

## 250mA Low Power LDO Low Power Consumption LDO HK73XX Series

### General Description

The HK73XX series are a group of positive voltage output, three-pin regulator, that provide a high current even when the input/output voltage differential is small. Low power consumption and high accuracy is achieved through CMOS technology. They allow input voltages as high as 12V.

### Features

- Ultra low quiescent current: 3.0uA(typ)
- High input voltage (up to 12v)
- Low dropout voltage :80mV@Iout=40mA (Vout=3.3v)
- Output voltage accuracy:  $\pm 2\%$
- Maximum output current: 250mA (within max.power dissipation, Vout=3.3V)
- Low temperature coefficient
- Package : SOT23-3 、 TO-92 、 SOT89-3

### Selection Guide

HK 7 3 X XX X X

Environment mark

Package:

e.g.: M3-SOT23-3

P-SOT89-3

T-TO92

Output Voltage

e.g.: 25-2.5V  
30-3.0V  
33-3.3V  
36-3.6V  
44-4.4V  
50-5.0V

Function

e.g.:A- no"CE"

Product Type

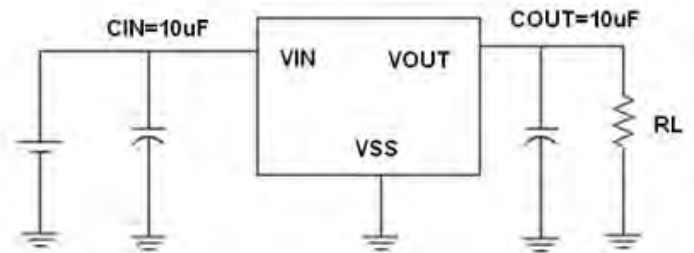
Product Series

HK

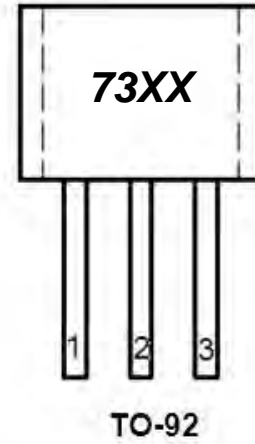
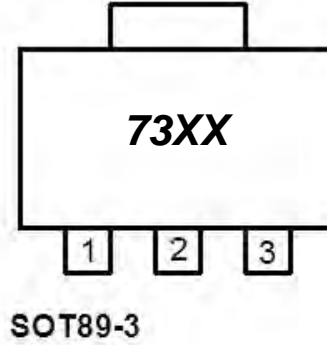
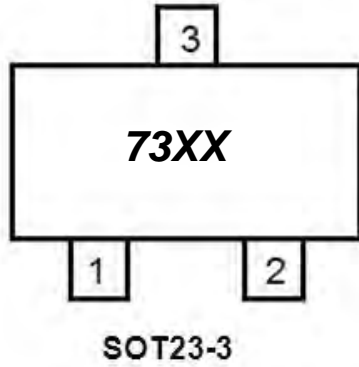
### Typical Application

- Cameras, video recorders
- Voltage regulator for microprocessor
- Voltage regulator for LAN cards
- Wireless communication equipment
- Audio/Video equipment

### Typical Application Circuit



## Pin Configuration



## Pin Assignment

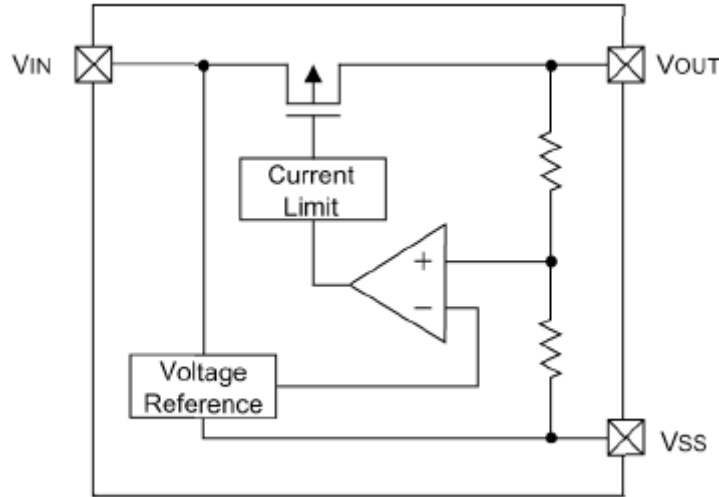
### HK73XX

Pin Number		Pin Name	Functions
SOT89-3/TO-92	SOT23-3		
1	1	$V_{SS}$	Ground
2	3	$V_{IN}$	Input
3	2	$V_{OUT}$	Output

