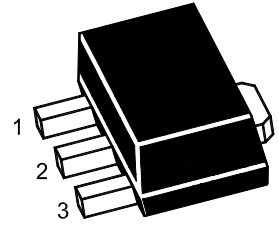




Features

- Input voltage: up to 30V
- Output voltage: 9V
- Output current up to 100 mA, internal thermal overload protection and short-circuit current limiting.

SOT-89



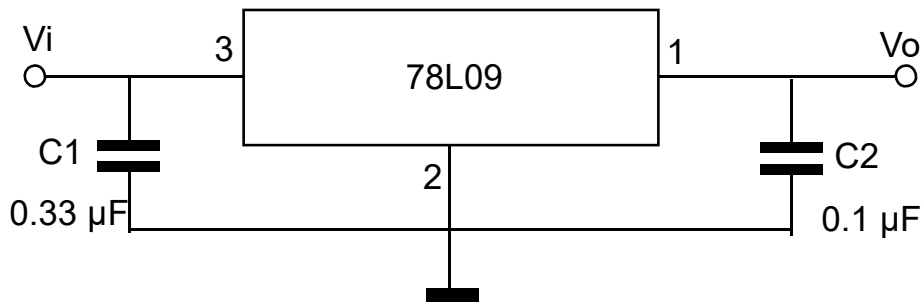
1. VOUT 2. GND 3. VIN

Marking Code : 78L09

Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Input Voltage	V_I	30	V
Output Current	I_o	100	mA
Maximum Power Dissipation	P_D	500	mW
Junction Temperature	T_J	150	°C
Operating Temperature Range	T_{OPR}	-40 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C



