33V HIGH PRECISE VOLTAGE REFERENCE AZ574

General Description

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

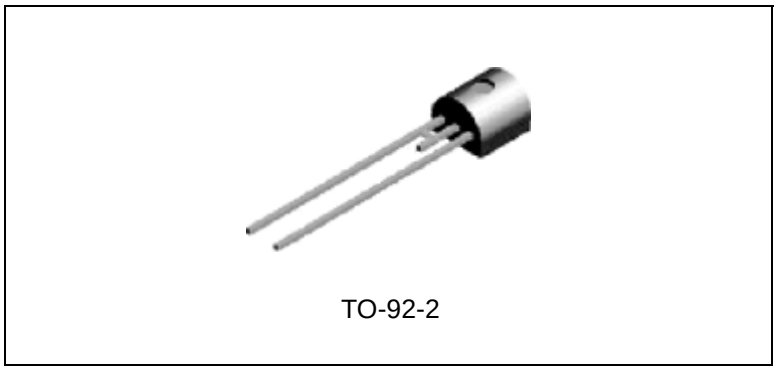
The AZ574 is available in TO-92-2 package.

Features

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

Applications

- TV Tuners



TO-92-2

Figure 1. Package Type of AZ574

Pin Configuration

Z Package
(TO-92-2)

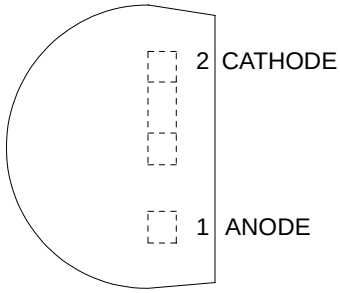


Figure 2. Pin Configuration of AZ574 (Top View)

Functional Block Diagram

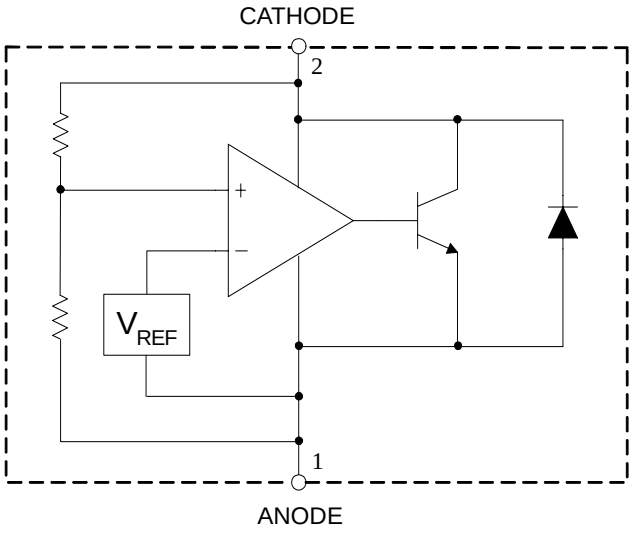
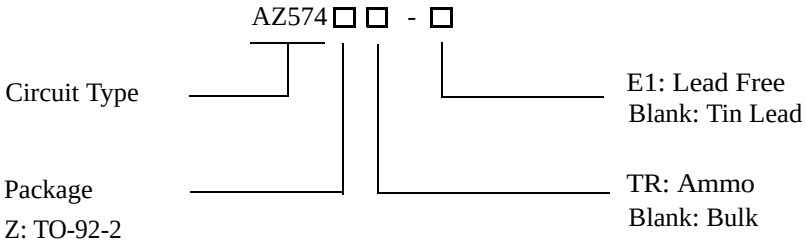


Figure 3. Functional Block Diagram of AZ574

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.

Absolute Maximum Ratings (Note 1)

Parameter	Symbol	Value	Unit
Cathode Current	I_{KA}	40	mA
Power Dissipation	P_D	700 (T_A=75°C)	mW
Storage Temperature	T_{STG}	-40 to 125	°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	°C
Operating Cathode Current	I_{KA}	1.5	30	mA

Electrical Characteristics

(T_A=25°C, unless otherwise specified.)

