

## 33V HIGH PRECISE VOLTAGE REFERENCE

**AZ574**

### General Description

The AZ574 is a monolithic integrated voltage stabilizer especially designed for TV tuners.

The AZ574 is available in TO-92-2 package.

### Features

- Low Temperature Coefficient
- Low Dynamic Impedance
- Typical Reference Voltage of 33V
- High Cathode Current Capacity up to 30mA

### Applications

- TV Tuners

[www.DataSheet4U.com](http://www.DataSheet4U.com)

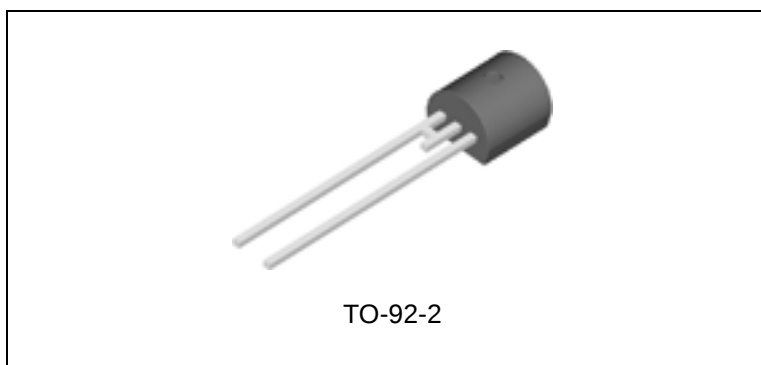


Figure 1. Package Type of AZ574

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### Pin Configuration

Z Package  
(TO-92-2)

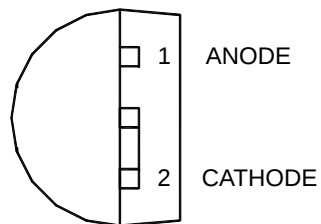


Figure 2. Pin Configuration of AZ574 (Top View)

### Functional Block Diagram

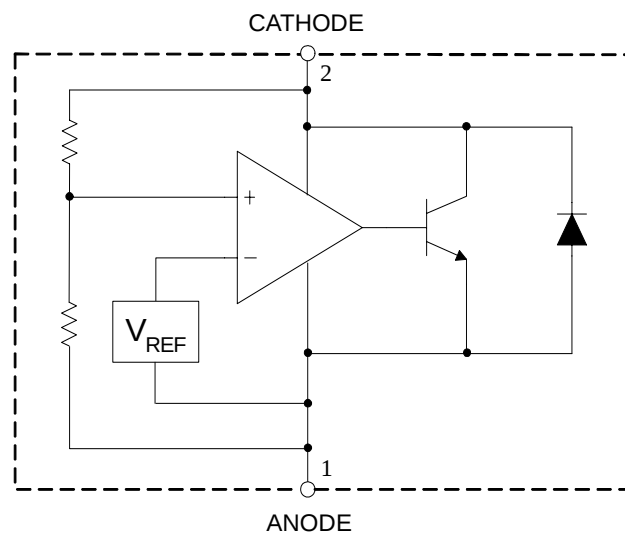
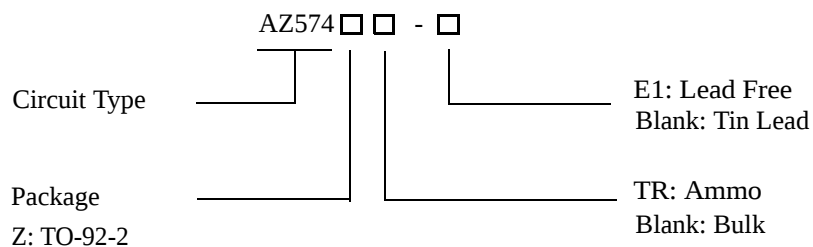


Figure 3. Functional Block Diagram of AZ574

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## Ordering Information



| Package | Temperature Range | Part Number |             | Marking ID |           | Packing Type |
|---------|-------------------|-------------|-------------|------------|-----------|--------------|
|         |                   | Tin Lead    | Lead Free   | Tin Lead   | Lead Free |              |
| TO-92-2 | -20 to 75°C       | AZ574Z      | AZ574Z-E1   | AZ574Z     | AZ574Z-E1 | Bulk         |
|         |                   | AZ574ZTR    | AZ574ZTR-E1 | AZ574Z     | AZ574Z-E1 | Ammo         |

BCD Semiconductor's Pb-free products, as designated with "E1" suffix in the part number, are RoHS compliant.

