

To our customers,

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## Old Company Name in Catalogs and Other Documents

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Renesas Electronics website: <http://www.renesas.com>

April 1<sup>st</sup>, 2010  
Renesas Electronics Corporation

Issued by: Renesas Electronics Corporation (<http://www.renesas.com>)

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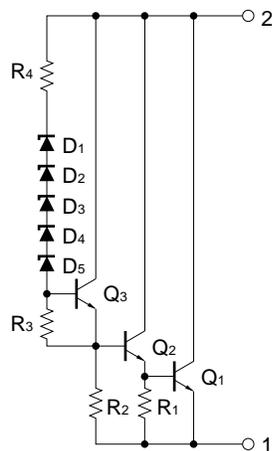
MONOLITHIC BIPOLAR INTEGRATED CIRCUIT  
VOLTAGE STABILIZER FOR ELECTRONIC TUNER

The  $\mu$ PC574 is a monolithic integrated voltage stabilizer especially designed as voltage supplier for electronic tuners.

FEATURES

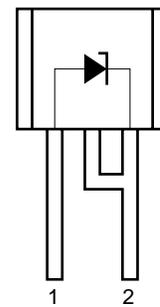
- Low temperature coefficient
- Low dynamic resistance
- Typical reference voltage of 33 V

EQUIVALENT CIRCUIT



PIN CONFIGURATION (Marking Side)

$\mu$ PC574J: 2-pin plastic SIP (TO-92)



1. Anode
2. Cathode

★ ORDERING INFORMATION

Part Number	Package
$\mu$ PC574J	2-pin plastic SIP (TO-92)

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

**ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub> = 25°C, unless otherwise specified.)**

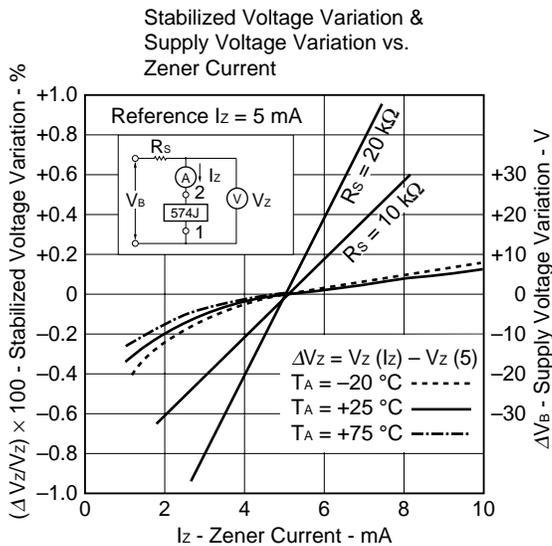
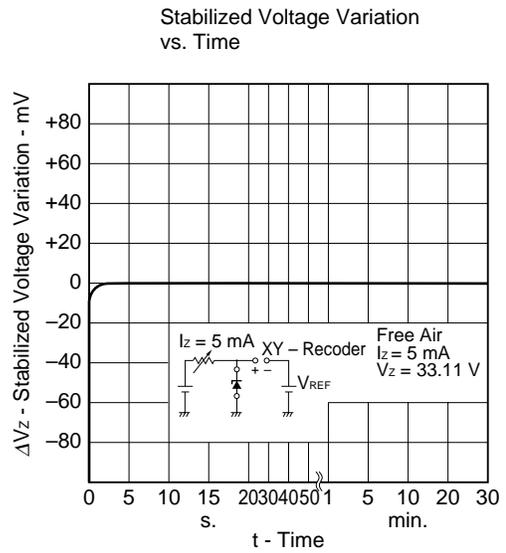
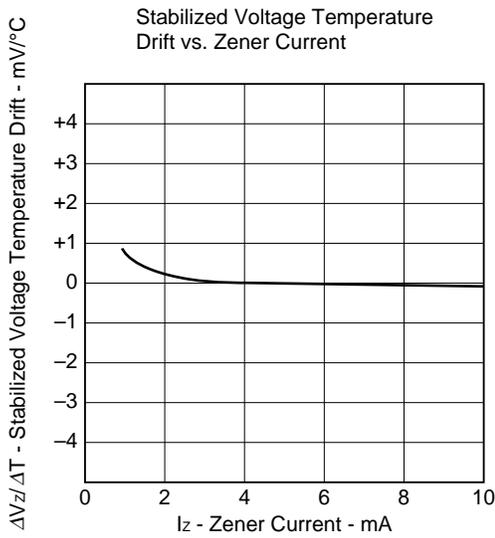
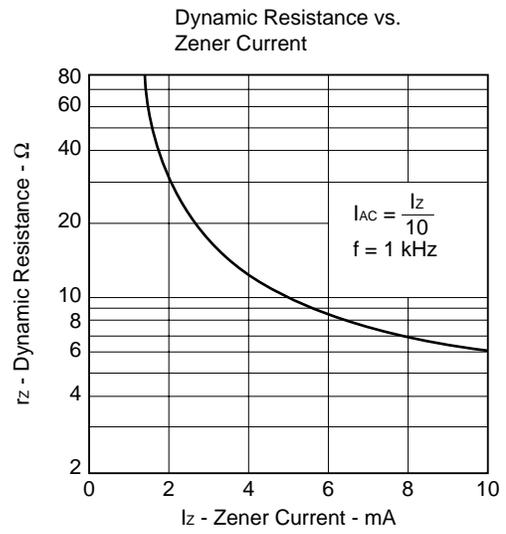
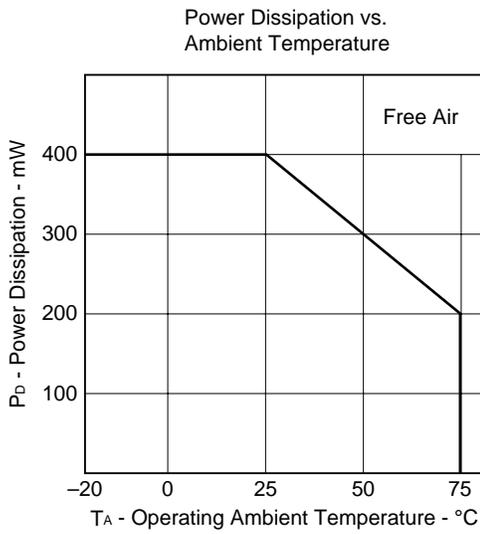
Parameter	Symbol	Ratings	Unit
Zener Current	I <sub>z</sub>	10	mA
Power Dissipation	P <sub>D</sub>	200 (T <sub>A</sub> = 75°C)	mW
Operating Ambient Temperature Range	T <sub>A</sub>	-20 to +75	°C
Storage Temperature Range	T <sub>stg</sub>	-40 to +125	°C