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

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

Typical Performance Characteristics

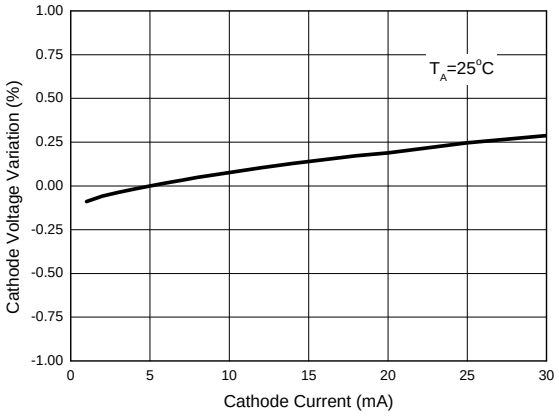


Figure 4. Cathode Voltage Variation vs. Cathode Current

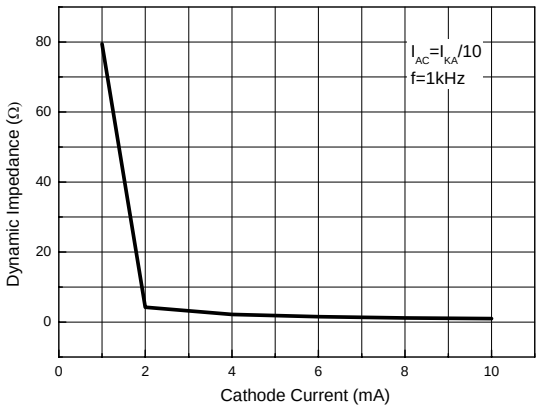


Figure 5. Dynamic Impedance vs. Cathode Current

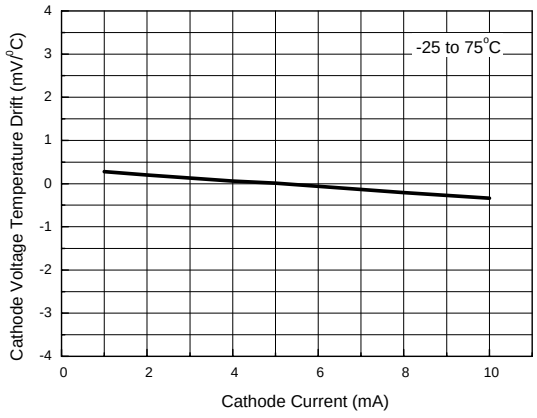


Figure 6. Cathode Voltage Temperature Drift vs. Cathode Current

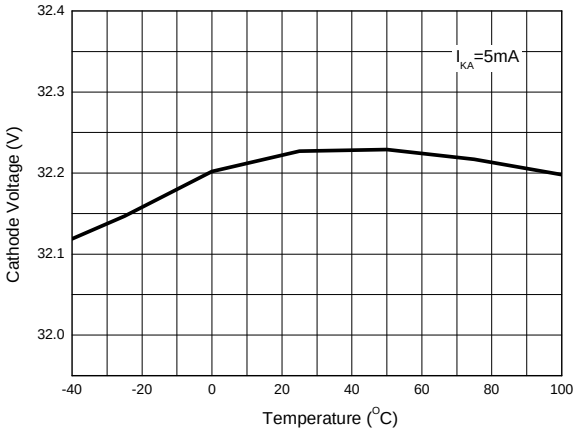


Figure 7. Cathode Voltage vs. Temperature

Typical Performance Characteristics (Continued)