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### Absolute Maximum Ratings (Note 1)

| Parameter           | Symbol    | Value                            | Unit               |
|---------------------|-----------|----------------------------------|--------------------|
| Cathode Current     | $I_{KA}$  | 40                               | mA                 |
| Power Dissipation   | $P_D$     | 700 ( $T_A=75^{\circ}\text{C}$ ) | mW                 |
| Storage Temperature | $T_{STG}$ | -40 to 125                       | $^{\circ}\text{C}$ |

Note 1: Stresses greater than those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only, and functional operation of the device at these or any other conditions beyond those indicated under "Recommended Operating Conditions" is not implied. Exposure to "Absolute Maximum Ratings" for extended periods may affect device reliability.

### Recommended Operating Conditions

| Parameter                     | Symbol   | Min | Max | Unit               |
|-------------------------------|----------|-----|-----|--------------------|
| Operating Ambient Temperature | $T_A$    | -20 | 75  | $^{\circ}\text{C}$ |
| Operating Cathode Current     | $I_{KA}$ | 1.5 | 30  | mA                 |

### Electrical Characteristics

( $T_A=25^{\circ}\text{C}$ , unless otherwise specified.)

| Parameter                         | Symbol                   | Conditions                                                          | Min | Typ | Max | Unit                   |
|-----------------------------------|--------------------------|---------------------------------------------------------------------|-----|-----|-----|------------------------|
| Cathode Voltage                   | $V_{KA}$                 | $I_{KA}=5\text{mA}$                                                 | 31  |     | 35  | V                      |
| Cathode Voltage Temperature Drift | $\Delta V_{KA}/\Delta T$ | $I_{KA}=5\text{mA}$ , $T_A=-20$ to $75^{\circ}\text{C}$<br>(Note 2) |     | 0.6 |     | mV/ $^{\circ}\text{C}$ |
| Dynamic Impedance                 | $Z_{KA}$                 | $I_{KA}=5\text{mA}$ , $f=1\text{KHz}$ , $I_{AC}=0.5\text{mA}$       |     | 5   | 12  | $\Omega$               |

Note 2: Cathode voltage temperature drift is defined as maximum (worst case) change divided by the total temperature range.

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## Typical Performance Characteristics

