

SHR3012 Low-Drift, Low-Power, Small-Footprint Series Voltage Reference

1 Features

- Initial accuracy: $\pm 0.15\%$ Maximum
- Temperature coefficient: 35ppm/°C Maximum from -40°C to $+125^{\circ}\text{C}$
- 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
- Long-term stability: 45 ppm/1000 hrs
- Small footprint 3 pin SOT-23 package pinouts:

2 Applications

- Factory Automation: PLC/Transmitters/DCS
- Test Measurement Equipment
- Servo driver and Invertor
- Precision Reference for MCU's internal ADC/DAC

3 Description

The SHR3012 device is a low temperature drift (10 ppm/°C), low-power, precision CMOS voltage reference, featuring $\pm 0.15\%$ maximum initial accuracy, low operating current with power consumption less than 125 μA . This device also offers low output noise of 25 $\mu\text{Vp-p/V}$. The SHR3012 is compatible to most of the ADC and DAC, It offers a small SOT-23 package. 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.

SHR3012 is specified for the wide temperature range of -40°C to $+125^{\circ}\text{C}$.

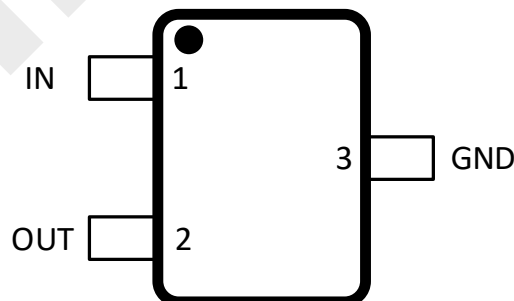
Device Information

PART NAME	PACKAGE (PIN) ⁽¹⁾	BODY SIZE (NOM)
SHR3012	SOT-23 (3)	2.90 mm × 1.30 mm

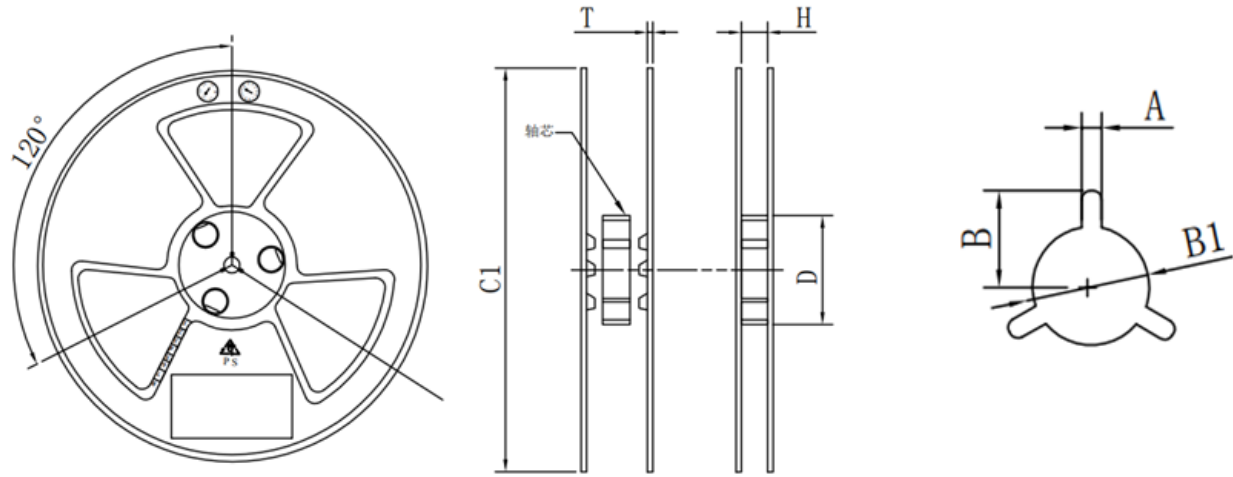
(1) For all available packages, see the orderable addendum at the end of the data sheet

