NEC

BIPOLAR ANALOG INTEGRATED CIRCUIT

μPC574

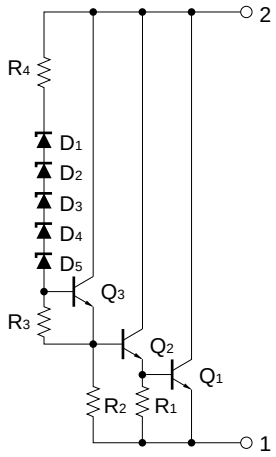
MONOLITHIC BIPOLAR INTEGRATED CIRCUIT
VOLTAGE STABILIZER FOR ELECTRONIC TUNER

The μPC574 is a monolithic integrated voltage stabilizer especially designed as voltage supplier for electronic tuners.

FEATURES

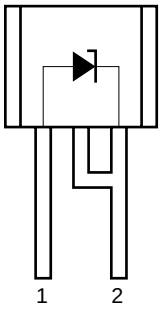
- Low temperature coefficient
- Low dynamic resistance
- Typical reference voltage of 33 V

EQUIVALENT CIRCUIT



PIN CONFIGURATION (Marking Side)

μPC574J: 2-pin plastic SIP (TO-92)



1. Anode
2. Cathode

★ ORDERING INFORMATION

Part Number	Package
μPC574J	2-pin plastic SIP (TO-92)

The information in this document is subject to change without notice.

Document No. S13200EJ4V0DS00 (4th edition)
(Previous No. IC-1006)
Date Published January 1998 N CP(K)
Printed in Japan

The mark ★ shows major revised points.

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

Parameter	Symbol	Ratings	Unit
Zener Current	I_Z	10	mA
Power Dissipation	P_D	200 (T_A = 75°C)	mW
Operating Ambient Temperature Range	T_A	–20 to +75	°C
Storage Temperature Range	T_{stg}	–40 to +125	°C

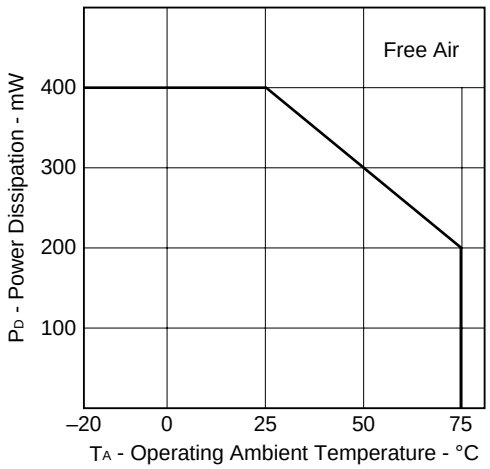
Caution Exposure to Absolute Maximum Ratings for extended periods may affect device reliability; exceeding the ratings could cause permanent damage. The parameters apply independently. The device should be operated within the limits specified under DC and AC Characteristics.

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

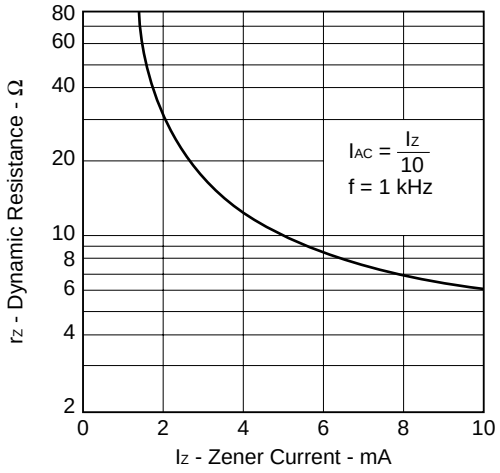
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Stabilized Voltage	V_Z	I_Z = 5 mA	31		35	V
Stabilized Voltage Temperature Drift	$\Delta V_Z/\Delta T$	I_Z = 5 mA, T_A = –20 to +75°C	–1.0	0	+1.0	mV/°C
Dynamic Resistance	r_Z	I_Z = 5 mA, f = 1 kHz, I_{AC} = 0.5 mA		10	25	Ω

