

SHR3430 Low-Drift, Low-Power, Small-Footprint Series Voltage Reference

1 Features

- Initial accuracy: $\pm 0.08\%$ (maximum)
- Temperature coefficient: 3 ppm/ $^{\circ}\text{C}$
- Operating temperature range: -40°C to $+125^{\circ}\text{C}$
- Output current: $\pm 10\text{ mA}$
- Low quiescent current: 125 μA
- Ultra-low zero load dropout voltage: 200 mV
- Input voltage: 2.7 ~ 5.5 V
- Output 1/f noise (0.1 Hz to 10 Hz): 15 $\mu\text{Vp-p/V}$
- Long-term stability: 45 ppm/1000 hrs
- Small footprint 6 pin SOT-23 package pinouts:

2 Applications

- Data acquisition systems
- Analog I/O modules
- Field transmitters
- Lab & field instrumentation
- Servo drive control modules
- DC power supply, AC source, electronic load

3 Description

The SHR3430 device is a low temperature drift (3 ppm/ $^{\circ}\text{C}$), low-power, high-precision CMOS voltage reference, featuring $\pm 0.08\%$ initial accuracy, low operating current with power consumption less than 125 μA . This device also offers very low output noise of 15 $\mu\text{Vp-p/V}$, which enables its ability to maintain high signal integrity with high-resolution data converters in noise critical systems. With a small SOT-23 package, SHR3430 offers enhanced specifications and pin-to-pin replacement for MAX607x, REF34xx, ADR34xx and LT1790. The SHR3430 is compatible to most of the ADC and DAC.

Stability and system reliability are further improved by the low output-voltage hysteresis of the device and low long-term output voltage drift. Furthermore, the small size and low operating current of the devices (125 μA) benefit portable and battery-powered applications.

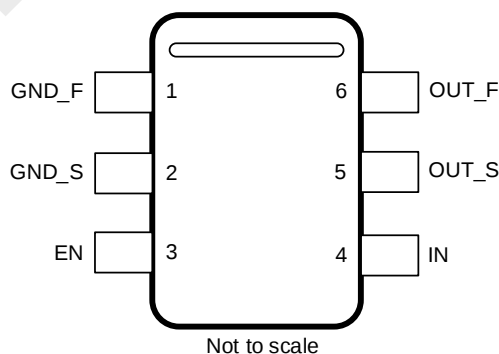
SHR3430 is specified for the wide temperature range of -40°C to $+125^{\circ}\text{C}$.

Device Information

PART NAME	PACKAGE (PIN) ⁽¹⁾	BODY SIZE (NOM)
SHR3430	SOT-23 (6)	2.92 mm $\times$ 1.62 mm

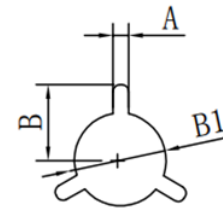
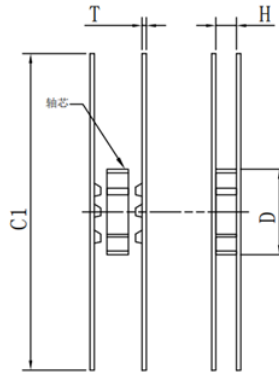
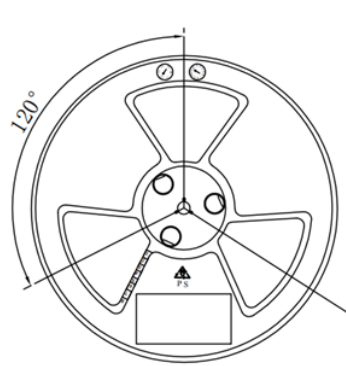
(1) For all available packages, see the orderable addendum at the end of the data sheet

PIN Configuration

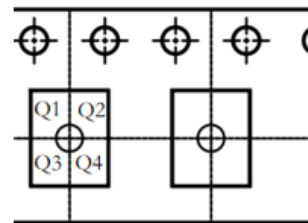


An IMPORTANT NOTICE at the end of this data sheet addresses availability, warranty, changes, use in safety-critical application, intellectual property matters and other important disclaimers. PRODUCT PREVIEW for pre-production products; subject to change without notice.

