



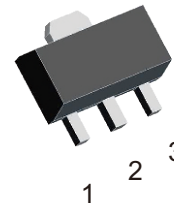
WG78L05

Three-terminal positive voltage regulator

Features:

- Maximum output current $I_{om}=0.1A$
- Output voltage $V_o=5V$
- Continuous total dissipation $P_D=0.5W$

SOT-89



1.Output (O)
2.GND (G)
3.Input (I)

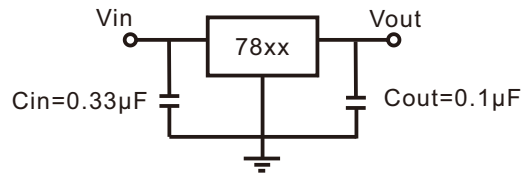
ABSOLUTE MAXIMUM RATINGS(Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit	
Input Voltage	V_i	$V_{OUT}=5-10V$	30	V
		$V_{OUT}=12-15V$	35	V
Output Current	I_{OUT}	100	mA	
Junction Temperature	T_J	125	°C	
Operating Junction Temperature Range	T_{OPR}	-40-+125	°C	
Storage Temperature Range	T_{STG}	-40-+150	°C	

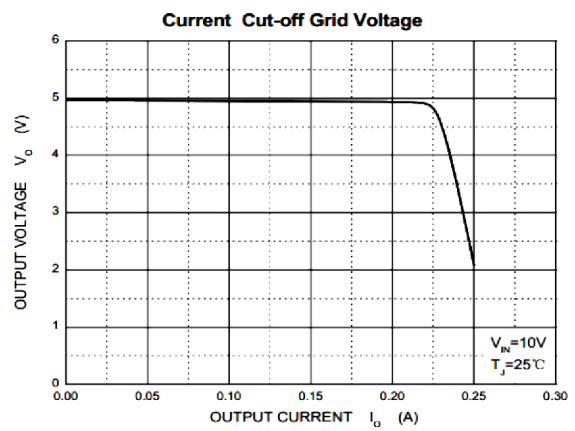
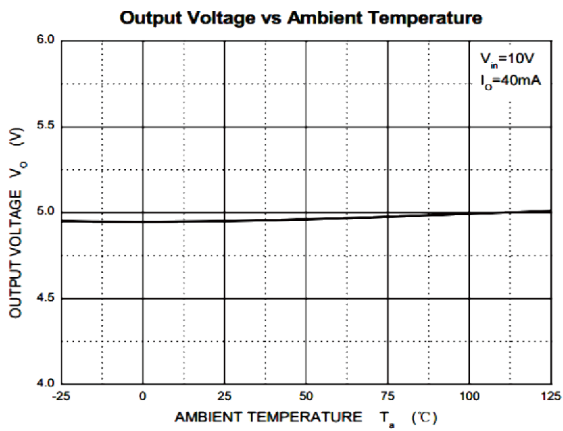
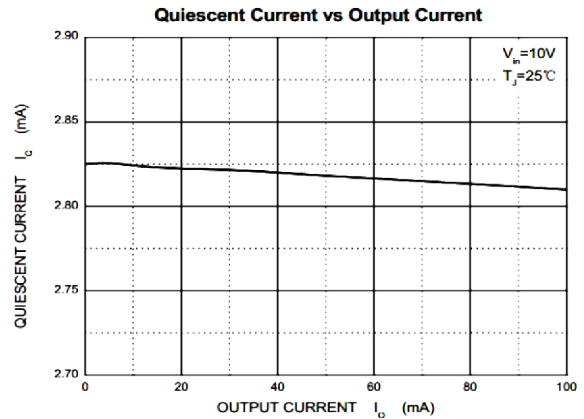
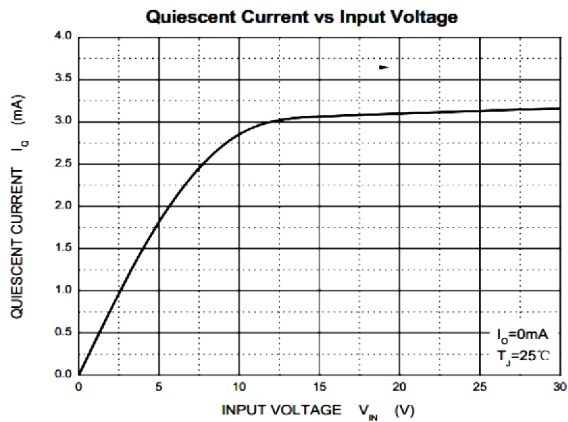
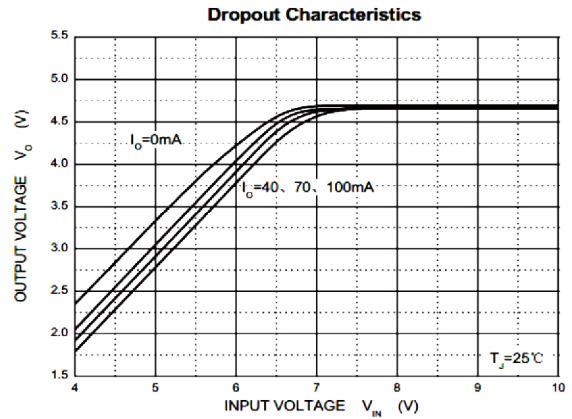
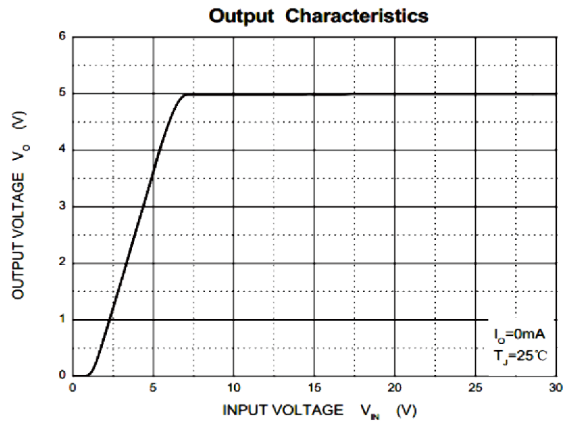
ELECTRICAL CHARACTERISTICS($V_i=10V, I_o=40mA, C_i=0.33\mu F, C_o=0.1\mu F$, unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit	
V_o	Output Voltage	$25^\circ C$	4.8	5.0	5.2	V	
		0-125°C	$7V \leq V_i \leq 20V, I_o=1mA - 40mA$	4.75		5.25	V
			$I_o=1mA - 70mA$	4.75		5.25	V
ΔV_o	Load Regulation	$I_o=1mA - 100mA$	$25^\circ C$		15	60	mV
		$I_o=1mA - 40mA$	$25^\circ C$		10	30	mV
ΔV_o	Line Regulation	$7V \leq V_i \leq 20V$	$25^\circ C$		10	150	mV
		$8V \leq V_i \leq 20V$	$25^\circ C$		5	100	mV
I_q	Quiescent Current	$25^\circ C$		2.0	5.5	mA	
ΔI_q	Quiescent Current Change	$8V \leq V_i \leq 20V$	0-125°C			1.5	mA
		$1mA \leq I_o \leq 40mA$	0-125°C			0.1	mA
V_N	Output Noise Voltage	$f=10Hz$ to 100KHz	$25^\circ C$		40	μV	
$\Delta V_o / \Delta T$	Temperature coefficient of V_o	$I_o=5mA$	$25^\circ C$		0.65	mA/°C	
RR	Ripple Rejection	$f=120Hz, 8V \leq V_i \leq 20V$	0-125°C	40	49	dB	
Vd	Dropout Voltage	$25^\circ C$		1.7		V	

