

FEATURE

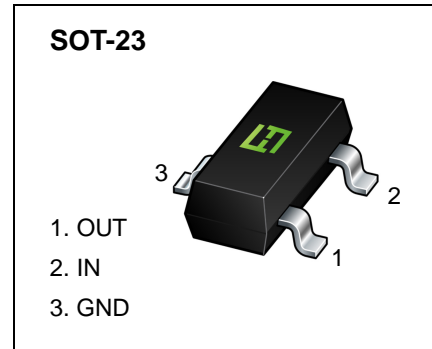
Maximum Output Current I_{O} : 0.1 A

Output Voltage V_{O} : 5 V

Continuous Total Dissipation

P_D : 0.25 W ($T_a = 25\text{ }^{\circ}\text{C}$)

MARKING: L05



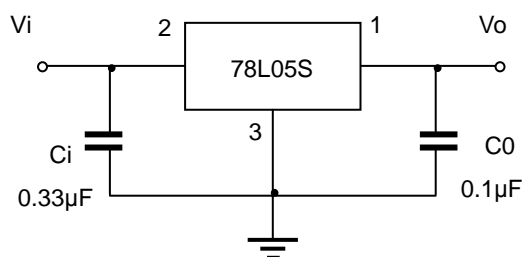
ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	V_i	30	V
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	160	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	T_{OPR}	0~+125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55~+150	$^{\circ}\text{C}$