**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<sub>A</sub> = 25°C, unless otherwise specified.)**

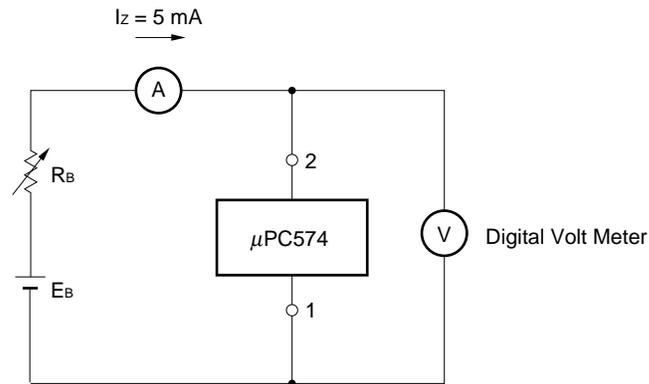
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Stabilized Voltage	V <sub>z</sub>	I <sub>z</sub> = 5 mA	31		35	V
Stabilized Voltage Temperature Drift	ΔV <sub>z</sub> /ΔT	I <sub>z</sub> = 5 mA, T <sub>A</sub> = -20 to +75°C	-1.0	0	+1.0	mV/°C
Dynamic Resistance	r <sub>z</sub>	I <sub>z</sub> = 5 mA, f = 1 kHz, I <sub>AC</sub> = 0.5 mA		10	25	Ω