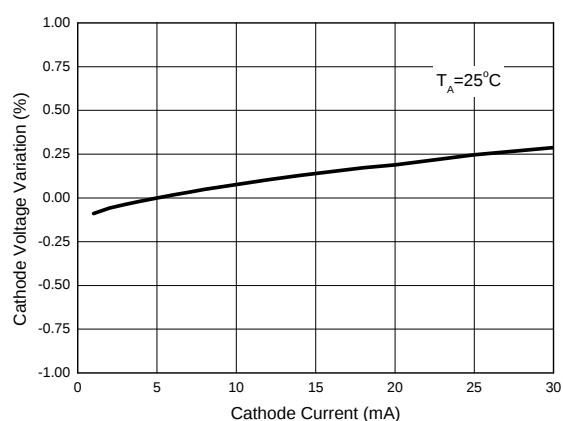


Figure 4. Cathode Voltage Variation vs. Cathode Current

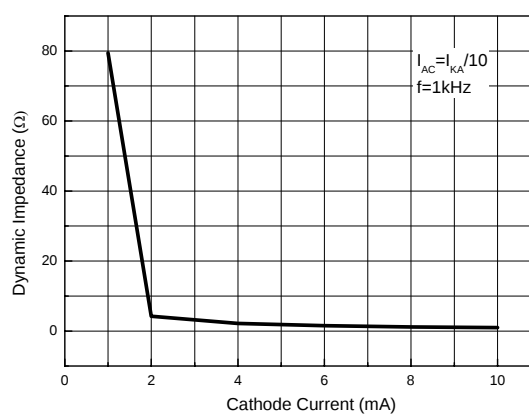


Figure 5. Dynamic Impedance vs. Cathode Current

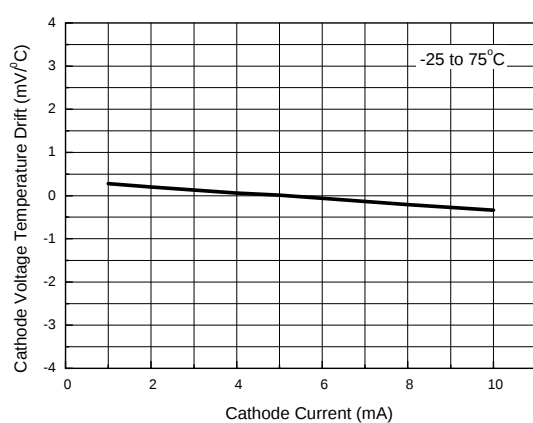


Figure 6. Cathode Voltage Temperature Drift vs. Cathode Current

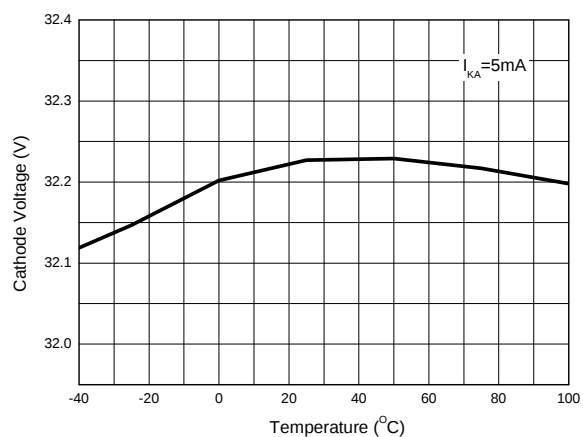


Figure 7. Cathode Voltage vs. Temperature

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## Typical Performance Characteristics (Continued)

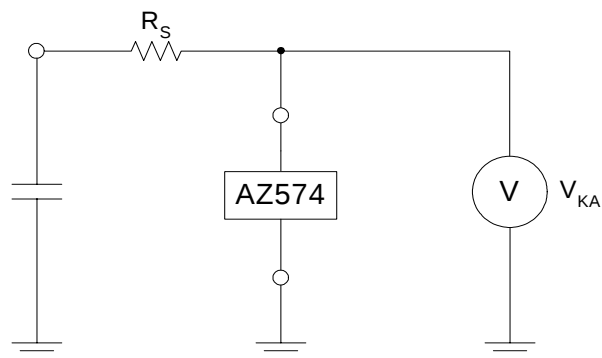
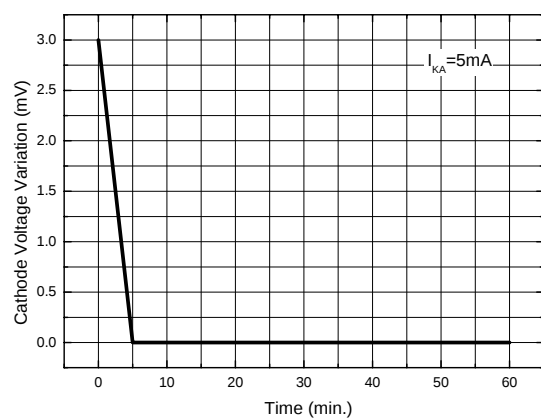


Figure 8. Cathode Voltage Variation vs. Time

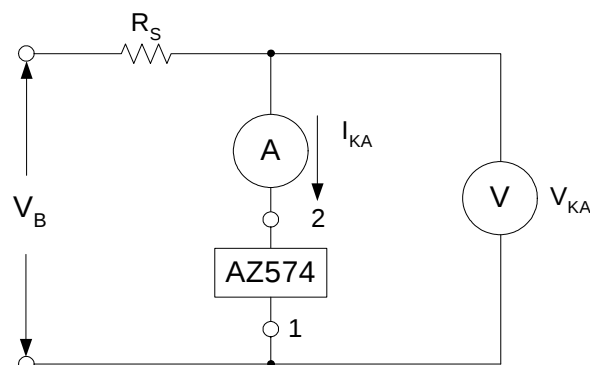
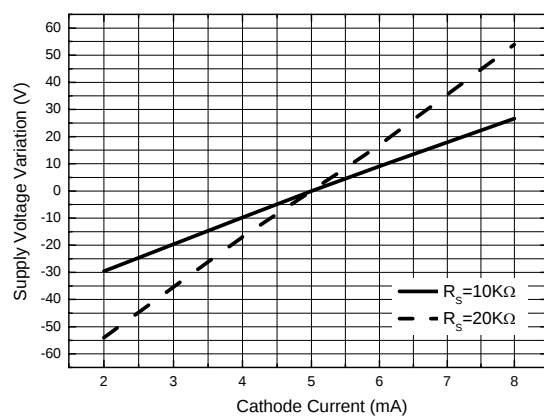


