

**MK78L05****Three-terminal positive voltage regulator****FEATURES:**

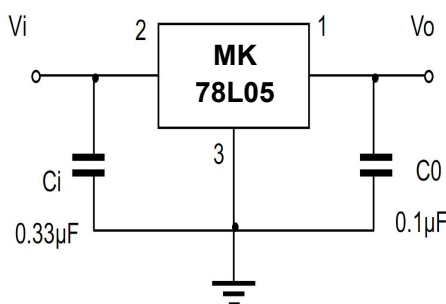
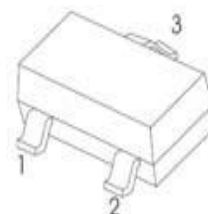
※ Maximum output current

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

(Vi=10V, Io=40mA, Ci=0.33µF, Co=0.1µF. Unless Otherwise Specified)

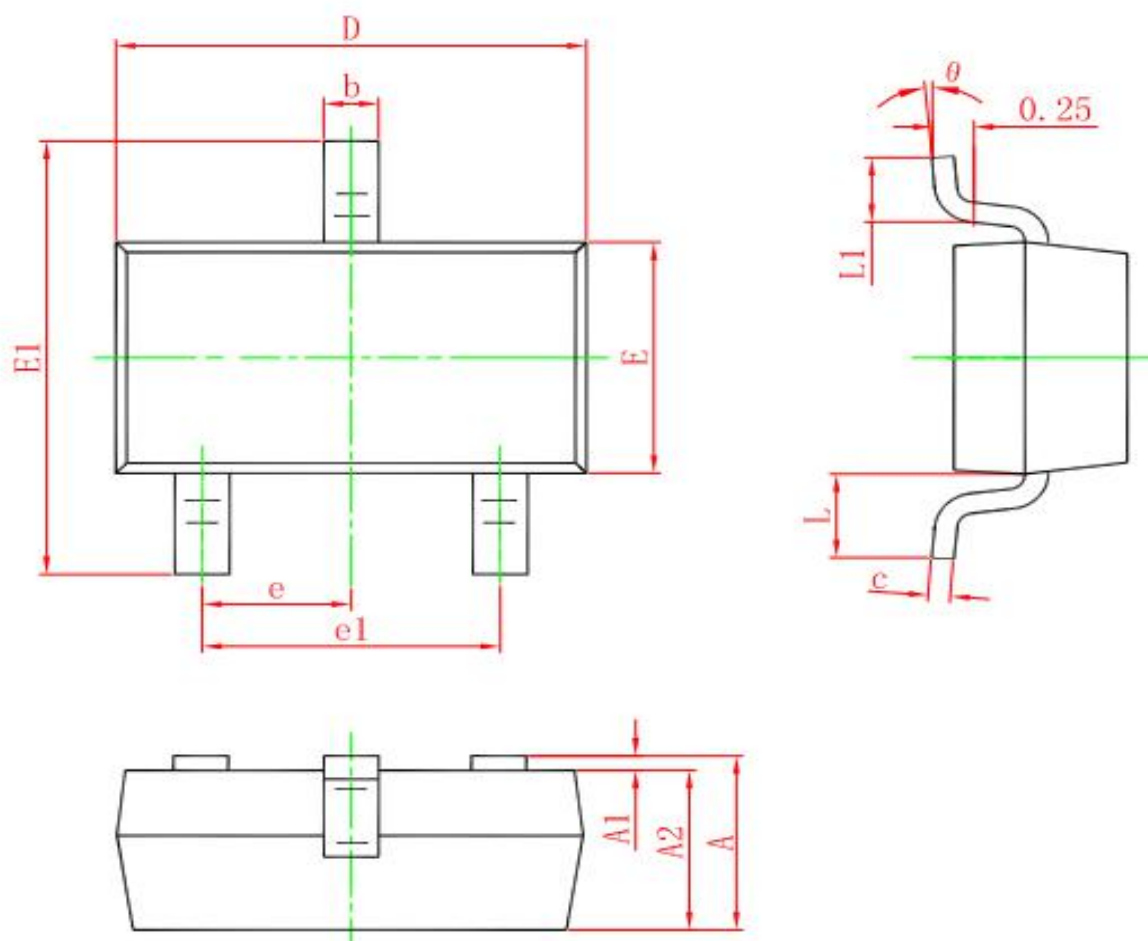
Parameter	Symbol	Test Condition		Min	Typ	Max	Unit
			5%	4.75	5	5.25	V
			3%	4.85	5	5.15	V
			2%	4.9	5	5.1	V
Output voltage	VO	7V≤Vi≤20V, Io=1mA-40mA	-25~+125	4.8	5	5.25	V
		7V≤Vi≤20V, Io=1mA-70mA	-25~+125	4.75	5	5.25	V
Load Regulation	ΔVO	Io=1mA-100mA, Vi=10V	25℃		15	60	mV
		Io=1mA-40mA, Vi=10V	25℃		5	30	mV
Line Regulation	ΔVO	7V≤Vi≤20V, Io=40mA	25℃		32	150	mV
		8V≤Vi≤20V, Io=40mA	25℃		26	100	mV
Quiescent Current	Iq		25℃		3.8	6	mA
Quiescent Current Change	ΔIq	8V≤Vi≤20V, Io=40mA	-25~+125			1.5	mA
	ΔIq	1mA≤Io≤40mA	-25~+125			0.1	mA
Output Noise Voltage	VN	10Hz≤f≤100KHz	25℃		42		μV/Vo
Ripple Rejection	Rr	8V≤Vi≤20V, f=120Hz, Io=40mA	-25~+125	41	49		dB
Dropout Voltage	Vd	Io=40mA	25℃		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 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°