## Absolute Maximum Ratings

Parameter	Symbol	Ratings	Units
Input Voltage	$V_{IN}$	18	V
Output Voltage	$V_{OUT}$	$V_{SS}-0.3 \sim V_{IN} + 0.3$	V
Output Current	$I_{out}$	250	mA
Operating Temperature Range	$T_{OPR}$	-40 ~ +85	°C
Storage Temperature Range	$T_{STG}$	-40 ~ +125	°C
Power Dissipation	SOT89-3	500	mW
	TO-92	500	
	SOT23-3	300	

## Block Diagram



## Electrical Characteristics

### HK7330

( $V_{IN} = V_{OUT} + 1.0V$ ,  $C_{IN} = C_L = 10\mu F$ ,  $T_a = 25^\circ C$ , unless otherwise noted)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT(E)}$ (Note 2)	$I_{OUT} = 40mA$ , $V_{IN} = V_{out} + 1V$	X 0.98	$V_{OUT(T)}$ (Note 1)	X 1.02	V
Input Voltage	$V_{IN}$				18	V
Maximum Output Voltage	$I_{OUT\_max}$	$V_{IN} = V_{out} + 1V$	250			mA
Load Regulation	$\Delta V_{OUT}$	$V_{IN} = V_{out} + 1V$ , $1mA \leq I_{OUT} \leq 60mA$		15	40	mV
Dropout Voltage (Note 3)	$V_{dif}$	$I_{OUT} = 40mA$		80		mV
Supply Current	$I_{SS}$	$V_{IN} = V_{out} + 1V$		3	4	$\mu A$
Line Regulations	$\frac{\Delta V_{OUT}}{\Delta V_{IN}} \times V_{OUT}$	$I_{OUT} = 40mA$ $V_{out} + 1V \leq V_{IN} \leq 18V$		0.1	0.2	%/V
$\Delta V_{OUT} / \Delta T_a$	Temperature Coefficient	$V_{IN} = V_{out} + 1V$ , $I_{OUT} = 40mA$ $-40^\circ C < T_a < 85^\circ C$		$\pm 0.7$		mV/ $^\circ C$

### HK7340

( $V_{IN} = V_{OUT} + 1.0V$ ,  $C_{IN} = C_L = 10\mu F$ ,  $T_a = 25^\circ C$ , unless otherwise noted)

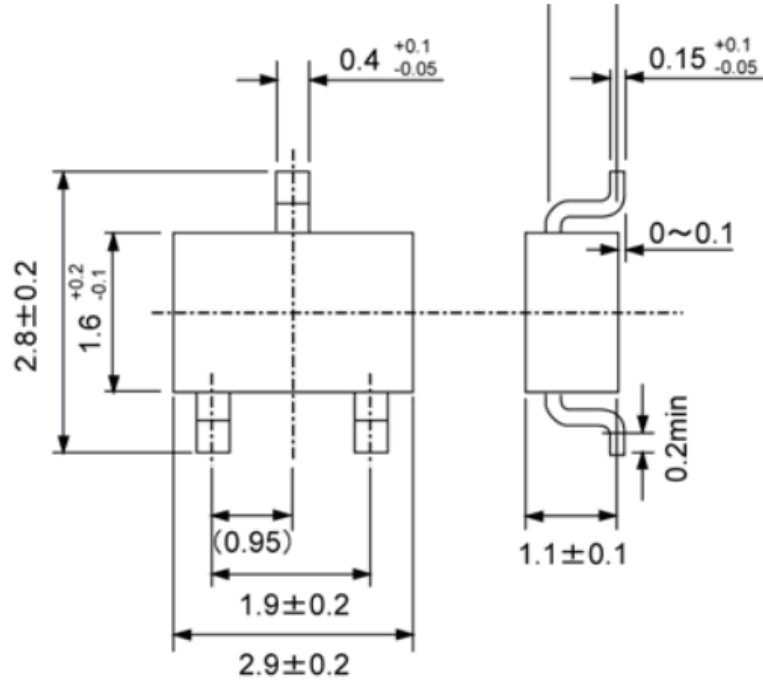
Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Output Voltage	$V_{OUT(E)}$ (Note 2)	$I_{OUT} = 40mA$ , $V_{IN} = V_{out} + 1V$	X 0.98	$V_{OUT(T)}$ (Note 1)	X 1.02	V
Input Voltage	$V_{IN}$				18	V
Maximum Output Voltage	$I_{OUT\_max}$	$V_{IN} = V_{out} + 1V$	250			mA
Load Regulation	$\Delta V_{OUT}$	$V_{IN} = V_{out} + 1V$ , $1mA \leq I_{OUT} \leq 60mA$		15	40	mV
Dropout Voltage (Note 3)	$V_{dif}$	$I_{OUT} = 40mA$		70		mV
Supply Current	$I_{SS}$	$V_{IN} = V_{out} + 1V$		3	4	$\mu A$
Line Regulations	$\frac{\Delta V_{OUT}}{\Delta V_{IN}} \times V_{OUT}$	$I_{OUT} = 40mA$ $V_{out} + 1V \leq V_{IN} \leq 18V$		0.1	0.2	%/V
$\Delta V_{OUT} / \Delta T_a$	Temperature Coefficient	$V_{IN} = V_{out} + 1V$ , $I_{OUT} = 40mA$ $-40^\circ C < T_a < 85^\circ C$		$\pm 0.7$		mV/ $^\circ C$