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

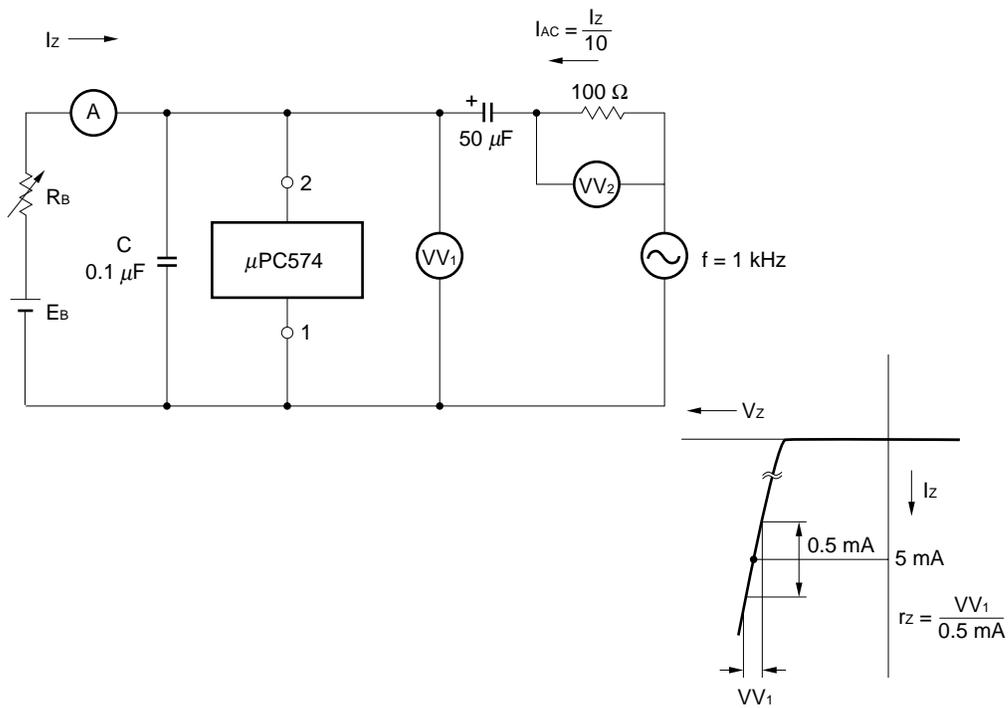


MEASURING CIRCUITS

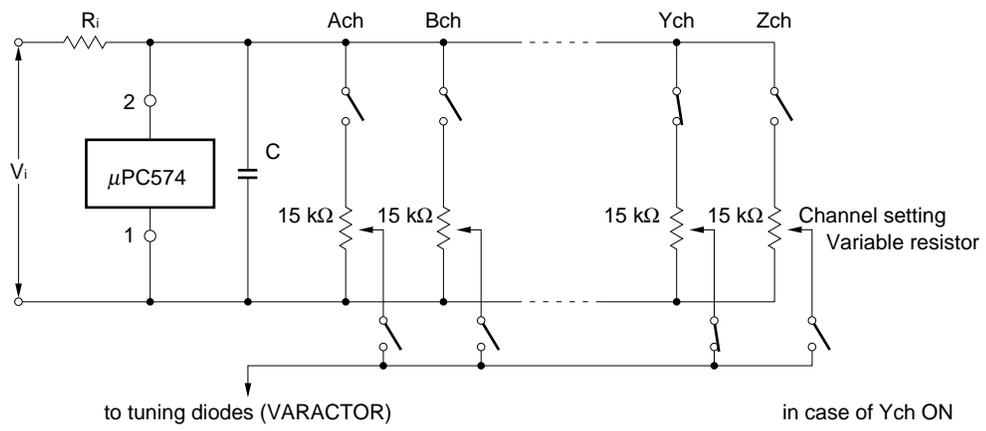
(i) Measuring Circuit for Stabilized Voltage  $V_z$



(ii) Measuring Circuit for Dynamic Resistance  $r_z$

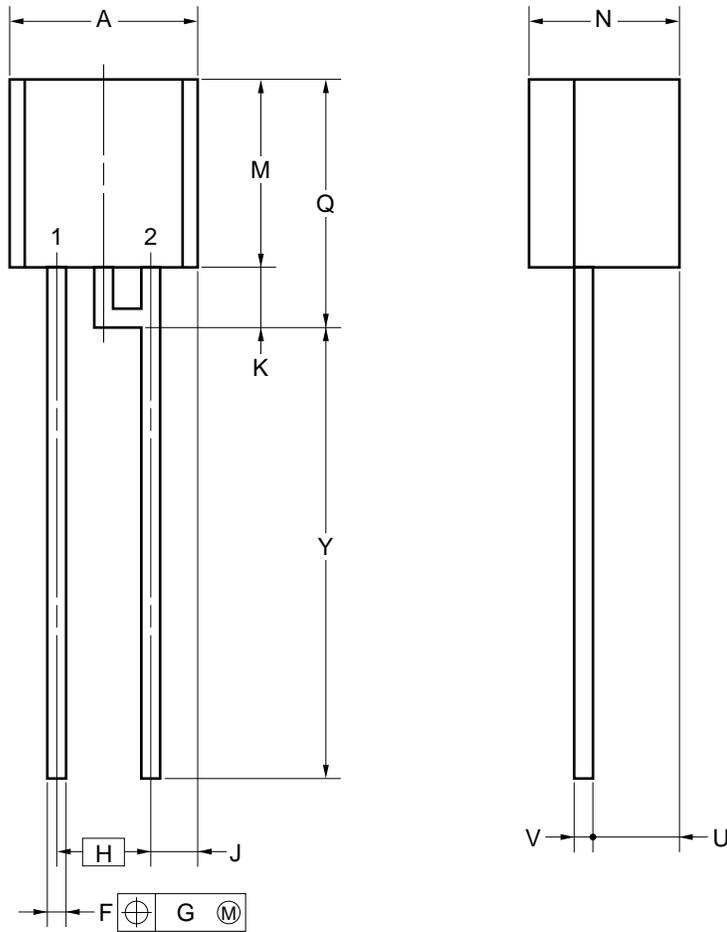


TYPICAL APPLICATION



★ 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 <sup>+0.004</sup> <sub>-0.005</sub>
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 <sup>+0.004</sup> <sub>-0.005</sub>
Y	15.0±0.7	0.591 <sup>+0.028</sup> <sub>-0.029</sub>

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.

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Standard: Computers, office equipment, communications equipment, test and measurement equipment, audio and visual equipment, home electronic appliances, machine tools, personal electronic equipment and industrial robots

Special: Transportation equipment (automobiles, trains, ships, etc.), traffic control systems, anti-disaster systems, anti-crime systems, safety equipment and medical equipment (not specifically designed for life support)

Specific: Aircrafts, aerospace equipment, submersible repeaters, nuclear reactor control systems, life support systems or medical equipment for life support, etc.

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