FS78M05

TO-252 Three Terminal Regulator 三端稳压 IC

■Features 特点

Pin 脚位：1.Input 输入　2.Ground 地　3.Output 输出
Output Voltage 输出电压：5V
Output Current 输出电流：0.5A
Power dissipation 耗散功率: 1.25W

■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_i	35	V
Operating Current 工作电流	I_O	500	mA
Power dissipation 耗散功率	P_D	1250	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$	80	℃/W
Solder Temperature 焊接温度/时间	Td	260	℃
Solder Temperature/Time 焊接时间	Td	10	S
Operating Ambient Temperature 工作温度	T_A	-40~+85	℃
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+125℃	

■Device Marking 产品字标

FS78M05=78M05

■Electrical Characteristics 电特性

(Vi=10V Io=40mA Ci=0.33uF Co=0.1uF T_A=25℃ 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	4.85	5	5.15	V
Output Voltage 输出电压	V_O	8V≤V_I≤25V 1mA≤I_O≤100mA	4.8		5.2	V
Output Voltage 输出电压	V_O	8V≤V_I≤12V 1mA≤I_O≤500mA	4.78		5.22	V
Output Current 输出电流	I_O	V_I=10V		500		mA
Dropout Voltage 落差电压	V_D	I_O=500mA		1.7		V
Quiescent Current 静态电流	I_q	V_I=10V I_O=0		1	4.7	mA
Quiescent Current Change 静态电流变化	ΔI_q	8V≤V_I≤25V			0.7	mA
Quiescent Current Change 静态电流变化	ΔI_q	5mA≤I_O≤500mA			0.4	mA
Line Regulation 线性调整	ΔV_O	I_O=40mA 8V≤V_I≤12V			150	mV
Line Regulation 线性调整	ΔV_O	I_O=40mA 10V≤V_I≤12V			100	mV
Load Regulation 负载调整	ΔV_O	5mA≤I_O≤500mA V_I=8V			125	mV
Load Regulation 负载调整	ΔV_O	5mA≤I_O≤300mA V_I=10V			125	mV
Output Noise Voltage 噪声电压	V_N	10Hz≤f≤100kHz		40		μV
Ripple Rejection 纹波抑制	RR	8V≤V_I≤16V f=120Hz	47	62		dB

■Typical Characteristic Curve 典型特性曲线
(CIN=330nF, COUT=100nF)

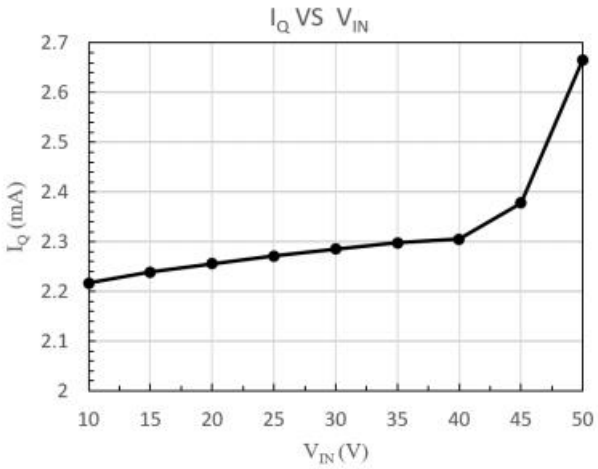


图 1 静态电流随输入电压变化

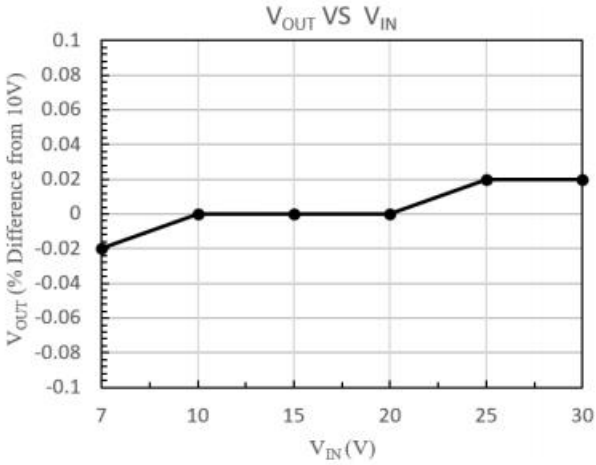


图 2 输出电压随输入电压变化(I_O=10mA)