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

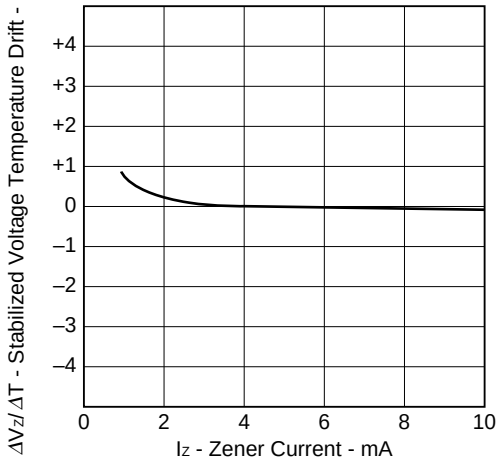
Power Dissipation vs. Ambient Temperature



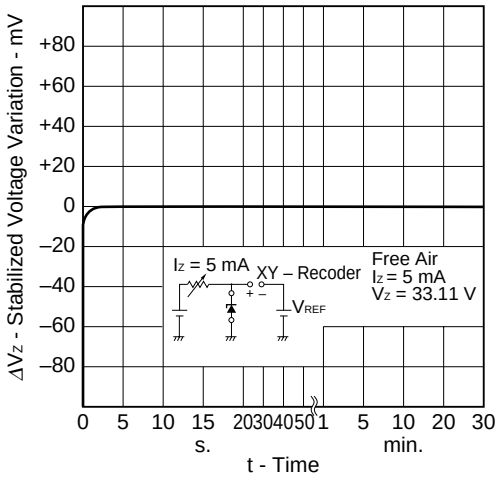
Dynamic Resistance vs. Zener Current



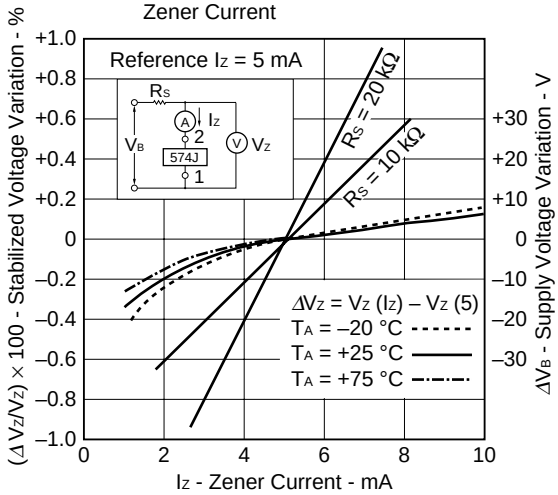
Stabilized Voltage Temperature Drift vs. Zener Current



