

### SHR3440 Low-Drift, Low-Power, Small-Footprint Series Voltage Reference

## 1 Features

- Initial accuracy:  $\pm 0.08\%$  (maximum)
- Temperature coefficient: 3 ppm/°C
- Operating temperature range:  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$
- Output current:  $\pm 10\text{ mA}$
- Low quiescent current: 125  $\mu\text{A}$
- 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 SHR3440 device is a low temperature drift (3 ppm/°C), low-power, high-precision CMOS voltage reference, featuring  $\pm 0.08\%$  initial accuracy, low operating current with power consumption less than 125  $\mu\text{A}$ . 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, SHR3440 offers enhanced specifications and pin-to-pin replacement for MAX607x, REF34xx, ADR34xx and LT1790. The SHR3440 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  $\mu\text{A}$ ) benefit portable and battery-powered applications.

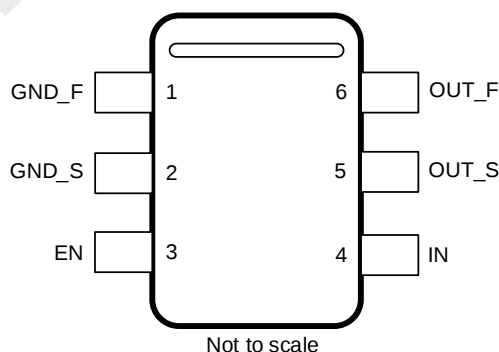
SHR3440 is specified for the wide temperature range of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .

### Device Information

| PART NAME | PACKAGE (PIN) <sup>(1)</sup> | BODY SIZE (NOM)   |
|-----------|------------------------------|-------------------|
| SHR3440   | SOT-23 (6)                   | 2.92 mm × 1.62 mm |

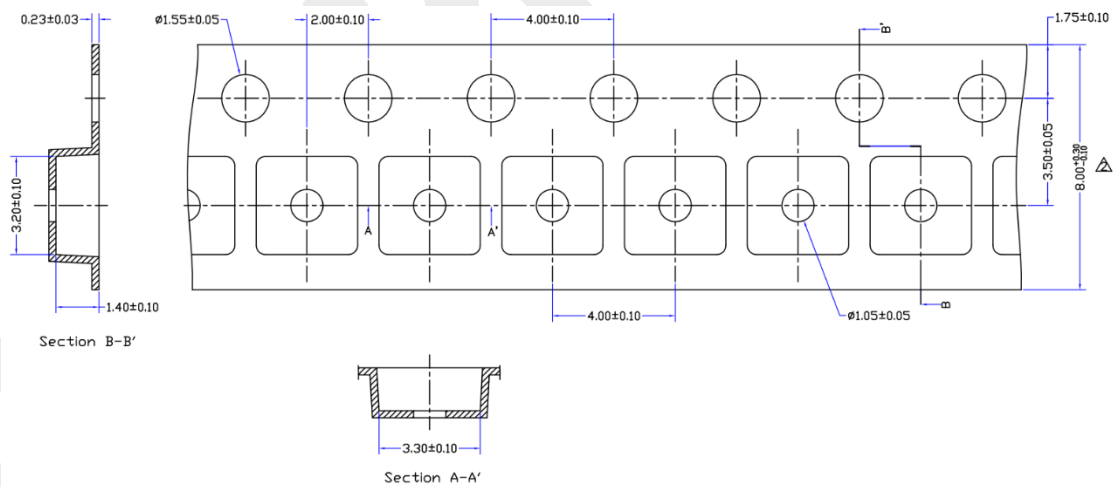
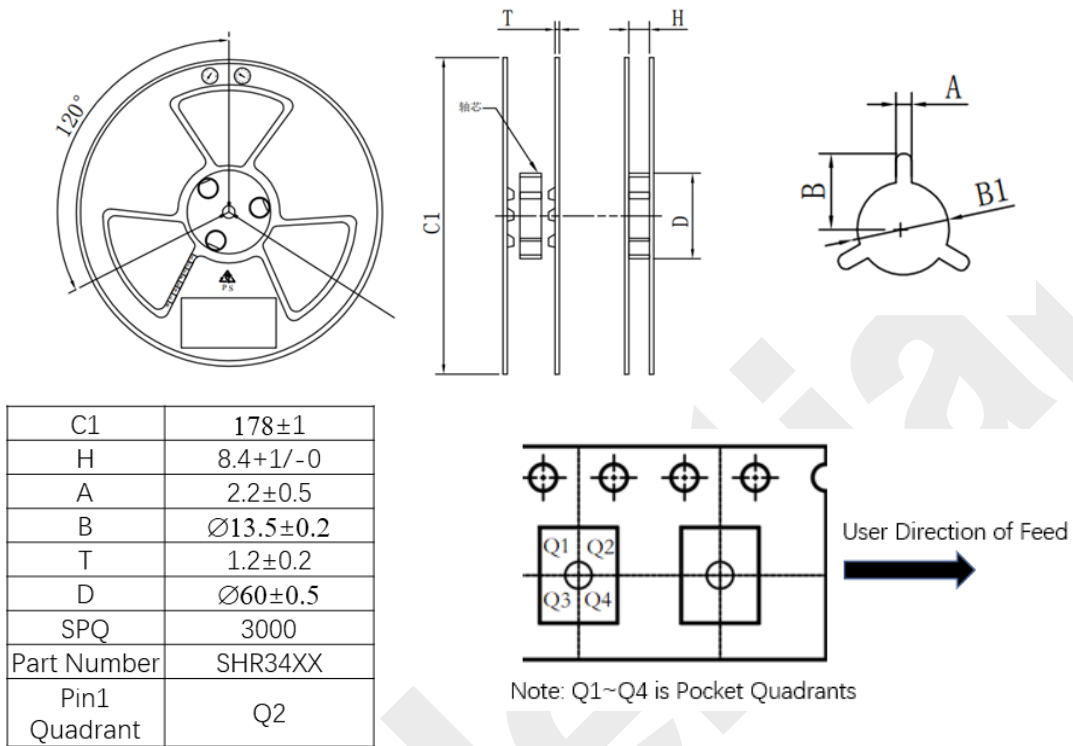
(1) For all available packages, see the orderable addendum at the end of the data sheet

