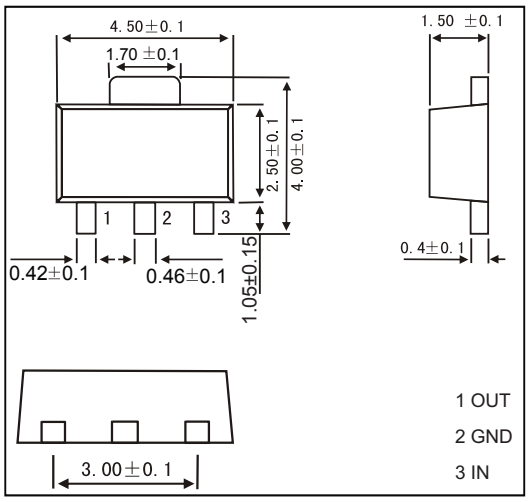
SOT-89 Three-terminal voltage regulator

FEATURES

- Maximum Output Current I_O=0.1A
- Output Voltage V_O=5V
- Continuous Total Dissipation PD: 0.5 W (Ta = 25 ℃)

MECHANICAL DATA

- Case: SOT-89 molded plastic
- Mounting position:any



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

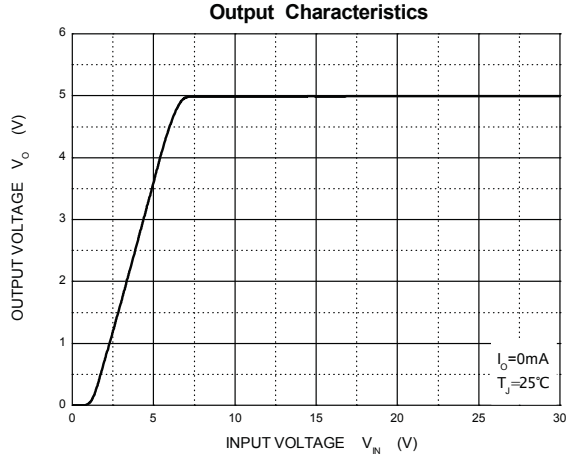
Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	TOPR	-55~+150	℃
Storage Temperature Range	TSTG	-55~+150	℃

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
(Vi=10V,Io=40mA,Ci=0.33μF,Co=0.1μF, unless otherwise specified)

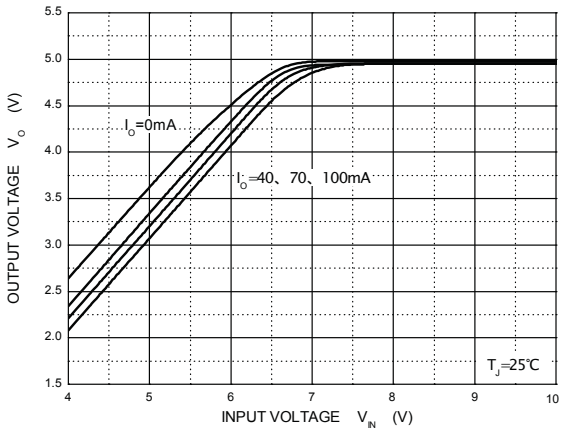
Parameter	Symbol	Tes Condititons		Min	Typ	Max	Unit
Output voltage	Vo		25℃	4.75	5.0	5.25	V
		7V≤Vi≤20V, Io=1mA~40mA	0-125℃	4.75	5.0	5.25	V
		Io=1mA~70mA		4.75	5.0	5.25	V
Load Regulation	ΔVo	Io=1mA~100mA	25℃		15	60	mV
		Io=1mA~40mA	25℃		8	30	mV
Line regulation	ΔVo	7V≤Vi≤20V			32	150	mV
		8V≤Vi≤20V	25℃		26	100	mV
Quiescent Current	Iq		25℃		3.8	6	mA
Quiescent Current Change	ΔIq	8V≤Vi≤20V	0-125℃			1.5	mA
	ΔIq	1mA≤V I≤40mA	0-125℃			0.1	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz	25℃		42		uV
Ripple Rejection	RR	8V≤Vi≤20V,f=120Hz	0-125℃	41	49		dB
Dropout Voltage	Vd		25℃		1.7		V