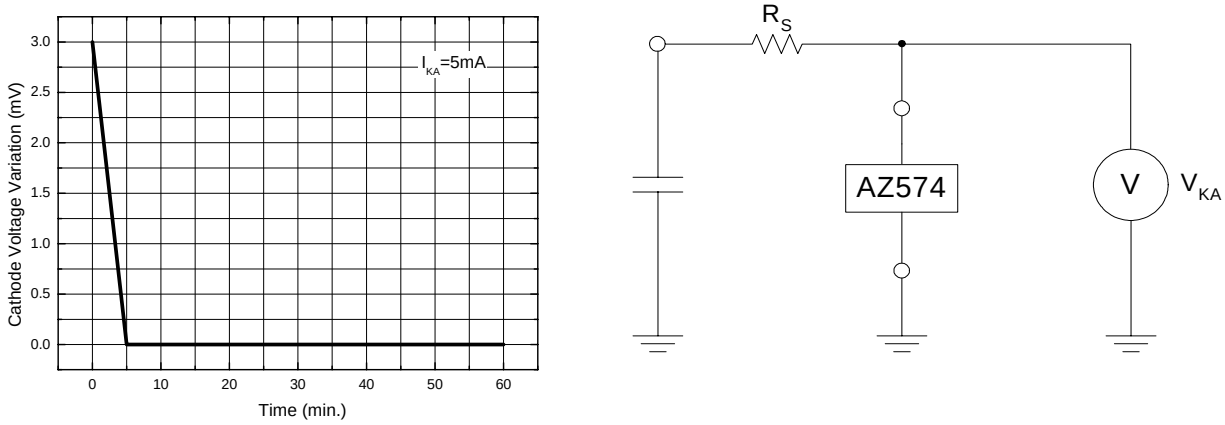


Figure 8. Cathode Voltage Variation vs. Time

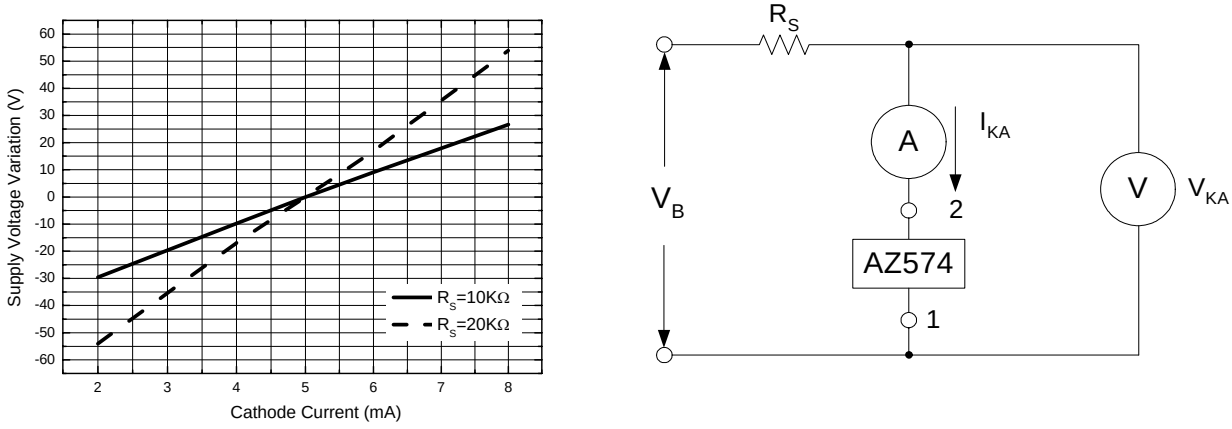


Figure 9. Supply Voltage Variation vs. Cathode Current

Typical Application

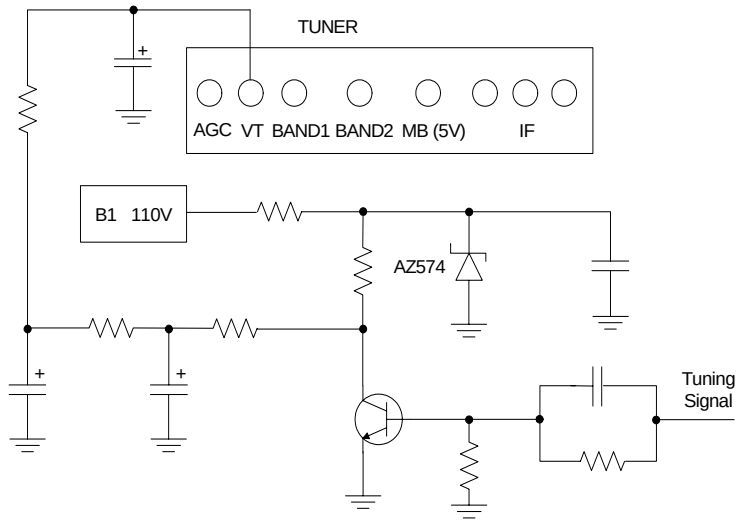
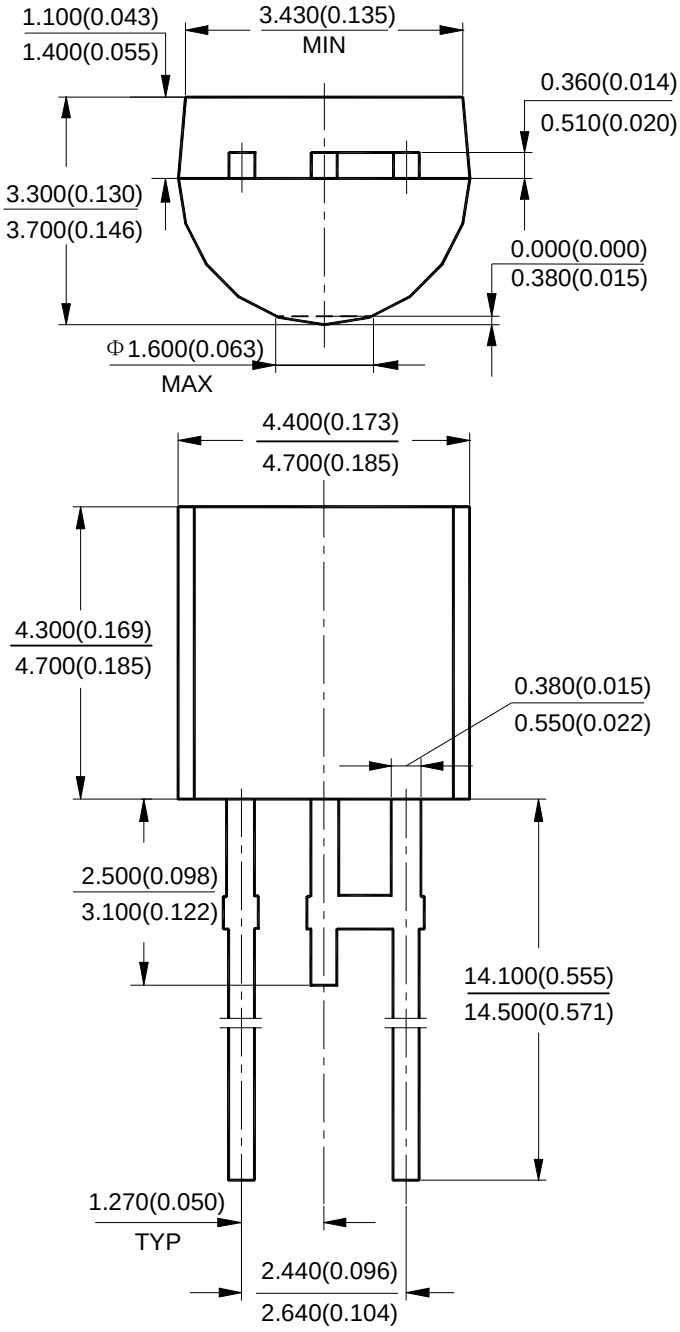


Figure 10. Typical Application of AZ574

Mechanical Dimensions

TO-92-2 **Unit: mm(inch)**



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MAIN SITE

BCD Semiconductor Manufacturing Limited
- Wafer Fab
Shanghai SIM-BCD Semiconductor Manufacturing Limited
800, Yi Shan Road, Shanghai 200233, China
Tel: +86-21-6485 1491, Fax: +86-21-5450 0008

BCD Semiconductor Manufacturing Limited
- IC Design Group
Advanced Analog Circuits (Shanghai) Corporation
8F, Zone B, 900, Yi Shan Road, Shanghai 200233, China
Tel: +86-21-6495 9539, Fax: +86-21-6485 9673

REGIONAL SALES OFFICE

Shenzhen Office
Shanghai SIM-BCD Semiconductor Manufacturing Co., Ltd. Shenzhen Office
Advanced Analog Circuits (Shanghai) Corporation Shenzhen Office
27B, Tower C, 2070, Middle Shen Nan Road, Shenzhen 518031, China
Tel: +86-755-8368 3987, Fax: +86-755-8368 3166

Taiwan Office
BCD Semiconductor (Taiwan) Company Limited
4F, 298-1, Rui Guang Road, Nei-Hu District, Taipei, Taiwan
Tel: +886-2-2656 2808, Fax: +886-2-2656 2806

USA Office
BCD Semiconductor Corporation
3170 De La Cruz Blvd., Suite 105, Santa Clara, CA 95054-2411, U.S.A
Tel: +1-408-988 6388, Fax: +1-408-988 6386