Note :

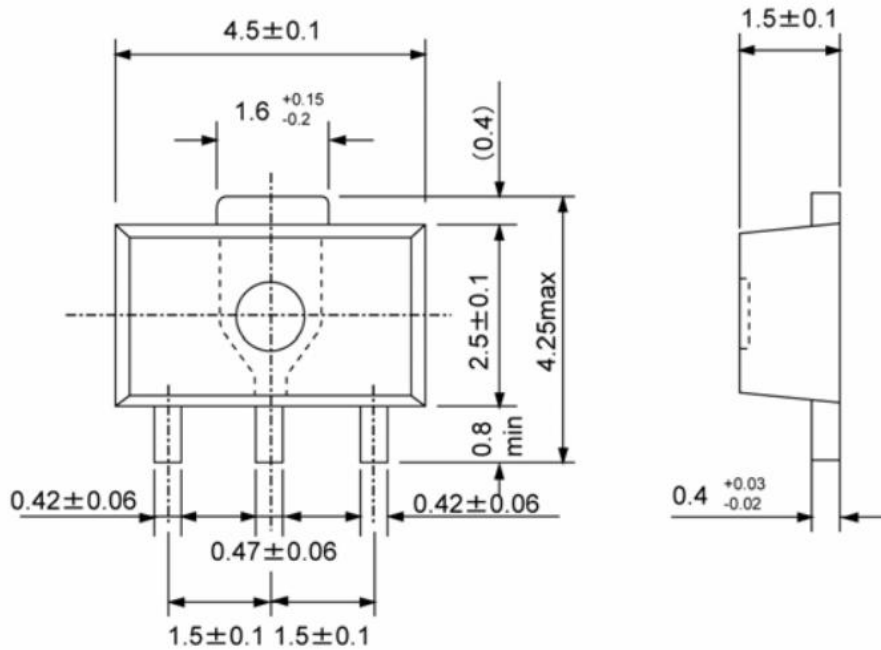
- $V_{OUT(T)}$  : Specified Output Voltage
- $V_{OUT(E)}$  : Effective Output Voltage ( ie. The output voltage when " $V_{OUT(T)} + 1.0V$ " is provided at the Vin pin while maintaining a certain Iout value.)
- $V_{DIF} = V_{IN1} - V_{OUT(E)}$   
 $V_{IN1}$  : The input voltage when  $V_{OUT(E)}$  appears as input voltage is gradually decreased.  
 $V_{OUT(E)}$  = A voltage equal to 98% of the output voltage whenever an amply stabilized Iout and  $\{V_{OUT(T)} + 1.0V\}$  is input.

Packaging Information:

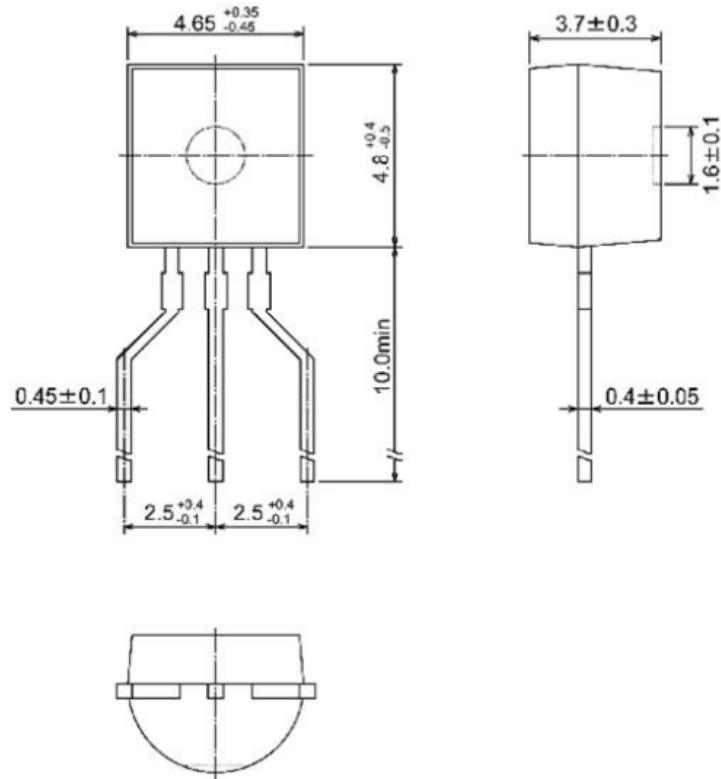
● SOT23-3



● SOT89-3



● TO-92





做中国自主知识产权核心处理器  
MCU/DSP/CPU芯片级大脑领导者

# 深圳市航顺芯片技术研发有限公司 航顺浩瀚处理器（广州）有限公司

国家高新技术企业 深圳龙华2017年八大重点签约引进企业  
航顺芯片32位通用MCU之M0 M3 M4世界级超低功耗  
性能超稳定 开发工具全兼容进口 软硬件全兼容进口

HK73XX

- The information described herein is subject to change without notice.
- Shanghai Hangshun One Electronics Inc is not responsible for any problems caused by circuits or diagrams described herein whose related industrial properties, patents, or other rights belong to third parties. The application circuit examples explain typical applications of the products, and do not guarantee the success of any specific mass-production design.
- Use of the information described herein for other purposes and/or reproduction or copying without the express permission of Shanghai Hangshun One Electronics Inc is strictly prohibited.
- The products described herein cannot be used as part of any device or equipment affecting the human body, such as exercise equipment, medical equipment, security systems, gas equipment, or any apparatus installed in airplanes and other vehicles, without prior written permission of Shanghai Hangshun One Electronics Inc.
- Although Shanghai Hangshun One Electronics Inc exerts the greatest possible effort to ensure high quality and reliability, the failure or malfunction of semiconductor products may occur. The user of these products should therefore give thorough consideration to safety design, including redundancy, fire-prevention measures, and malfunction prevention, to prevent any accidents, fires, or community damage that may ensue.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [LDO Voltage Regulators](#) category:*

*Click to view products by [HK manufacturer](#):*

Other Similar products are found below :

[M38D29FFHP#U1](#) [702103A](#) [717726C](#) [742457H](#) [MP20051DN-LF-Z](#) [R5F111PGGFB#30](#) [AP7363-SP-13](#) [NCP103AMX285TCG](#)  
[NCV8664CST33T3G](#) [NCV8752AMX28TCG](#) [L9454](#) [AP7362-HA-7](#) [LX13043CLD](#) [TCR3DF185,LM\(CT](#) [TCR3DF24,LM\(CT](#)  
[TCR3DF285,LM\(CT](#) [TCR3DF31,LM\(CT](#) [TCR3DF45,LM\(CT](#) [TLF4949EJ](#) [L9708](#) [L970813TR](#) [030014BB](#) [059985X](#) [EAN61387601](#)  
[EAN61573601](#) [NCP121AMX173TCG](#) [NCP4687DH15T1G](#) [NCV8703MX30TCG](#) [701326R](#) [702087BB](#) [755078E](#) [TCR2EN28,LF\(S](#)  
[LM1117DT-1.8/NO](#) [LT1086CM#TRPBF](#) [AZ1085S2-1.5TRE1](#) [MAX15101EWL+T](#) [NCV8170AXV250T2G](#) [SCD337BTG](#)  
[TCR3DF27,LM\(CT](#) [TCR3DF19,LM\(CT](#) [TCR3DF125,LM\(CT](#) [TCR2EN18,LF\(S](#) [MAX15103EWL+T](#) [TS2937CZ-5.0 C0](#) [MAX8878EUK30-](#)  
[T](#) [MAX663CPA](#) [NCV4269CPD50R2G](#) [NCV8716MT30TBG](#) [AZ1117IH-1.2TRG1](#) [MP2013GQ-P](#)