RATINGS AND CHARACTERISTIC CURVES

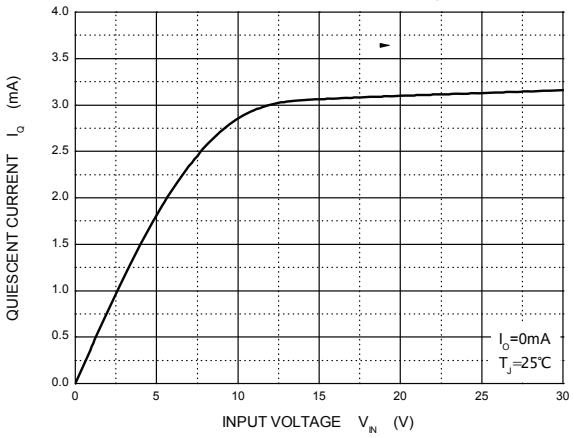
Output Characteristics



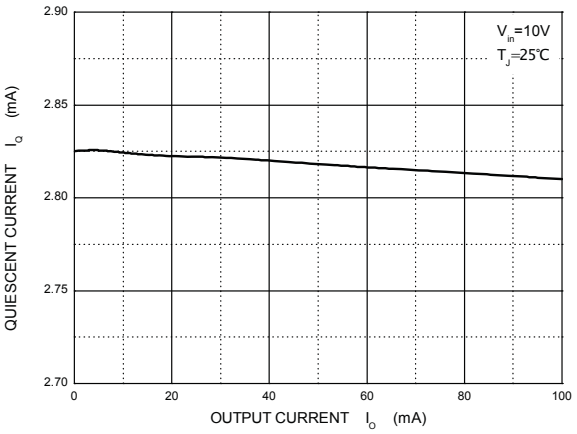
Dropout Characteristics



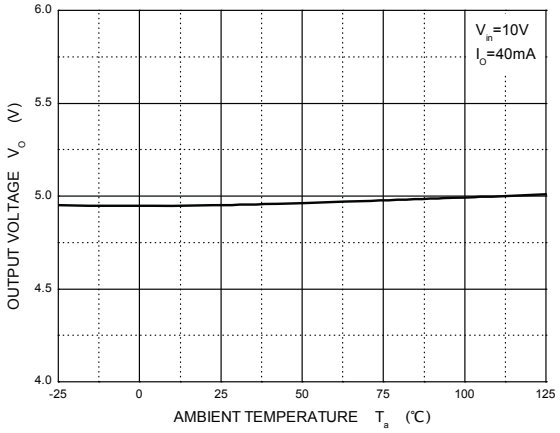
Quiescent Current vs Input Voltage



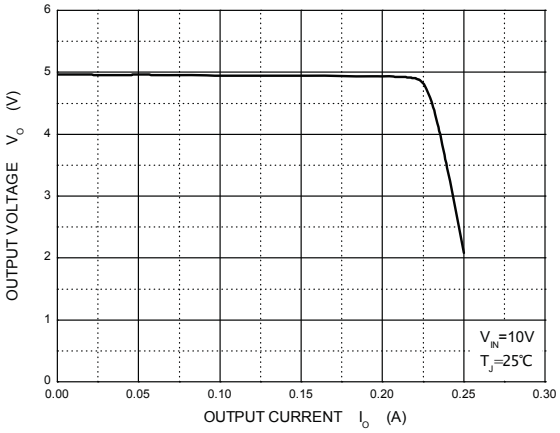
Quiescent Current vs Output Current



Output Voltage vs Ambient Temperature



Current Cut-off Grid Voltage



Power Derating Curve