

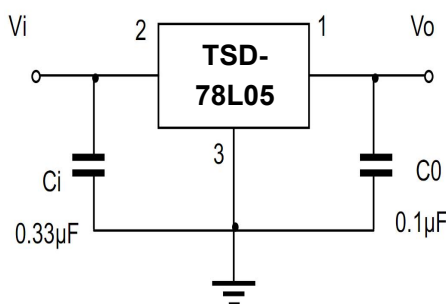
SOT 23 Plastic Encapsulate Voltage Regulators

Three-terminal positive voltage regulator

FEATURES:

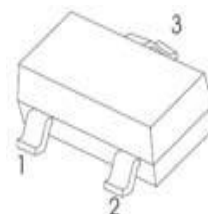
- ※ Maximum output current
IOM: 0.1A
- ※ Output voltage
VO: 5V
- ※ Continuous total dissipation
PD: 0.25W

TYPICAL APPLICATION:



SOT-23

1.OUT
2.IN
3.GND



MARKING: L05

Solid dot = Green molding compound device,
if none, the normal device.

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 air	$R_{\theta JA}$	160	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature Range	TOPR	-40~+125	$^{\circ}\text{C}$
Storage Temperature Range	TSTG	-65~+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)

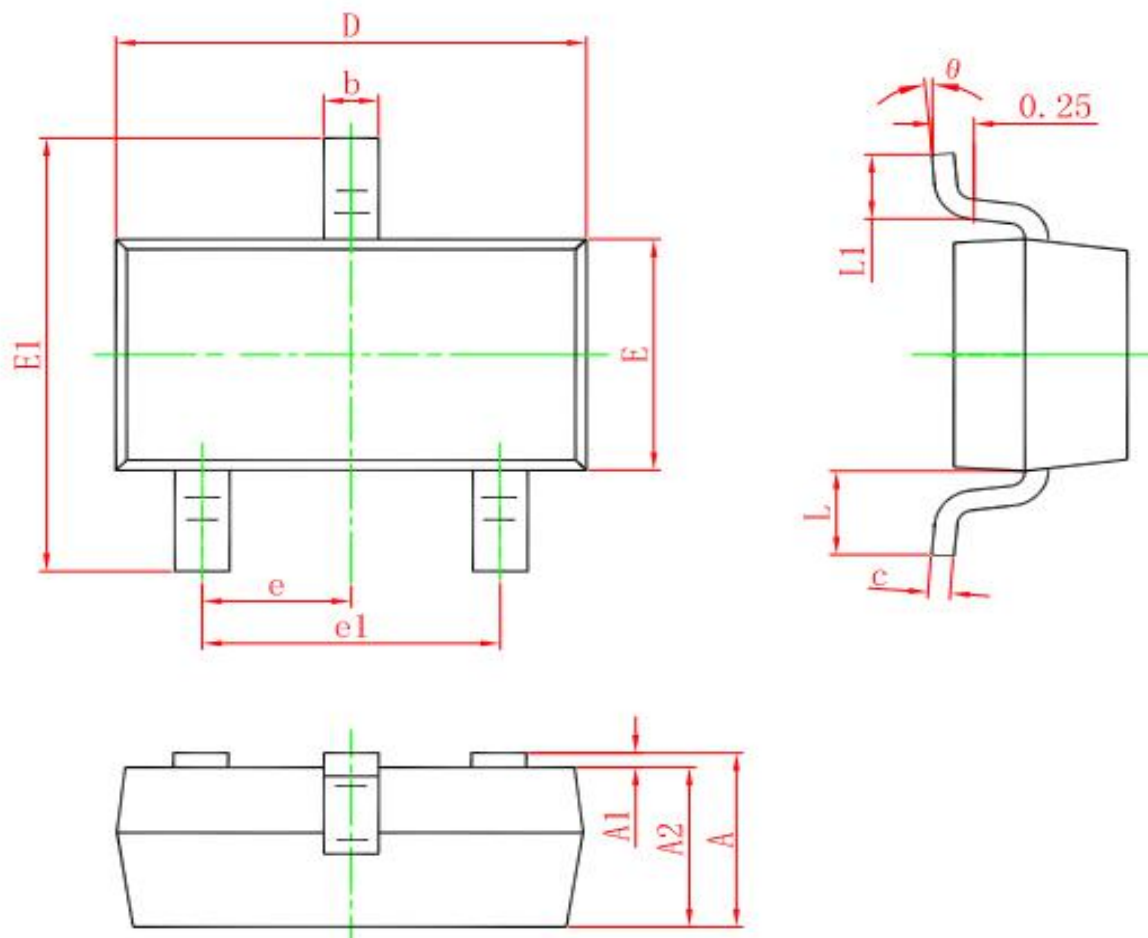
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
		25 $^{\circ}\text{C}$	4%	4.8	5.2	V
			3%	4.85	5.15	V
			2%	4.9	5.1	V
Output voltage	V_O	$7\text{V} \leq V_i \leq 20\text{V}$, $I_o=1\text{mA}-40\text{mA}$	-25~+125	4.8	5.25	V
		$7\text{V} \leq V_i \leq 20\text{V}$, $I_o=1\text{mA}-70\text{mA}$	-25~+125	4.75	5.25	V
Load Regulation	ΔV_O	$I_o=1\text{mA}-100\text{mA}$, $V_i=10\text{V}$	25 $^{\circ}\text{C}$	15	60	mV
		$I_o=1\text{mA}-40\text{mA}$, $V_i=10\text{V}$	25 $^{\circ}\text{C}$	5	30	mV
Line Regulation	ΔV_O	$7\text{V} \leq V_i \leq 20\text{V}$, $I_o=40\text{mA}$	25 $^{\circ}\text{C}$	32	150	mV
		$8\text{V} \leq V_i \leq 20\text{V}$, $I_o=40\text{mA}$	25 $^{\circ}\text{C}$	26	100	mV
Quiescent Current	I_q		25 $^{\circ}\text{C}$	3.8	6	mA
Quiescent Current Change	ΔI_q	$8\text{V} \leq V_i \leq 20\text{V}$, $I_o=40\text{mA}$	-25~+125		1.5	mA
	ΔI_q	$1\text{mA} \leq I_o \leq 40\text{mA}$	-25~+125		0.1	mA
Output Noise Voltage	V_N	$10\text{Hz} \leq f \leq 100\text{KHz}$	25 $^{\circ}\text{C}$	42		$\mu\text{V}/V_o$
Ripple Rejection	R_r	$8\text{V} \leq V_i \leq 20\text{V}$, $f=120\text{Hz}$, $I_o=40\text{mA}$	-25~+125	41	49	dB
Dropout Voltage	V_d	$I_o=40\text{mA}$	25 $^{\circ}\text{C}$	1.7		V

Note :

Bypass Capacitors are Recommended For Optimum Stability and Transient Response
and Should be located as Close as Possible to the Regulators

SOT 23 Plastic Encapsulate Voltage Regulators

SOT-23 PACKAGE OUTLINE DIMENSIONS



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
θ	0°	8°	0°	8°