Figure 9. Supply Voltage Variation vs. Cathode Current

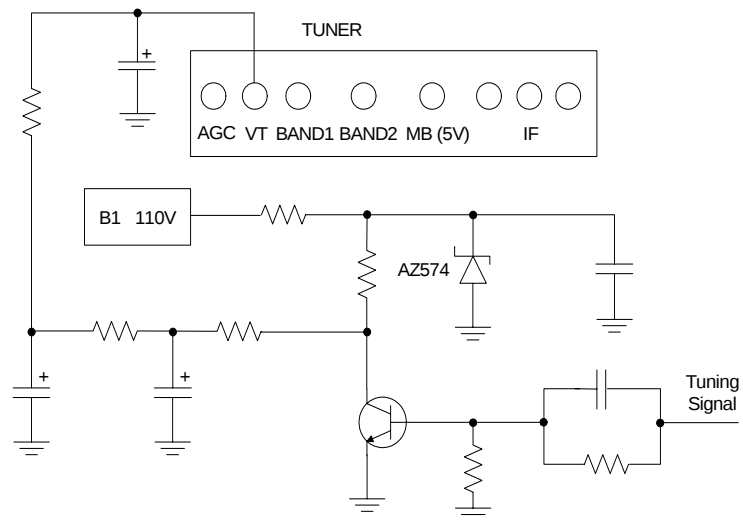
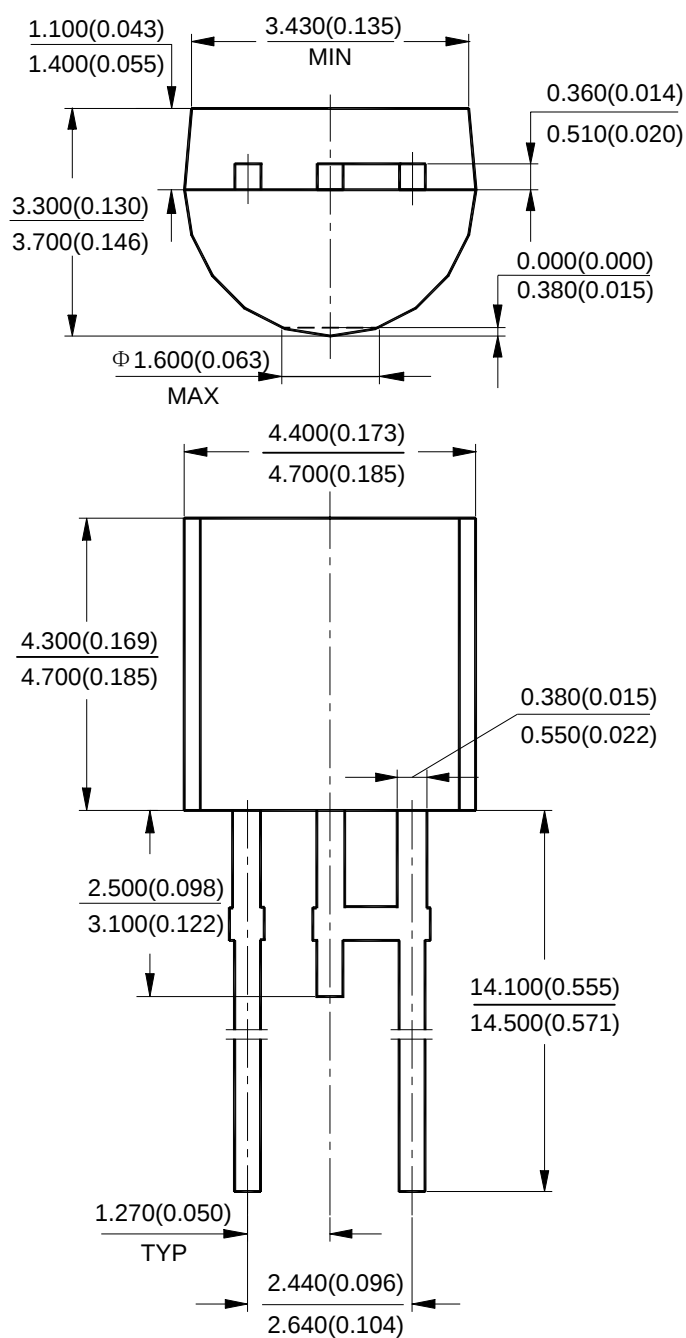
**33V HIGH PRECISE VOLTAGE REFERENCE****AZ574****Typical Application**

Figure 10. Typical Application of AZ574

**33V HIGH PRECISE VOLTAGE REFERENCE****AZ574****Mechanical Dimensions****TO-92-2****Unit: mm(inch)**



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