



安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

FS78L05

SOT-89 Three Terminal Regulator 三端稳压 IC

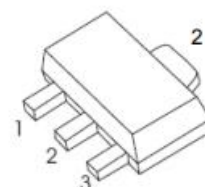
■Features 特点

Pin 脚位: 1.Output 输出 2.Ground 地 3.Input 输入

Output Voltage 输出电压: 5V

Output Current 输出电流: 0.1A

Power dissipation 耗散功率: 0.6W



■Absolute Maximum Ratings 最大额定值

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

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Input Voltage 输入电压	V _i	30	V
Operating Current 工作电流	I _o	100	mA
Power dissipation 耗散功率	P _D	600	mW
Thermal Resistance Junction-Ambient 热阻	R _{θJA}	208	°C/W
Solder Temperature 焊接温度/时间	T _d	260	°C
Solder Temperature/Time 焊接时间	T _d	10	S
Operating Ambient Temperature 工作温度	T _A	-40~+125	°C
Junction and Storage Temperature 结温和储藏温度	T _J , T _{stg}	-55to+150°C	

■Device Marking 产品字标

FS78L05=78L05



■Electrical Characteristics 电特性

($V_I=10V$ $I_O=40mA$ $C_i=0.33\mu F$ $C_o=0.1\mu F$ $T_A=25^\circ C$ 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	$V_I=10V$ $I_O=40mA$	4.8	5	5.2	V
Output Voltage 输出电压	V_O	$7V \leq V_I \leq 20V$ $1mA \leq I_O \leq 40mA$	4.75		5.25	V
Output Voltage 输出电压	V_O	$7V \leq V_I \leq 20V$ $1mA \leq I_O \leq 70mA$	4.75		5.25	V
Output Current 输出电流	I_O	$V_I=10V$		100		mA
Dropout Voltage 落差电压	V_D	$I_O=40mA$		1.7		V
Quiescent Current 静态电流	I_q	$V_I=10V$ $I_O=0$		3.8	6	mA
Quiescent Current Change 静态电流变化	ΔI_q	$8V \leq V_I \leq 20V$			1.5	mA
Quiescent Current Change 静态电流变化	ΔI_q	$1mA \leq I_O \leq 40mA$			0.1	mA
Line Regulation 线性调整	ΔV_O	$I_O=40mA$ $7V \leq V_I \leq 20V$		32	150	mV
Line Regulation 线性调整	ΔV_O	$I_O=40mA$ $8V \leq V_I \leq 20V$		20	100	mV
Load Regulation 负载调整	ΔV_O	$1mA \leq I_O \leq 100mA$ $V_I=10V$		15	60	mV
Load Regulation 负载调整	ΔV_O	$1mA \leq I_O \leq 40mA$ $V_I=10V$		8	30	mV
Output Noise Voltage 噪声电压	V_N	$10Hz \leq f \leq 100kHz$		42		μV
Ripple Rejection 纹波抑制	RR	$8V \leq V_I \leq 20V$ $f=120Hz$	41	49		dB