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

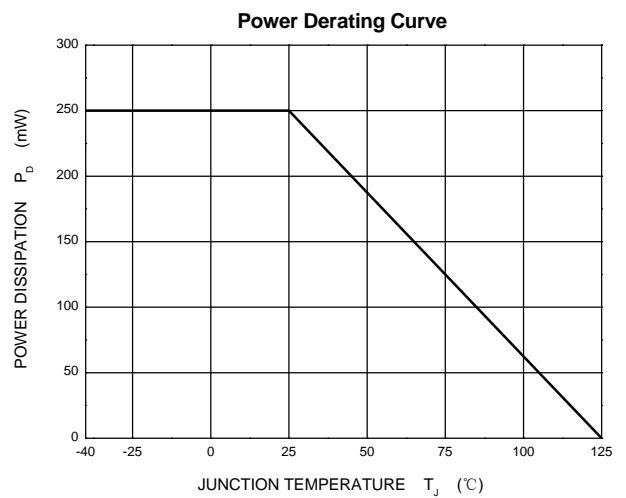
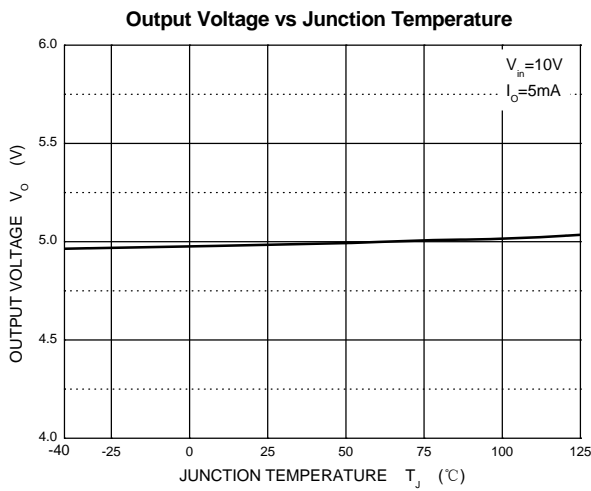
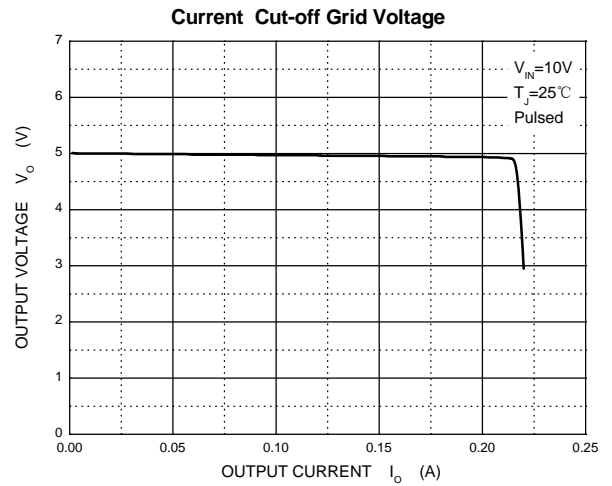
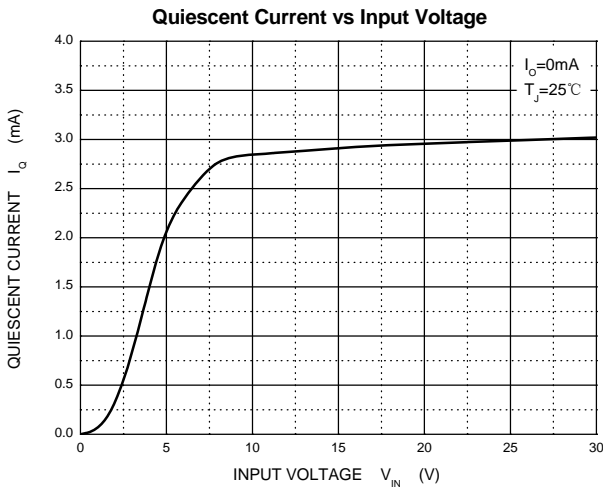
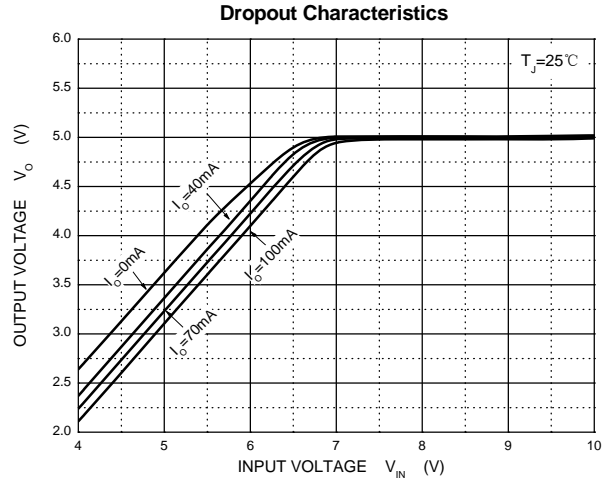
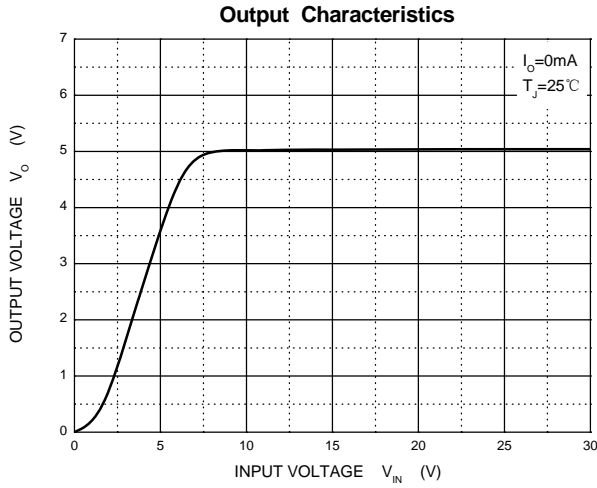
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Output voltage	V_o	25°C	4.80	5.0	5.20	V	
Output voltage	V_o	$7\text{V} \leq V_i \leq 20\text{V}$, $I_o = 1\text{mA} \sim 40\text{mA}$	0-125 $^{\circ}\text{C}$	4.75	5.0	5.25	V
		$I_o = 1\text{mA} \sim 70\text{mA}$		4.75	5.0	5.25	V
Load Regulation	ΔV_o	$I_o = 1\text{mA} \sim 100\text{mA}$	25 $^{\circ}\text{C}$		15	60	mV
		$I_o = 1\text{mA} \sim 40\text{mA}$	25 $^{\circ}\text{C}$		8	30	mV
Line regulation	ΔV_o	$7\text{V} \leq V_i \leq 20\text{V}$			32	150	mV
		$8\text{V} \leq V_i \leq 20\text{V}$	25 $^{\circ}\text{C}$		26	100	mV
Quiescent Current	I_q	25 $^{\circ}\text{C}$		3.8	6	mA	
Quiescent Current Change	ΔI_q	$8\text{V} \leq V_i \leq 20\text{V}$	0-125 $^{\circ}\text{C}$		1.5	mA	
	ΔI_q	$1\text{mA} \leq V_i \leq 40\text{mA}$	0-125 $^{\circ}\text{C}$		0.1	mA	
Output Noise Voltage	V_N	10Hz $\leq f \leq$ 100KHz	25 $^{\circ}\text{C}$		42	$\mu\text{V}/V_o$	
Ripple Rejection	RR	$8\text{V} \leq V_i \leq 20\text{V}$, $f=120\text{Hz}$	0-125 $^{\circ}\text{C}$	41	49	dB	
Dropout Voltage	V_d	25 $^{\circ}\text{C}$		1.7		V	

