

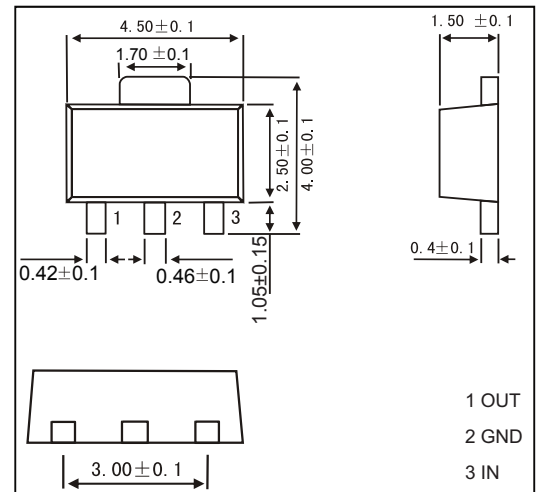
SOT-89 Three-terminal voltage regulator

FEATURES

- Maximum Output Current $I_O=0.1A$
- Output Voltage $V_O=5V$
- Continuous Total Dissipation PD: 0.5 W ($T_a = 25\text{ }^\circ\text{C}$)

MECHANICAL DATA

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



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

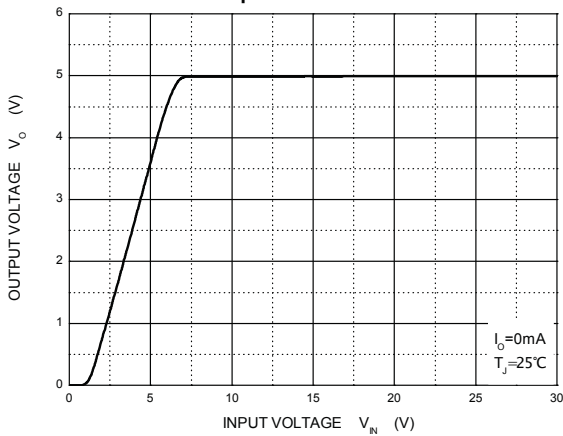
Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating Junction Temperature Range	TOPR	-55~+150	°C
Storage Temperature Range	TSTG	-55~+150	°C

ELECTRICAL CHARACTERISTICS AT SPECIFIED VIRTUAL JUNCTION TEMPERATURE
($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

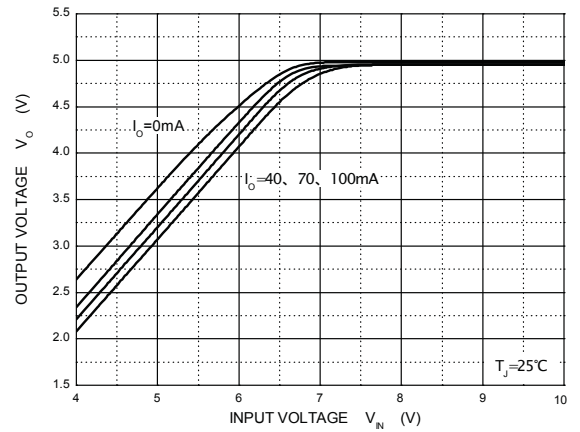
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	4.75	5.0	5.25	V	
		$7V \leq V_i \leq 20V, I_o=1mA \sim 40mA$	0-125°C	4.75	5.0	5.25	V
		$I_o=1mA \sim 70mA$		4.75	5.0	5.25	V
Load Regulation	ΔV_o	$I_o=1mA \sim 100mA$	25°C		15	60	mV
		$I_o=1mA \sim 40mA$	25°C		8	30	mV
Line regulation	ΔV_o	$7V \leq V_i \leq 20V$			32	150	mV
		$8V \leq V_i \leq 20V$	25°C		26	100	mV
Quiescent Current	I_q	25°C		3.8	6	mA	
Quiescent Current Change	ΔI_q	$8V \leq V_i \leq 20V$	0-125°C			1.5	mA
	ΔI_q	$1mA \leq V_i \leq 40mA$	0-125°C			0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	25°C		42	uV	
Ripple Rejection	RR	$8V \leq V_i \leq 20V, f=120Hz$	0-125°C	41	49	dB	
Dropout Voltage	V_d	25°C		1.7		V	