Stabilized Voltage Variation vs. Time

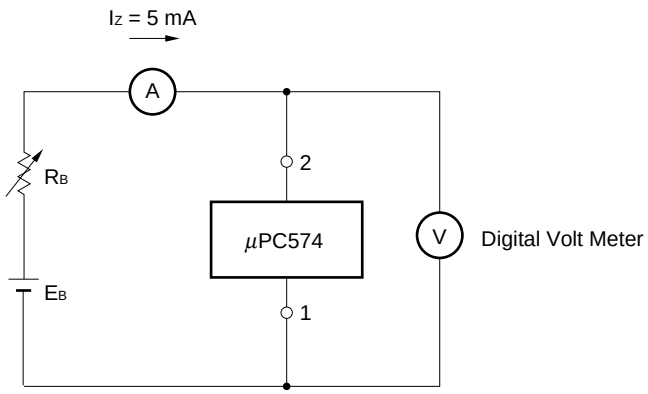


Stabilized Voltage Variation & Supply Voltage Variation vs. Zener Current

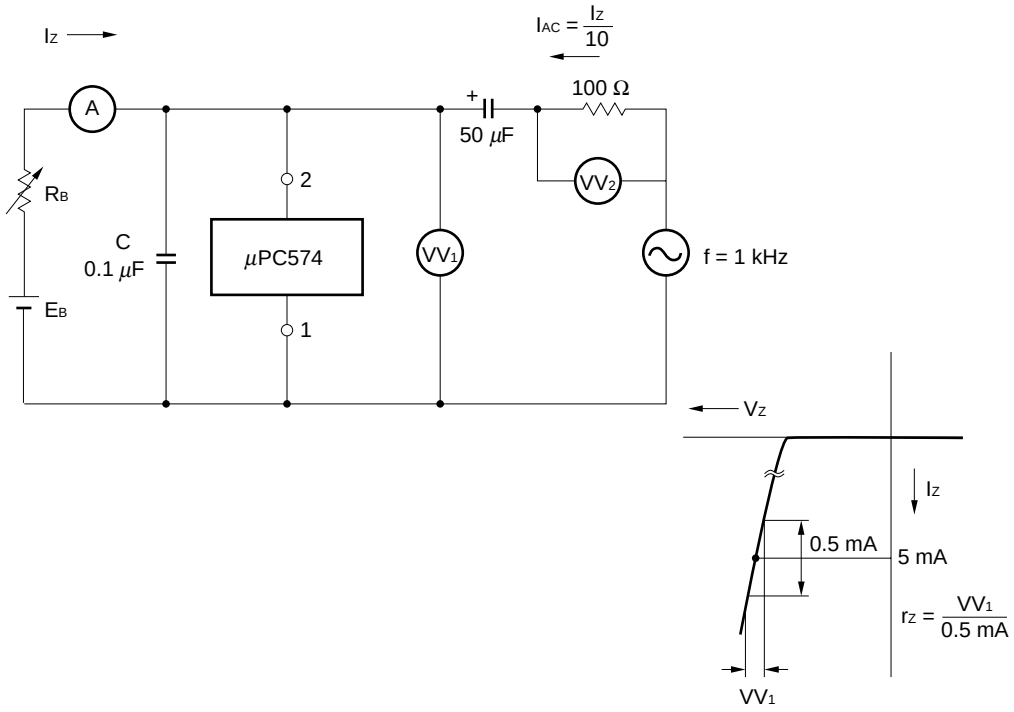


MEASURING CIRCUITS

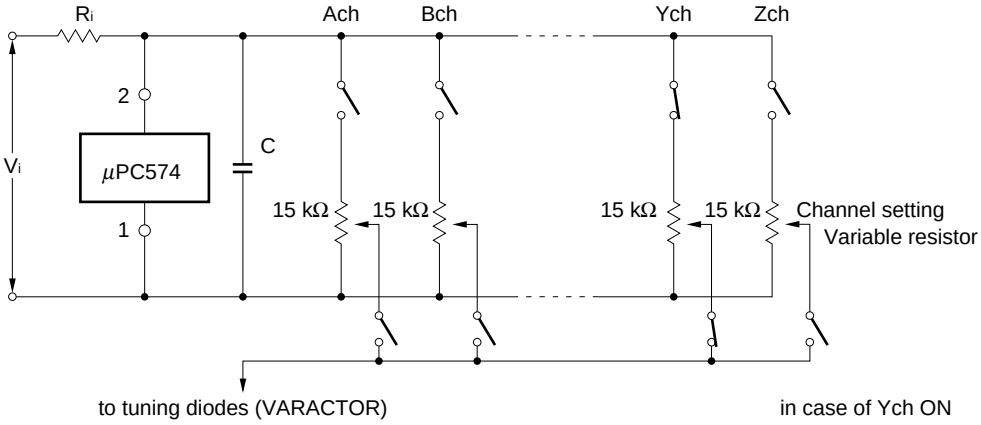
(i) Measuring Circuit for Stabilized Voltage V_Z