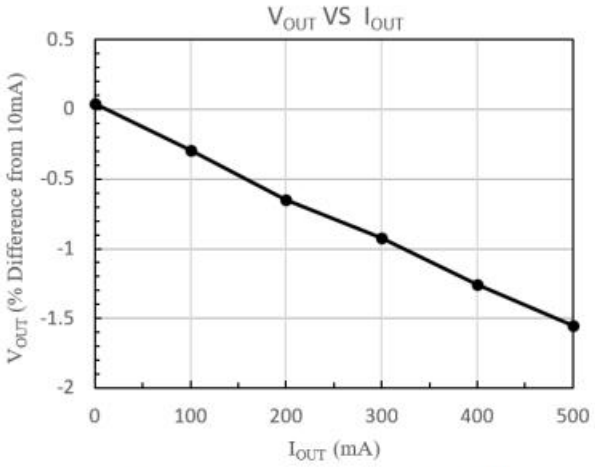


图 3 输出电压随负载电流变化(V_{IN}=8V)

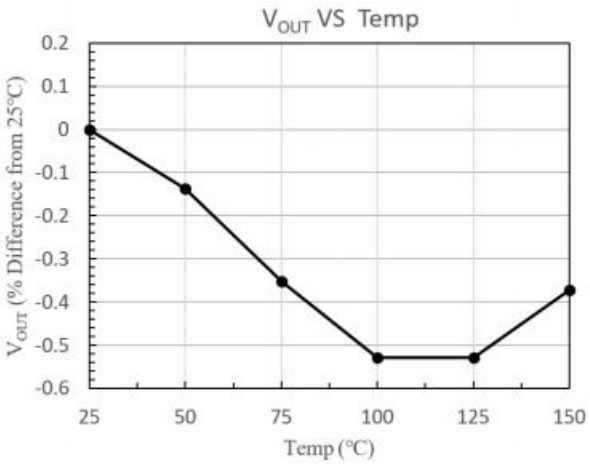
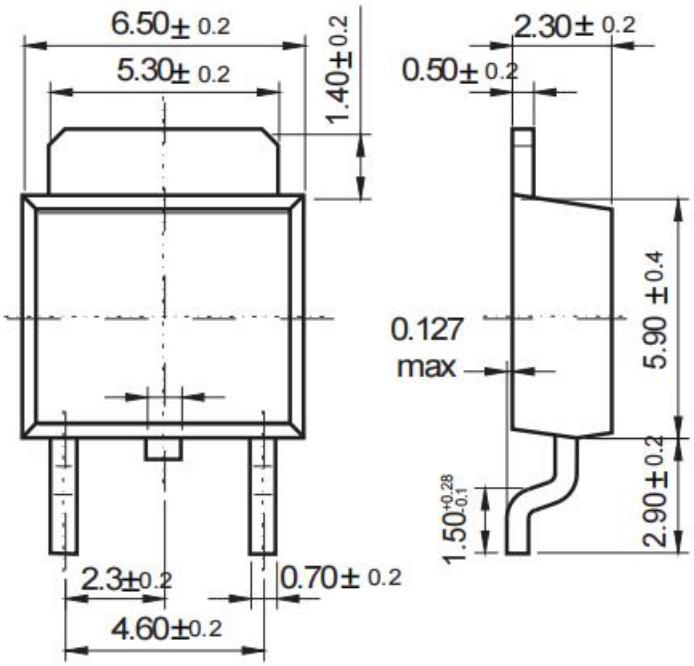


图 4 输出电压随温度变化(V_{IN}=10V, I_{OUT}=10mA)

■**Dimension 外形封装尺寸**

TO-252

Unit: mm



Dimensions in inches and (millimeters)