RATINGS AND CHARACTERISTIC CURVES

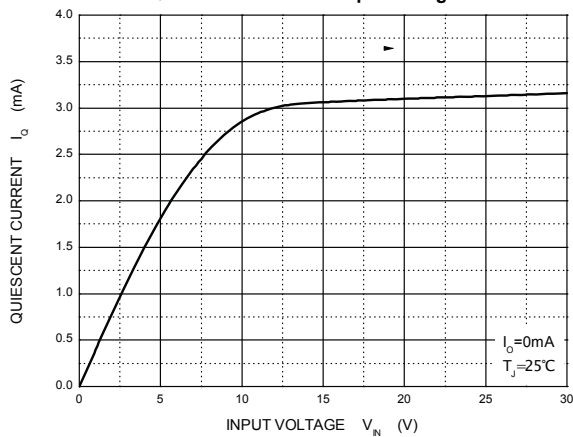
Output Characteristics



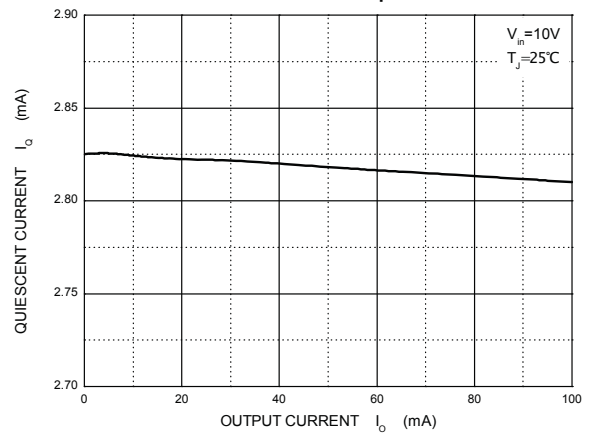
Dropout Characteristics



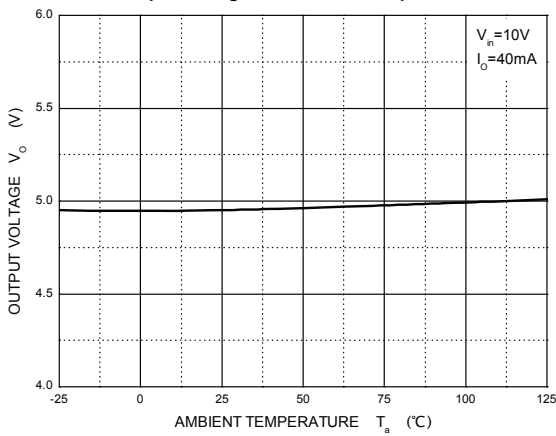
Quiescent Current vs Input Voltage



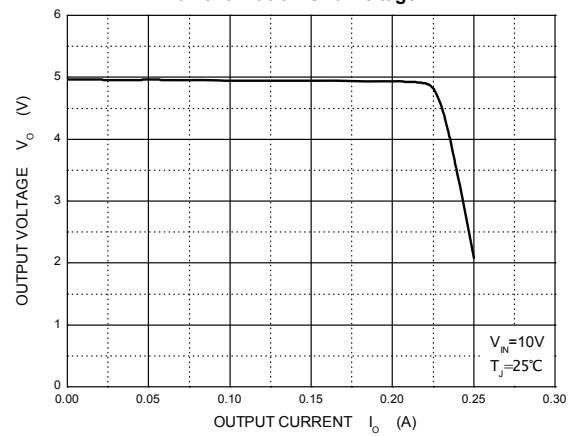
Quiescent Current vs Output Current



Output Voltage vs Ambient Temperature



Current Cut-off Grid Voltage



Power Derating Curve