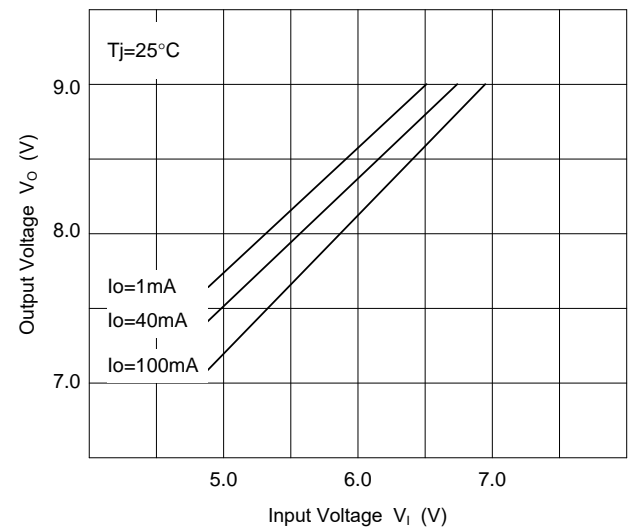
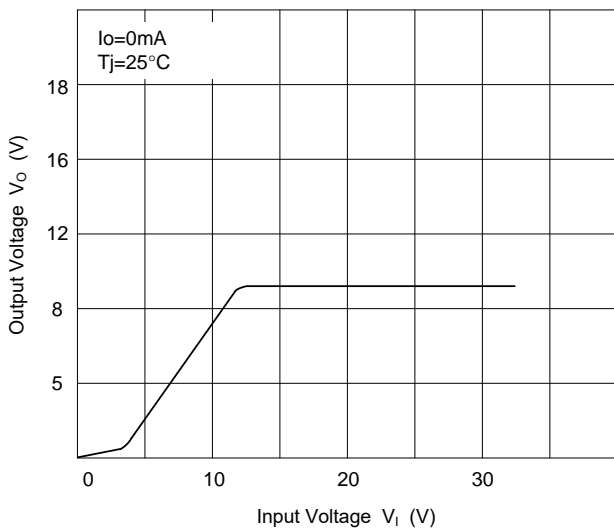
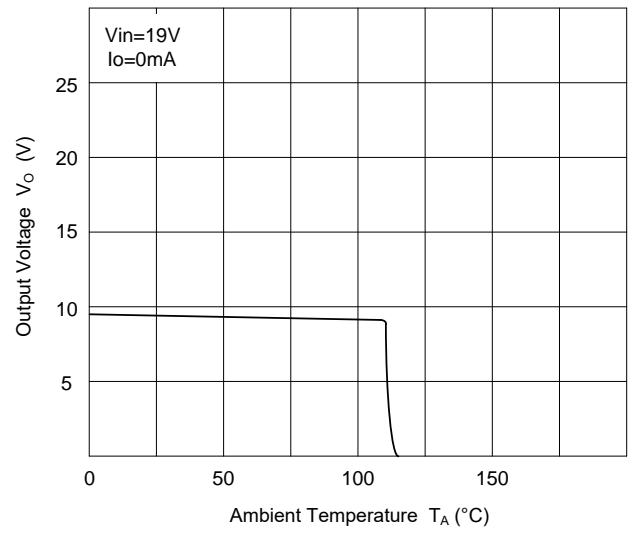
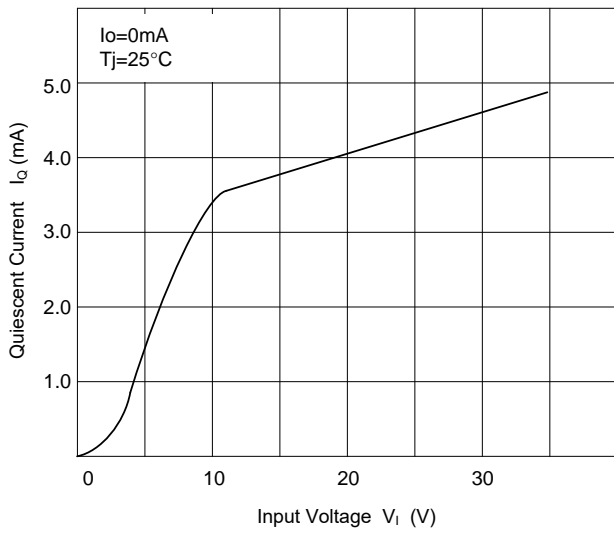
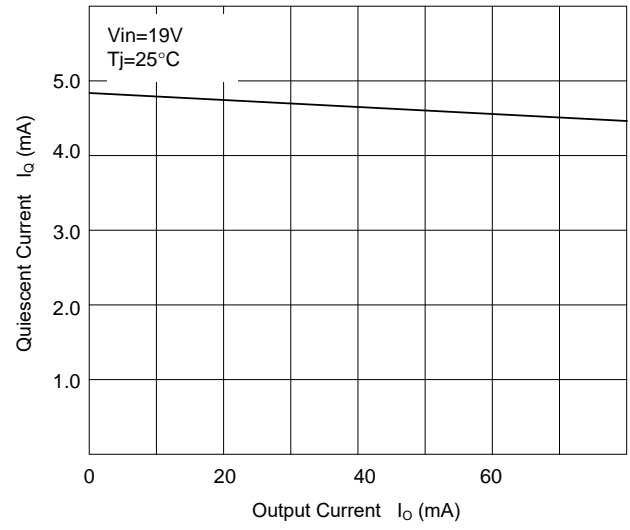
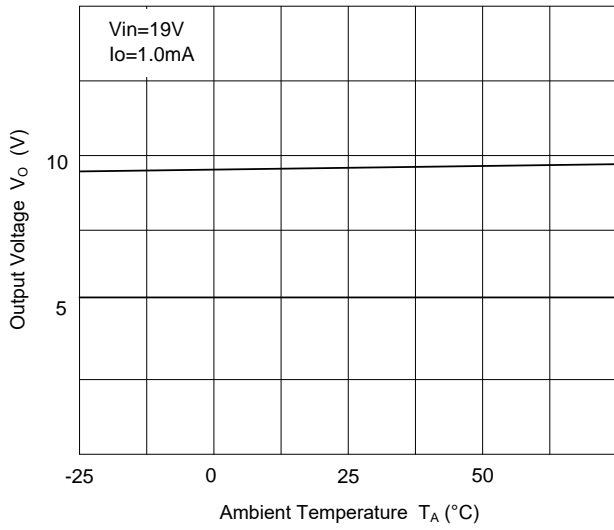
Electrical Characteristics

$V_i=15V$, $I_o=40mA$, $0^{\circ}C \leq T_J \leq 125^{\circ}C$, $C_i=0.33\mu F$, $C_o=0.1\mu F$, unless otherwise specified.

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Output Voltage	V_o	$T_J=25^{\circ}C$	8.64	9	9.36	V
		$I_o=1mA$ to $40mA$, $V_i=11.5V$ to $24V$	8.55	9	9.45	V
		$I_o=1mA$ to $70mA$	8.55	9	9.45	V
Line Regulation	ΔV_o	$V_i=11.5V$ to $24V$, $T_J=25^{\circ}C$	--	--	200	mV
		$V_i=13V$ to $24V$, $T_J=25^{\circ}C$	--	--	150	mV
Load Regulation	ΔV_o	$I_o=1mA$ to $100mA$, $T_J=25^{\circ}C$	--	--	90	mV
		$I_o=1mA$ to $40mA$, $T_J=25^{\circ}C$	--	--	45	mV
Ripple Rejection	RR	$V_i=12V$ to $23V$, $f=120Hz$, $T_J=25^{\circ}C$	36	44	--	dB
Dropout Voltage	V_D	$T_J=25^{\circ}C$	--	1.7	--	V
Quiescent Current	I_Q		--	--	5.5	mA
Quiescent Current Change	ΔI_Q	$V_i=13V$ to $24V$	--	--	1.5	mA
		$I_o=1mA$ to $40mA$	--	--	0.1	mA
Output Noise Voltage	V_N	$10Hz \leq f \leq 100KHz$	--	49	--	μV