11 Tape and Reel Information



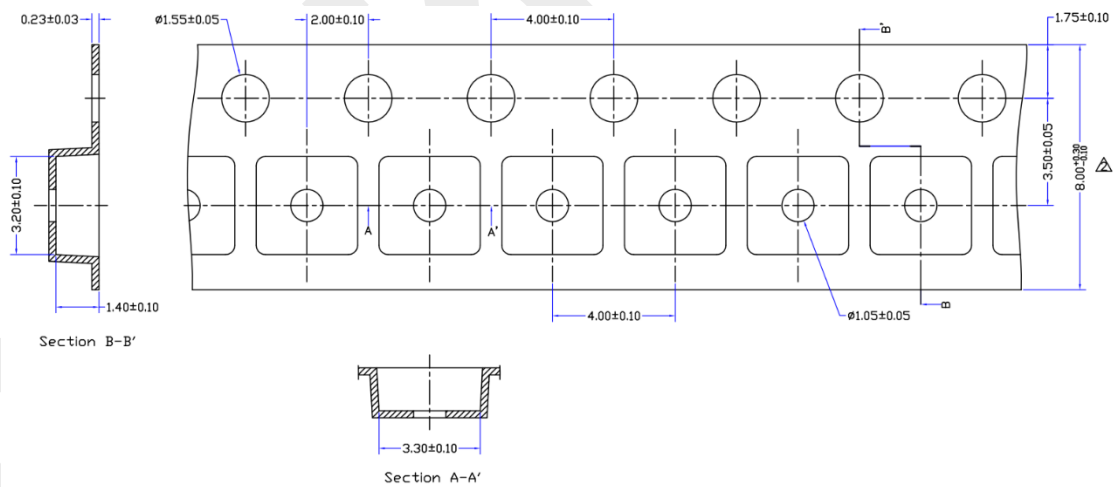
C1	178±1
H	8.4+1/-0
A	2.2±0.5
B	Ø13.5±0.2
T	1.2±0.2
D	Ø60±0.5
SPQ	3000
Part Number	SHR34XX
Pin1 Quadrant	Q2



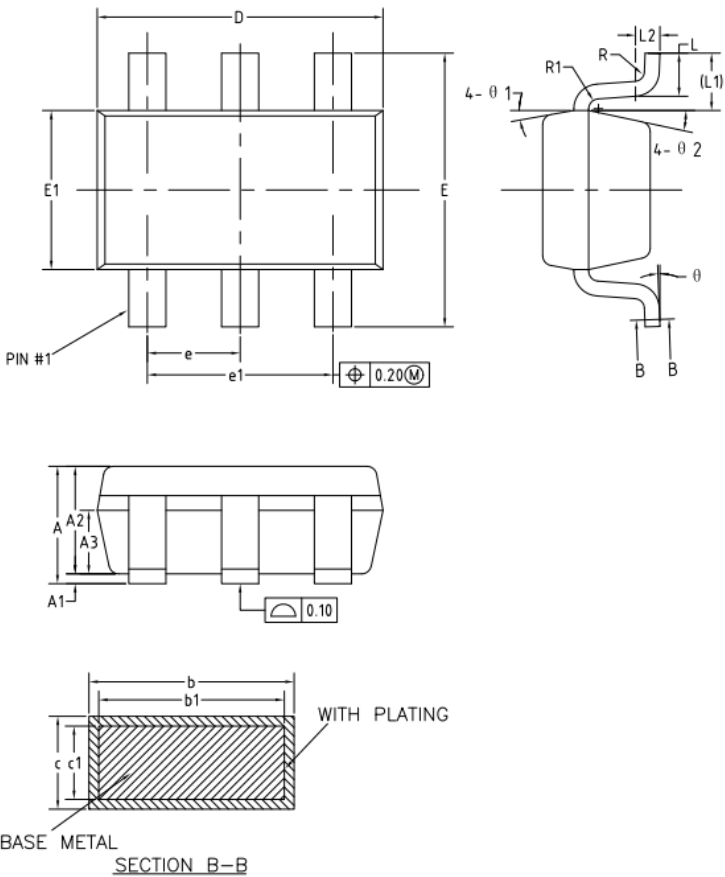
User Direction of Feed



Note: Q1~Q4 is Pocket Quadrants



12 Package Information



COMMON DIMENSIONS
(UNITS OF MEASURE=MILLIMETER)

SYMBOL	MIN	NOM	MAX
A	—	—	1.25
A1	0	—	0.15
A2	1.00	1.10	1.20
A3	0.60	0.65	0.70
b	0.34	—	0.45
b1	0.34	0.38	0.41
c	0.12	—	0.20
c1	0.12	0.15	0.16
D	2.826	2.926	3.026
E	2.60	2.80	3.00
E1	1.526	1.626	1.700
e	0.90	0.95	1.00
e1	1.80	1.90	2.00
L	0.30	0.40	0.60
L1		0.59REF	
L2		0.25BSC	
R	0.05	—	0.20
R1	0.05	—	0.20
θ	0°	—	8°
$\theta 1$	8°	10°	12°
$\theta 2$	10°	12°	14°

13 Ordering Guide

Orderable Device	Package	Package Qty	MSL-Peak-Temp	Lead Fish Plating	Op Temp (°C)	RoHS (Pb Free)
SHR3430SST6IR	SOT23-6	3000	Level 2-260°C	100%Sn	-40 to 125°C	Yes
SHR3430SST6IT	SOT23-6	250	Level 2-260°C	100%Sn	-40 to 125°C	Yes