

SPECIFICATION

1. DESCRIPTION

The DK450 is an accurate 5V voltage stabilizing controller with high performance. It is specially design for AC-DC switch mode power supply as output voltage stabilizing benchmark.

2. APPLICATIONS

Battery charger	DVD/VCD/VCR power supply
Power AC/DC adapters	Air conditioner power supply
STB power supply	LED driver applications
Electromagnetic oven power supply	TV/Monitor power supply

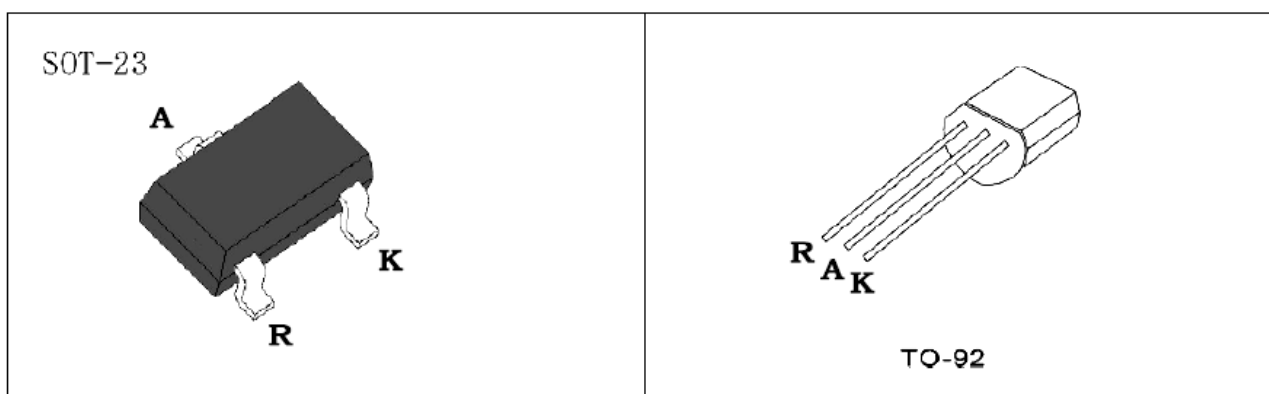
3. MAIN FEATURES

With integrated accurate voltage stabilizer and constant-current output circuit to support 5V AC-DC products, no need for additional components, this IC can directly driver the optocoupler with constant-current, so that can reduce the cost, defective rate and size of the PCB.

