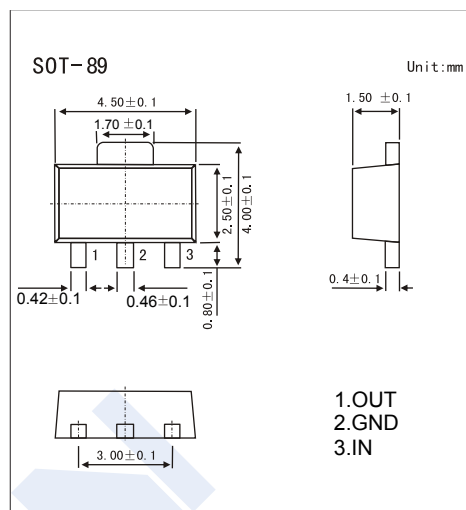


Three-Terminal Voltage Regulator 78L03

■ Features

- Maximum output current: $I_{OM}=0.1A$.
- Output voltage: $V_O=3.3V$.
- Continuous total dissipation: $P_D: 0.5W$



■ Absolute Maximum Ratings $T_a = 25^\circ C$

Parameter	Symbol	Rating	Unit
Input Voltage	V_I	30	V
Operating junction temperature range	T_{OPR}	0 to +125	$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ C$

■ Electrical Characteristics ($V_I=8.3V, I_O=40mA, 0^\circ C < T_J < 125^\circ C, C_1=0.33 \mu F, C_O=0.1 \mu F$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Output voltage	V_O	$T_J=25^\circ C$	3.173	3.3	3.432	V
		$5.8V \leq V_I \leq 20V, I_O=5mA-100mA$	3.142	3.3	3.465	V
Load regulation	ΔV_O	$T_J=25^\circ C, I_O=5mA-100mA$		15	60	mV
		$T_J=25^\circ C, I_O=5mA-40mA$		5	30	mV
Line regulation	ΔV_O	$5.8V \leq V_I \leq 20V, T_J=25^\circ C, I_{OUT}=40mA$		50	150	mV
Quiescent current	I_q	$T_J=25^\circ C$		3	6	mA
Quiescent current change	ΔI_q	$0^\circ C < T_J < 125^\circ C, 5V \leq V_I \leq 20V$			1.5	mA
		$0^\circ C < T_J < 125^\circ C, 5mA \leq I_O \leq 40mA$			0.1	mA
Output noise voltage	V_N	$10Hz \leq f \leq 100KHz$		40		μV
Ripple rejection	RR	$5.8V \leq V_I \leq 20V, f=120Hz, T_J=25^\circ C$	41	49		dB
Dropout voltage	V_d	$T_J=25^\circ C, I_{OUT}=100mA$		2		V

■ Typical application.