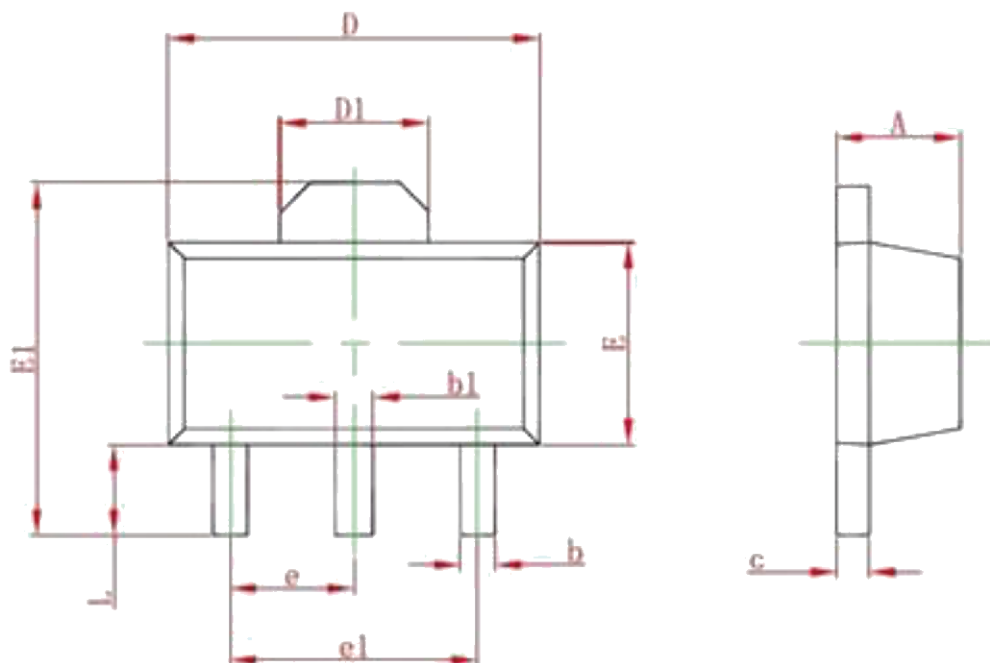
Application Circuit



Electrical Characteristic Curve



Package Dimension



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

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