### PIN Configuration

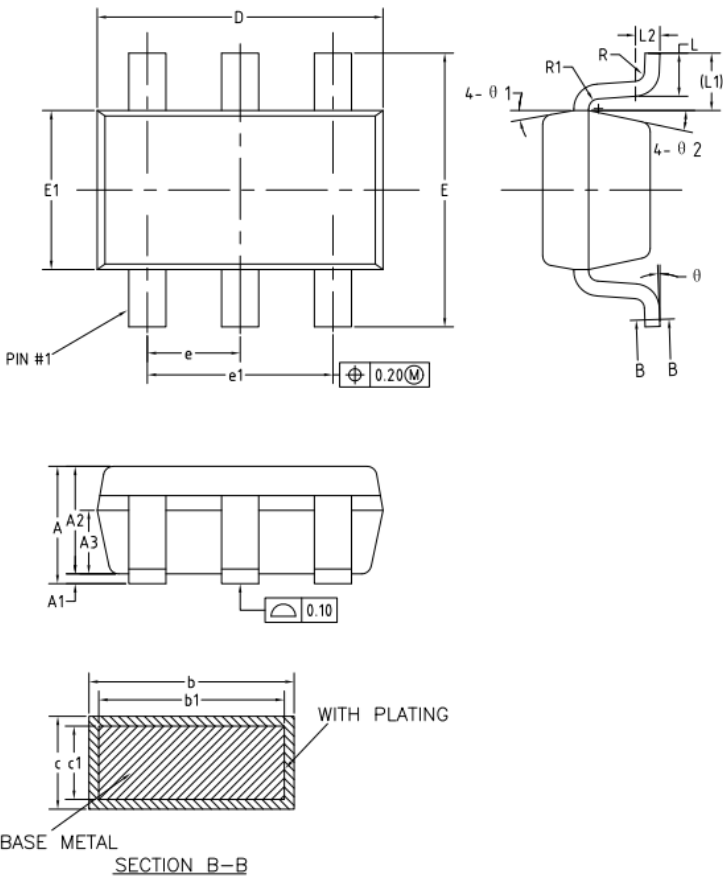


An IMPORTANT NOTICE at the end of this data sheet addresses availability, warranty, changes, use in safety-critical application, intellectual property matters and other important disclaimers. PRODUCT PREVIEW for pre-production products; subject to change without notice.

## 11 Tape and Reel Information



**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°    |
| θ 1    | 8°    | 10°     | 12°   |
| θ 2    | 10°   | 12°     | 14°   |

### 13 Ordering Guide

| Orderable Device | Package | Package Qty | MSL-Peak-Temp | Lead Fish Plating | Op Temp (°C) | RoHS (Pb Free) |
|------------------|---------|-------------|---------------|-------------------|--------------|----------------|
| SHR3440SST6IR    | SOT23-6 | 3000        | Level 2-260°C | 100%Sn            | -40 to 125°C | Yes            |
| SHR3440SST6IT    | SOT23-6 | 250         | Level 2-260°C | 100%Sn            | -40 to 125°C | Yes            |

Confidential