TYPICAL APPLICATION

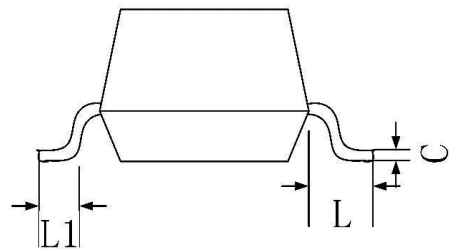
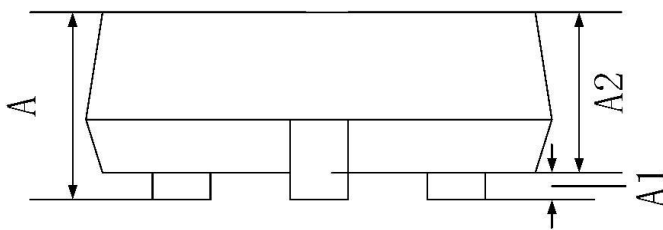
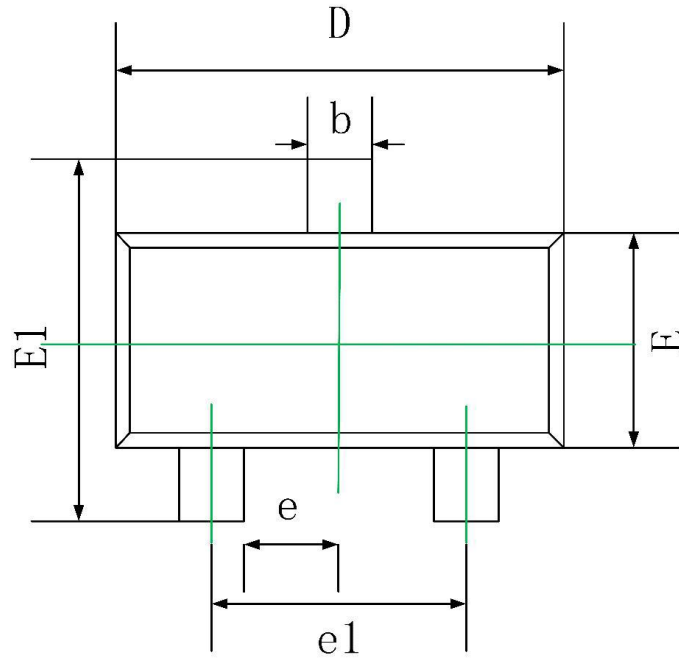


Note: Bypass capacitors are recommended for optimum stability and transient response and should be located as close as possible to the regulators.

Typical Characteristics



SOT-23 Package Information



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020

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