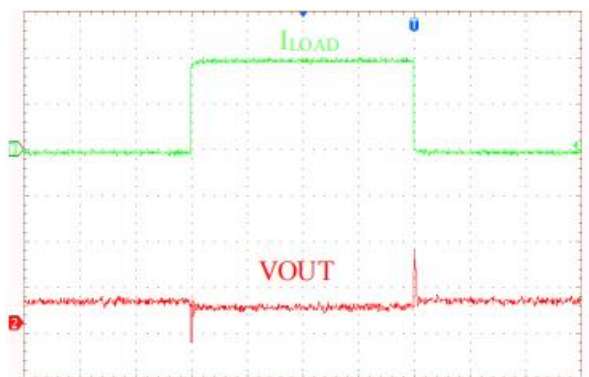
$V_{IN}=0V-5V$, $C_{IN}=1\mu F$, $C_{OUT}=1\mu F$, $I_{LOAD}=20mA$
CH1: V_{IN} (1V/DIV), CH2: V_{OUT} (1V/DIV)
Time: 40us/DIV

Line Transient Response



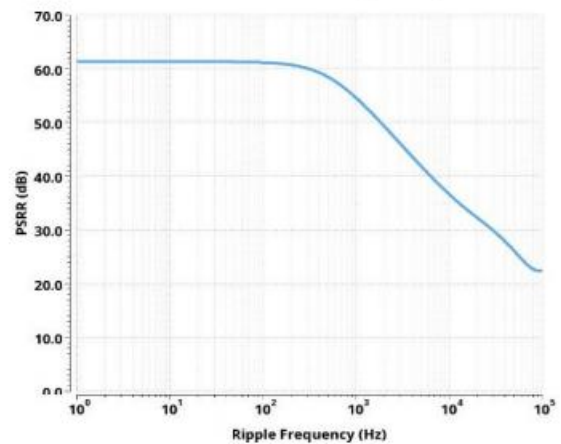
$V_{IN}=4V-6V$, $C_{IN}=1\mu F$, $C_{OUT}=1\mu F$, $I_{LOAD}=20mA$
CH1: V_{IN} (1V/DIV), CH2: V_{OUT} (20mV/DIV)
Time: 2ms/DIV

Load Transient Response



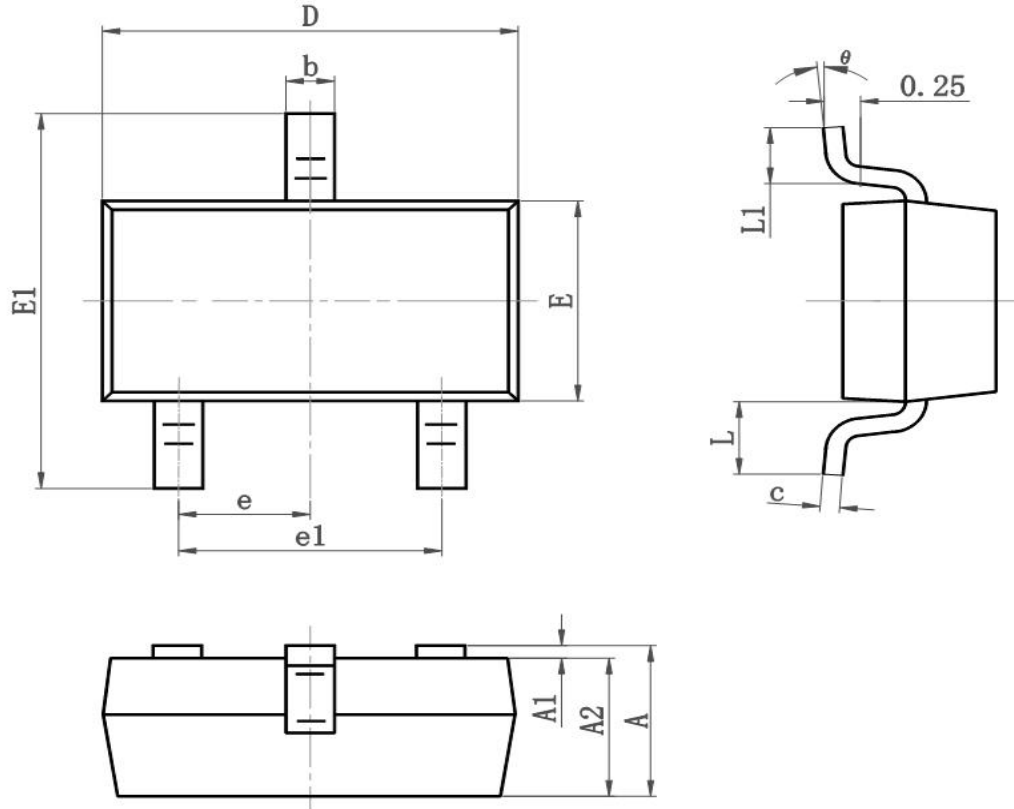
$V_{IN}=4.3V$, $C_{IN}=1\mu F$, $C_{OUT}=1\mu F$, $I_{LOAD}=1m-100mA$
CH2: V_{OUT} (100mV/DIV), CH3: I_{LOAD} (50mA/DIV)
Time: 2ms/DIV

PSRR vs. Frequency



$V_{IN}=4.3V+1Vp-p$ AC, $C_{OUT}=1\mu F$, $I_{LOAD}=10mA$

■ SOT-23 Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°