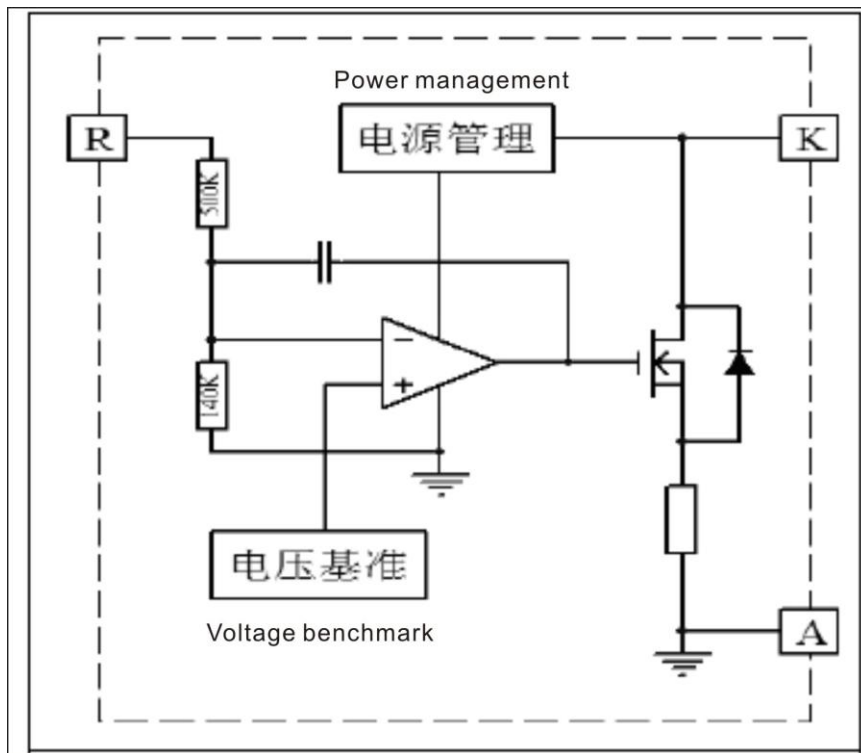
4. VOLTAGE RANGE

L Level	A Level	B Level	H Level
4.9-5.0V	5.0-5.1V	5.1-5.2V	5.2-5.3V

5. CONNECTION DIAGRAM



6. CIRCUIT DIAGRAM



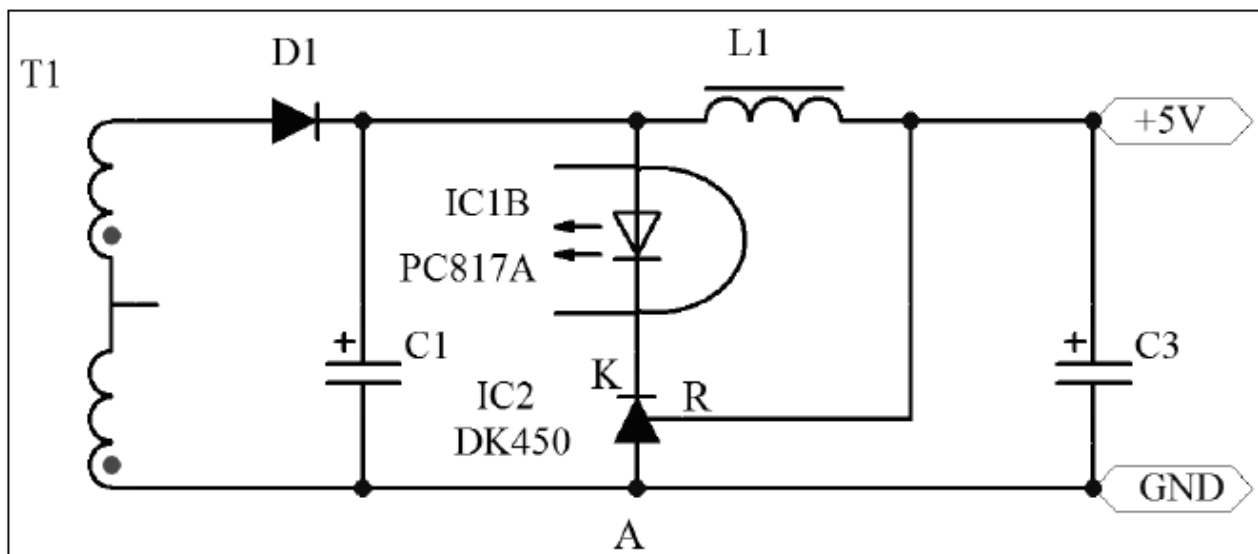
7. ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V _{cc}	Supply voltage	-0.3V--8	V
I _{vcc}	Current of supply voltage	200	uA
V _{pin}	Pin voltage	-0.3--8	V
V _{esd}	ESD withstand voltage	2.5	KV
T _c	Case operating temperature	-20--+125	°C
T _{stg}	Storage temperature	-50--+150	°C
T _{sol}	Soldering temperature	+280	°C/5S