PIN Configuration

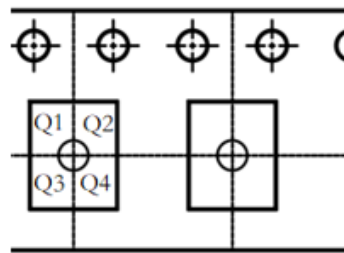
SOT23-3
Top View



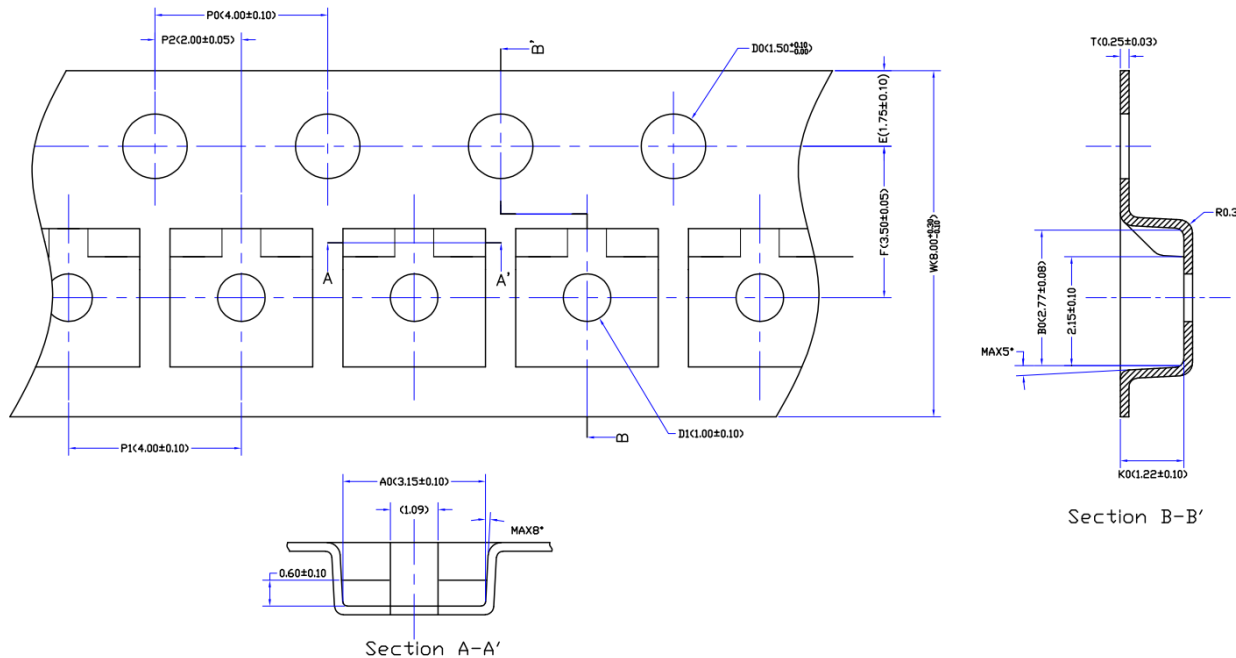
10 Tape and Reel Information



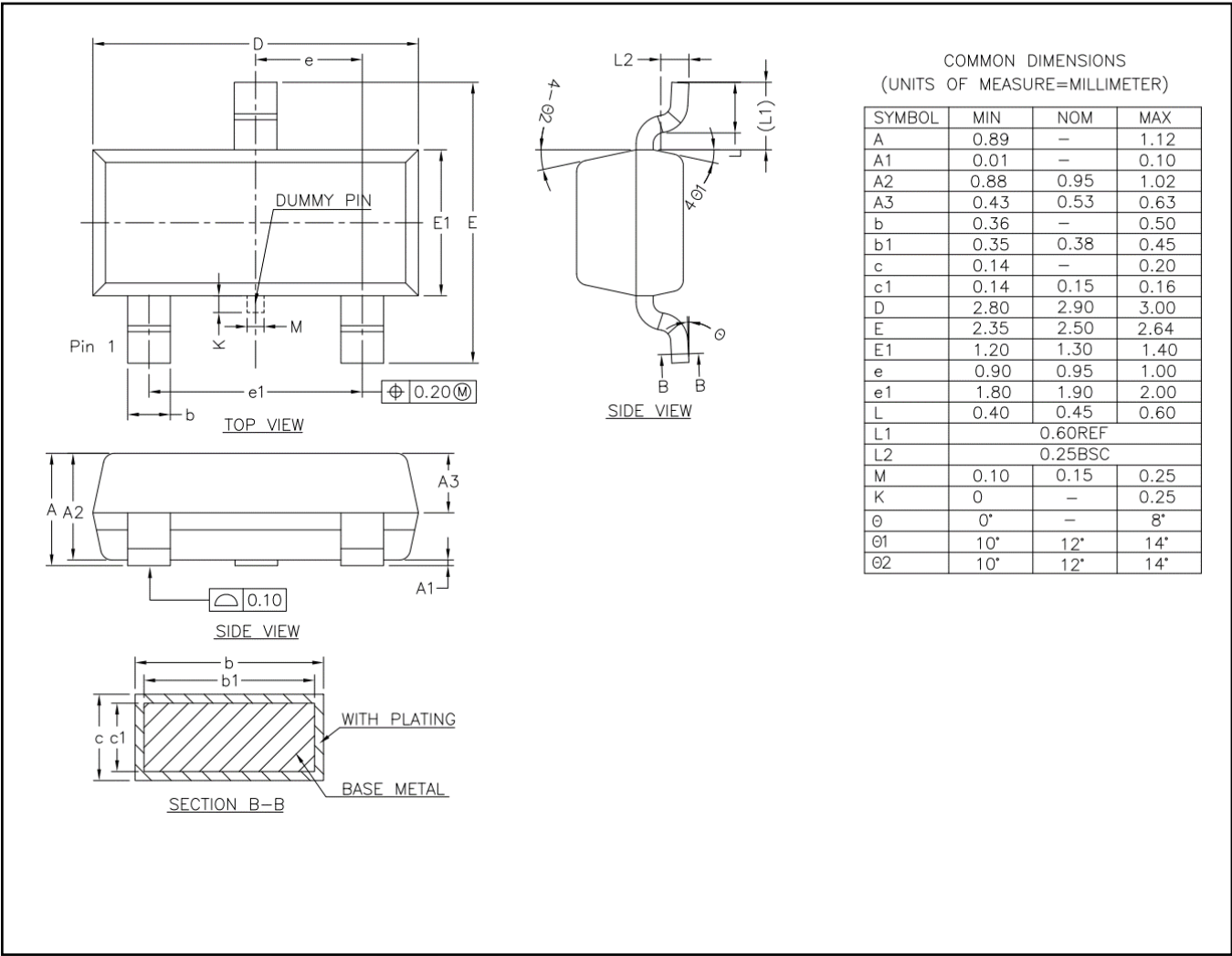
C1	178±1
H	8.4+1/-0
A	2.2±0.5
B	Ø13.5±0.2
T	1.2±0.2
D	Ø60±0.5
Pin1 Quadrant	Q3



Note: Q1~Q4 is Pocket Quadrants



11 Package Information



12 Ordering Guide

Orderable Device	Package	Package Qty	MSL-Peak Temp	Lead Fish Plating	Op Temp (°C)	RoHS (Pb Free)
SHR3012TST3IR	SOT23-3	3000	Level 1-260°C	100%Sn	-40 to 125°C	Yes
SHR3012TST3IT	SOT23-3	250	Level 1-260°C	100%Sn	-40 to 125°C	Yes