■ Typical Characteristic Curve 典型特性曲线

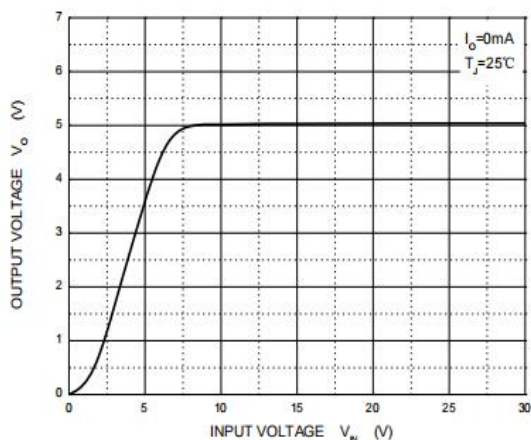


Figure 1: Transfer Characteristics

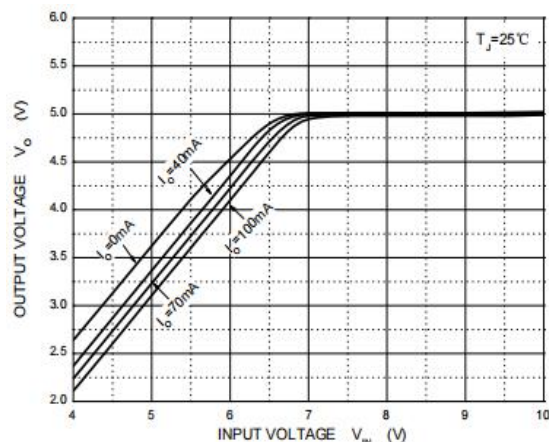


Figure 2: Dropout Characteristics

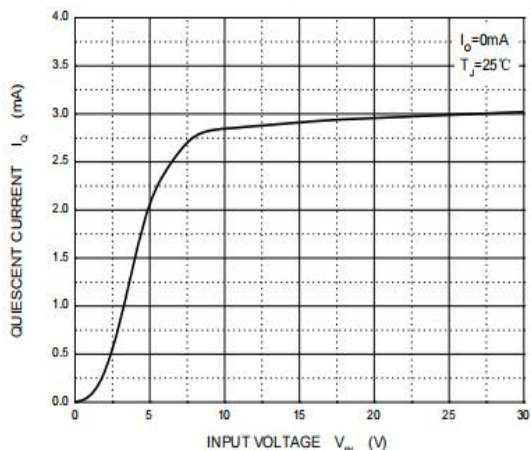


Figure 3: Quiescent Current Characteristics

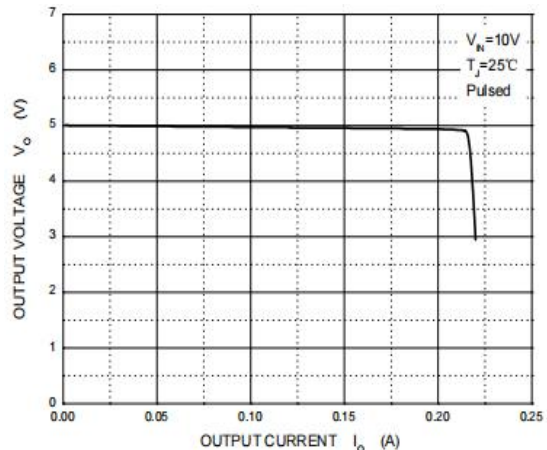


Figure 4: Output Characteristics

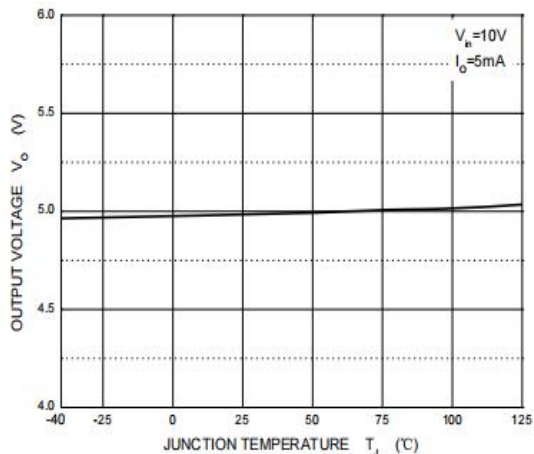


Figure 5: Temperature Characteristics

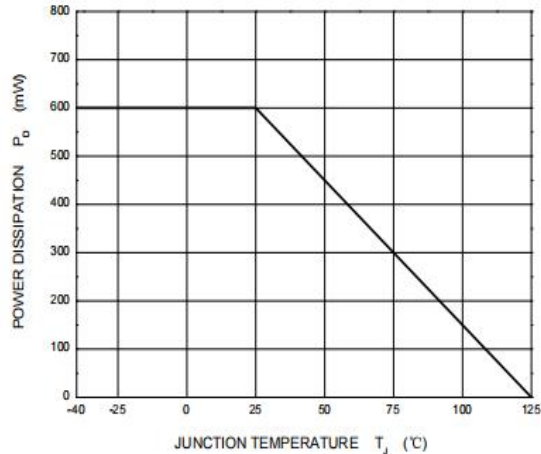
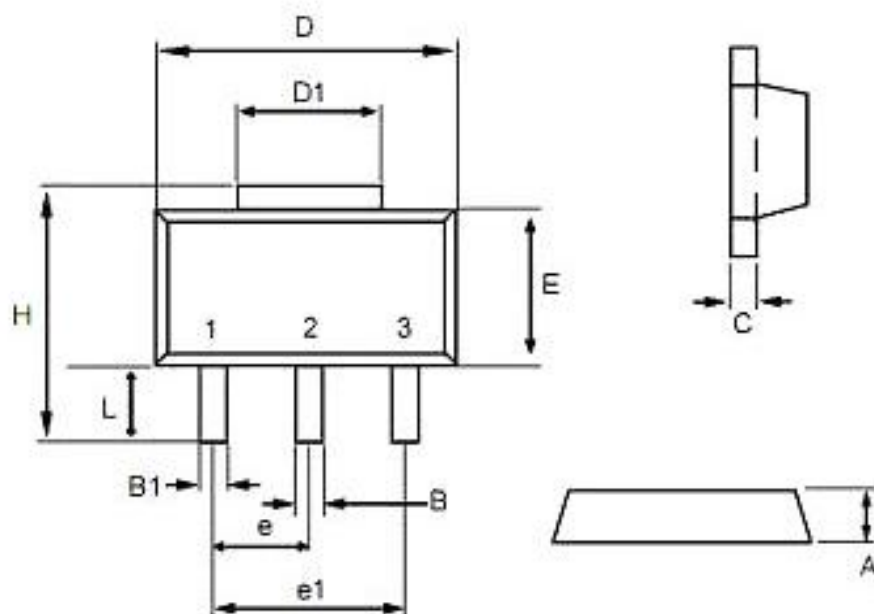


Figure 6: Power Characteristics

■SOT-89 Dimension 外形封装尺寸



Dim	min	max
A	1.40	1.60
B	0.40	0.56
B1	0.35	0.48
C	0.35	0.44
D	4.40	4.60
D1	1.35	1.83
e	1.50 BSC	
e1	3.00 BSC	
E	2.29	2.60
H	3.75	4.25
L	0.80	1.20

Dimensions In Millimeters