Typical Characteristic Curves

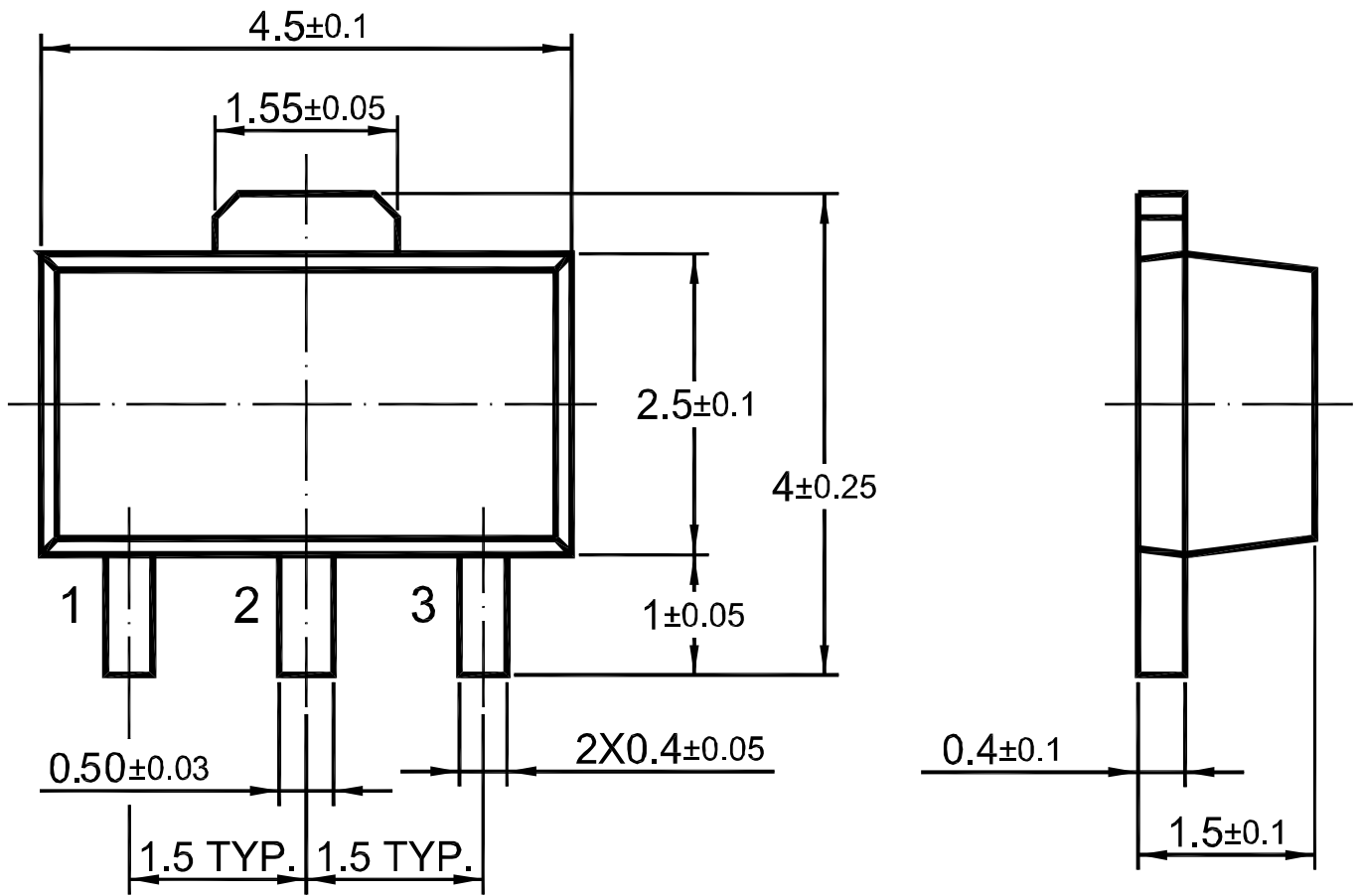




Package Outline

SOT-89

Dimensions in mm



Ordering Information

Device	Package	Shipping
78L09	SOT-89	1,000PCS/Reel&7inches
		3,000PCS/Reel&13inches