(ii) Measuring Circuit for Dynamic Resistance r_Z

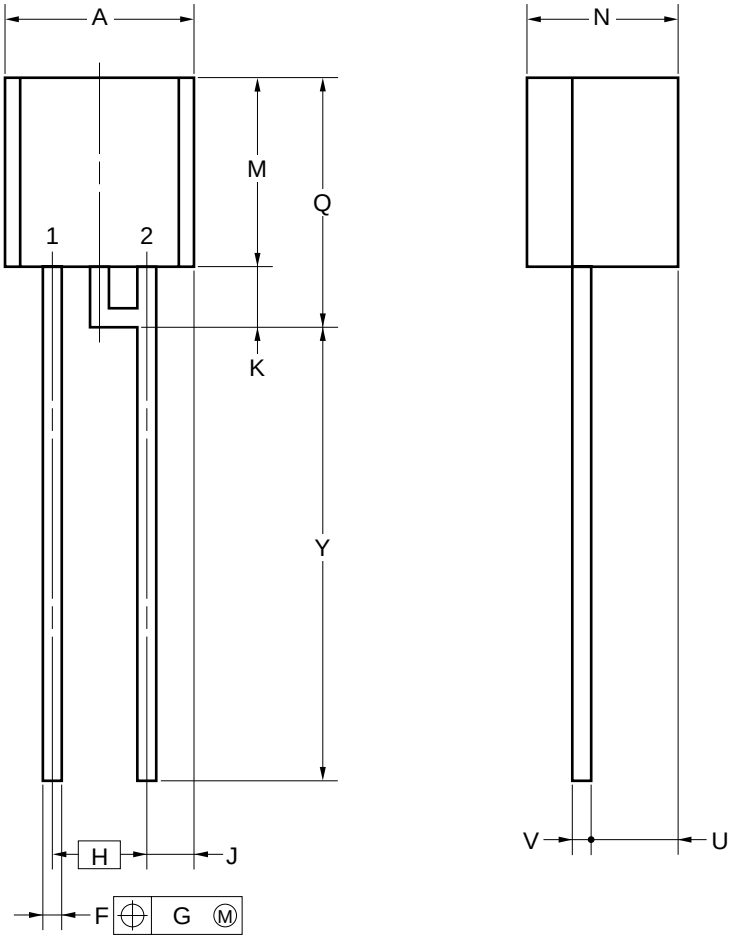


TYPICAL APPLICATION



★ **PACKAGE DRAWING**

2 PIN PLASTIC SIP (TO-92)



NOTE

Each lead centerline is located within 0.25 mm (0.01 inch) of its true position (T.P.) at maximum material condition.

ITEM	MILLIMETERS	INCHES
A	5.2 MAX.	0.205 MAX.
F	0.5±0.1	$0.02^{+0.004}_{-0.005}$
G	0.25	0.01
H	2.54	0.1
J	1.33 MAX.	0.053 MAX.
K	1.8 MIN.	0.07 MIN.
M	5.5 MAX.	0.217 MAX.
N	4.2 MAX.	0.166 MAX.
Q	8.0 MAX.	0.315 MAX.
U	2.8 MAX.	0.111 MAX.
V	0.5±0.1	$0.02^{+0.004}_{-0.005}$
Y	15.0±0.7	$0.591^{+0.028}_{-0.029}$

P2J-254B-1

★ RECOMMENDED SOLDERING CONDITIONS

When soldering this product, it is highly recommended to observe the conditions as shown below. If other soldering processes are used, or if the soldering is performed under different conditions, please make sure to consult with our sales offices.

For more details, refer to our document "**SEMICONDUCTOR DEVICE MOUNTING TECHNOLOGY MANUAL**" **(C10535E)**.

Through-hole device

μPC574J: 2-pin plastic SIP (TO-92)

Process	Conditions
Wave soldering (only to leads)	Solder temperature: 260°C or below, Flow time: 10 seconds or less.
Partial heating method	Pin temperature: 300°C or below, Heat time: 3 seconds or less (per each lead.)

Caution For through-hole device, the wave soldering process must be applied only to leads, and make sure that the package body does not get jet soldered.

[MEMO]

The application circuits and their parameters are for reference only and are not intended for use in actual design-ins.

M4 96.5