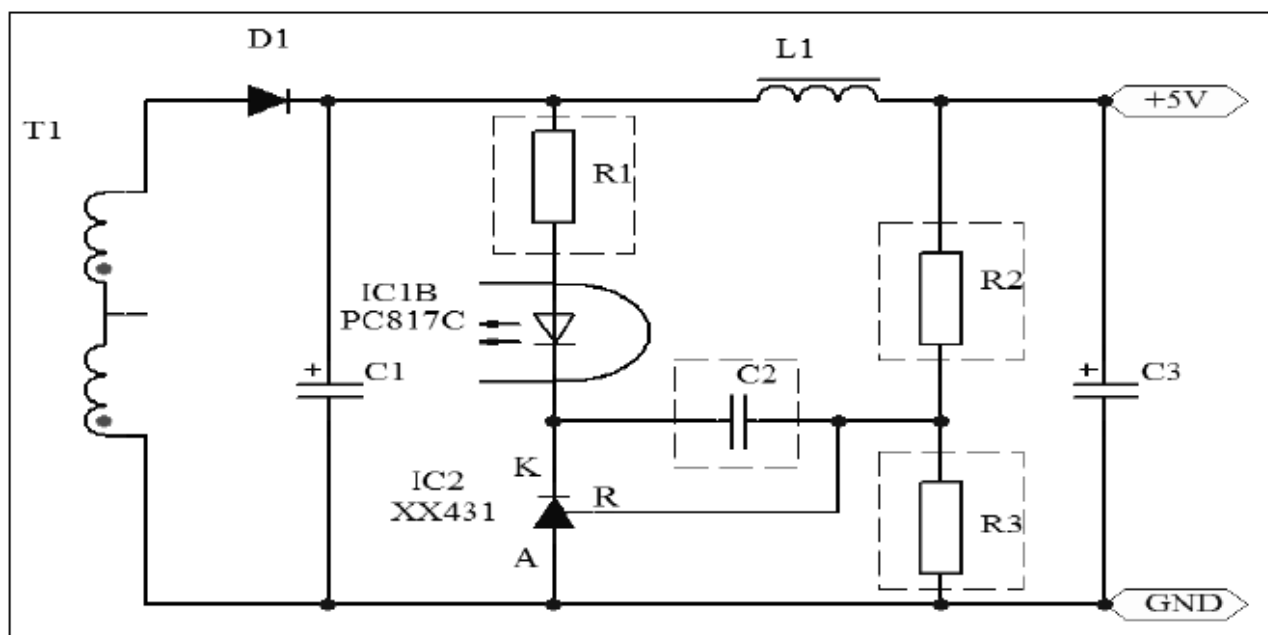
8. ELECTRICAL CHARACTERISTIC

Parameter	Condition	Value			Unit
		Min.	Typ.	Max.	
V _{cc} (Work Power Supply)	25°C	4.90	5.00	5.30	V
Current of V _{cc}	V _{DD} =5.0V	70	100	200	UA
K pin current	6V>V _{DD} >5.3V	0.2	8	15	mA
Temperature changing rate	V _{DD} =5.0V -20--+125°C	4.95	5.0	5.05	V

9. APPLICATION CIRCUIT



CIRCUIT WITH DK450 IC



NORMAL CIRCUIT WITHOUT DK450

Comparing the above two circuit, it is seen that circuit with DK450 and reduce the use of R1, R2, R3 and C2.

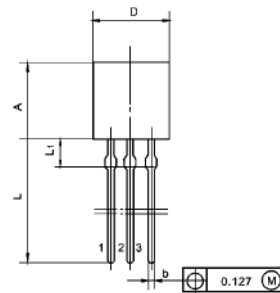
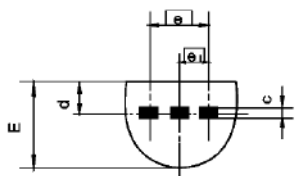
10. MECHANICAL AND PACKING INFORMATION

TO-92

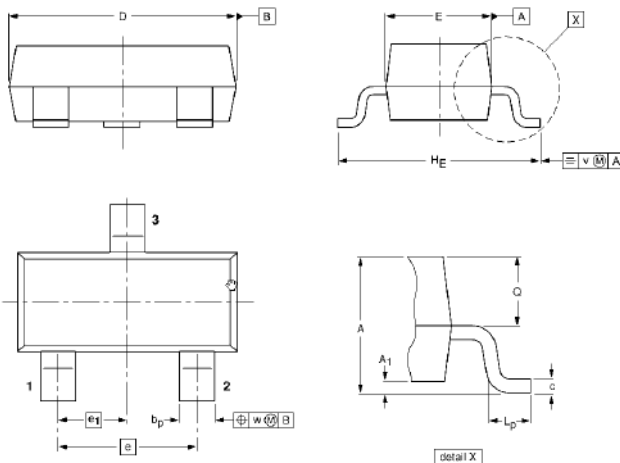
TO-92 MECHANICAL DATA

UNIT: mm

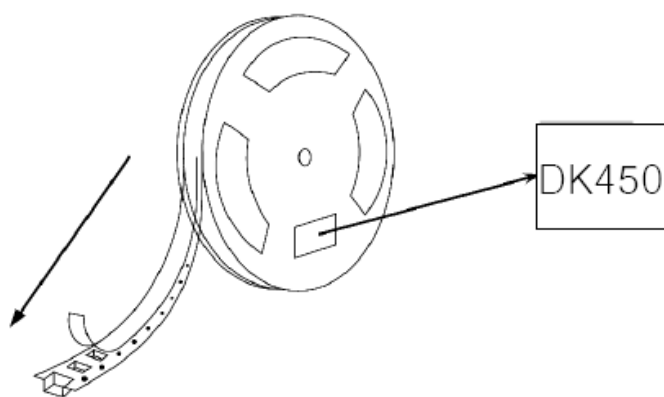
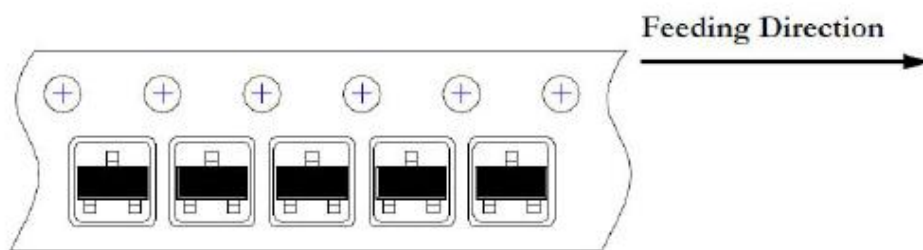
SYMBOL	min	nom	max
A	4.3		5.3
b	0.3		
c	0.3		
Φ D	4.3		5.2
d	1.0		1.7
E	3.2		4.2
e		2.54	
e1		1.27	
L	12.7		
L1			2.0



SOT-23



UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1



•Packing quantity

MODEL	QTY/inner carton	QTY/master carton
TO-92	1000	10000
SOT-23	3000	30000