## 1. Description

The KIA79L05 series of three terminal positive regulators is available with several fixed output voltages making them useful in a wide range of applications. KIA79L05 can use as a zener diode/resistor combination replacement, and lower quiescent current. These devices suitable for a multitude of applications that require a regulated supply of up to 100 mA.The voltages available allow the KIA79L05 to be used in logic systems, instrumentation, HiFi, and other solid state electronic equipment. circuit takes over preventing the IC from overheating.

2. Applications

- Package SOT-89
- Output voltage tolerances of $\pm$5% over the temperature range
- Output current of 100mA
- Internal thermal overload protection
- Output voltages of 5.0V

3. Pin information
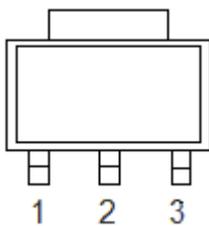
SOT89 Front View

Pin	Description
1	GND
2	V_{IN}
3	V_{OUT}

4. Maximum ratings

Characteristic	Symbol	Rating	Units
Input voltage	V_{IN}	-35	V
Power dissipation (T_C=25°C)	P_D	500	mW
Operating temperature	T_{OPR}	0~+125	°C
Storage temmperature	T_{STG}	-55~+150	°C

5. Electrical characteristics

(V_{IN}=-10V,I_{OUT}=40mA,C_{IN}=0.33uF,C_{OUT}=0.1uF,T_J=0°Cto125°C)

Parameter	Symbol	Condition		Min	Typ	Max	Unit
Output voltage	V_{OUT}	T_j=25°C		-5.2	-5.0	-4.8	V
Input regulation	Reg line	T_j=25°C	-20V≤V_{IN}≤-7.0V	-	55	150	mV
			-20V≤V_{IN}≤-8.0V	-	45	100	mV
Load regulation	Reg load	T_j=25°C	1.0mA≤I_{OUT}≤100mA	-	11	60	mV
			1.0mA≤I_{OUT}≤40mA	-	5.0	30	mV
Output voltage	V_{OUT}	-20V≤V_{IN}≤-7.0V 1.0mA≤I_{OUT}≤40mA		-5.25	-	-4.75	V
		V_{IN}=-10V, 1.0mA≤I_{OUT}≤70mA		-5.25	-	-4.75	V
Quiescent current	I_Q	T_j=25°C		-	3.1	6.0	mA
		T_j=125°C				5.5	mA
Quiescent current change	ΔI_Q	-20V≤V_{IN}≤-8.0V		-	-	1.5	mA
		1.0mA≤I_{OUT}≤40mA		-	-	0.1	mA
Output noise voltage	V_{NO}	T_a=25°C 10Hz≤f≤100KHz		-	40	-	uVrm
Long term stability	$\triangle Vout/\triangle t$			-	12	-	mV/1.0kHrs
Ripple rejection ratio	RR	-18V≤V_{IN}≤-8.0V, T_j=25°C,f=120Hz		41	49	-	dB
Dropout voltage	IV_{IN}-V_{OUT}I	T_j=25°C,I_{OUT}=40mA		-	1.7	-	V
Average temperature Coefficient of output voltage	TC_{VO}	I_{OUT}=5mA		-	-0.6	-	mV/°C

6. Appllcation circuits
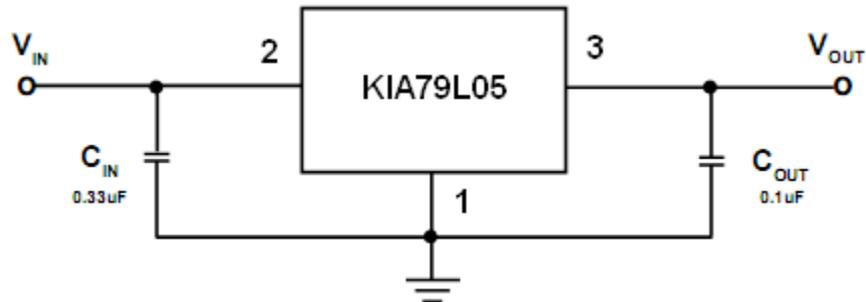
7. Package outline
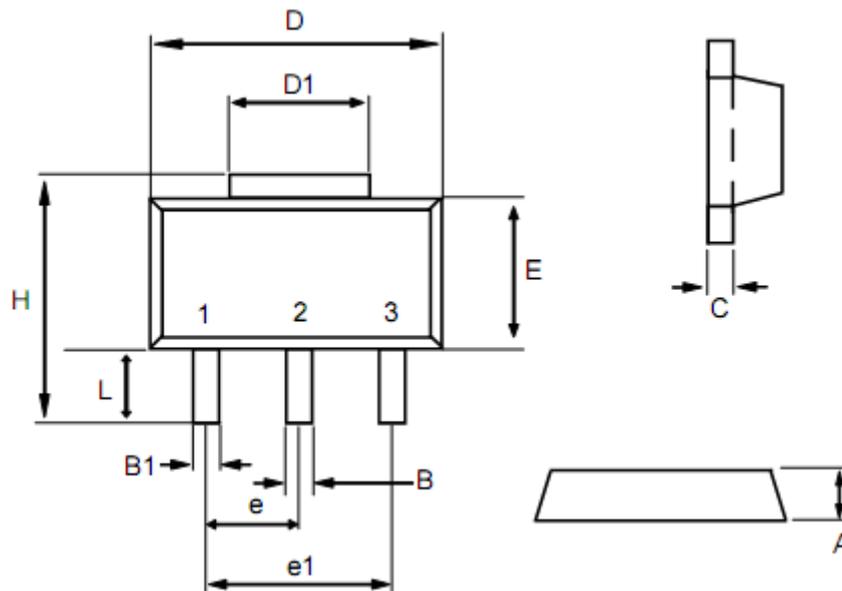
Dim	min	max
A	1.40	1.60
B	0.40	0.56
B1	0.35	0.48
C	0.35	0.44
D	4.40	4.60
D1	1.35	1.83
e	1.50 BSC	
e1	3.00 BSC	
E	2.29	2.60
H	3.75	4.25
L	0.80	1.20