WS336-2.5
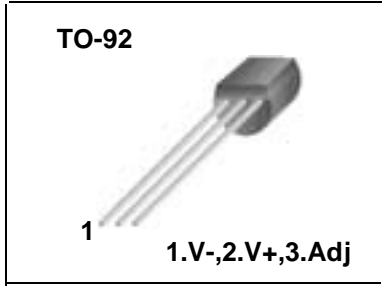
Features

- Low temperature coefficient
- Guaranteed temperature stability 4mV typical
- 0.2Ω dynamic impedance
- ±1.0% initial tolerance available
- Easily trimmed for minimum temperature drift

TO-92

1.V-,2.V+,3.Adj

Description

The WS336-2.5 integrated Circuits are precision 2.5V shunt regulators. The monolithic IC voltage references operates as a low temperature coeffcient 2.5V zener with 0.2ohm dynamic impedance. A third terminal on the WS336-2.5 allow the reference voltage and temperature coefficent to be trimmed easily. WS336-2.5 are useful as a precision 2.5V low voltage reference for digital voltmeters, power supplies or op amp circuitry. The 2.5V make it convenient to obtain a stable reference from low voltage supplies. Further, since the WS336-2.5 operate as shunt regulators, they can be used as either a positive or negative voltage reference.

Product Number	Package	Operating Temperature
WS336Z-2.5	TO-92	$0\,^{\circ}C$ ~ $70\,^{\circ}C$

Internal Block Diagram
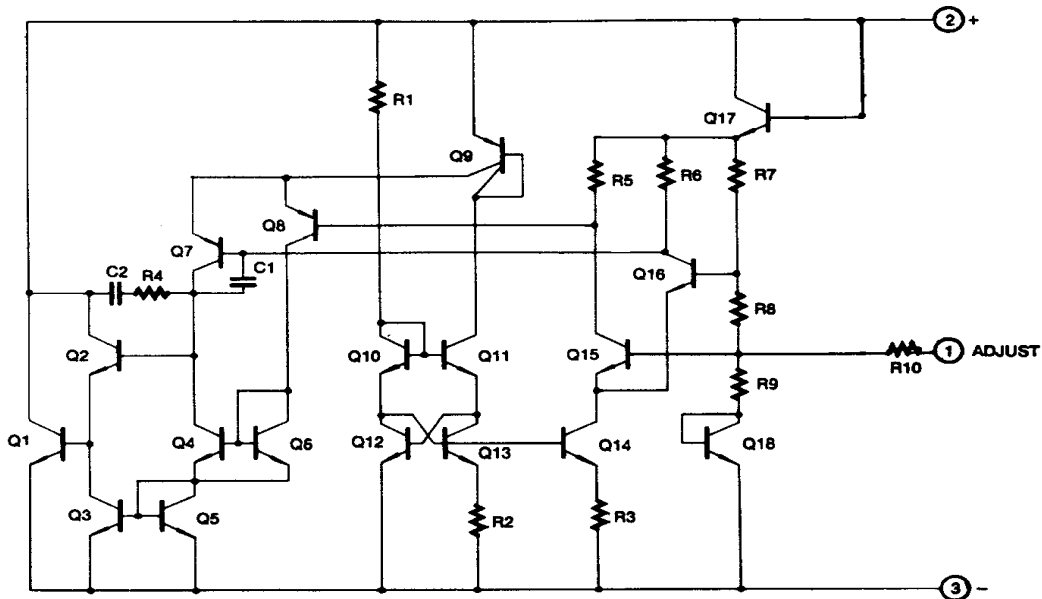
WS336-2.5

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Reverse Current	I_R	15	mA
Forward Current	I_F	10	mA
Operating Temperature Range KA336-2.5/B	T_{OPR}	0 ~ + 70	°C
Storage Temperature Range	T_{STG}	- 60 ~ + 150	°C

Electrical Characteristics

$(0°C < T_A < +70°C$, unless otherwise specified)

Parameter	Symbol	Conditions	WS336-2.5						Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Reverse Breakdown Voltage	V_R	$T_A = +25°C$ $I_R = 1mA$	2.44	2.49	2.54				V
Reverse Breakdown Change with Current	$\Delta V_R/\Delta I_R$	$T_A = +25°C$ $400uA \leq I_R \leq 10mA$	-	2.6	10				mV
Reverse Dynamic Impedance	Z_D	$T_A = +25°C$ $I_R = 1mA$	-	0.2	1				Ω
Temperature Stability	ST_T	$I_R = 1mA$	-	1.8	6				m V
Reverse Breakdown Change with Current	$\Delta V_R/\Delta I_R$	$400uA \leq I_R \leq 10mA$	-	3	12				mV
Reverse Dynamic Impedance	Z_D	$I_R = 1mA$	-	0.4	12				Ω
Long Term Stability In reference voltage	ST	$I_R = 1mA$	-	20	-				ppm/Khr

WS336-2.5

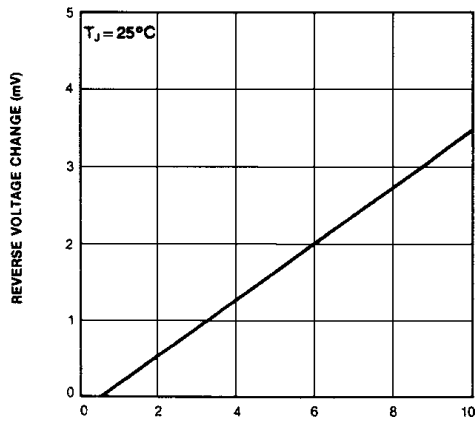## Typical Perfomance Characteristics
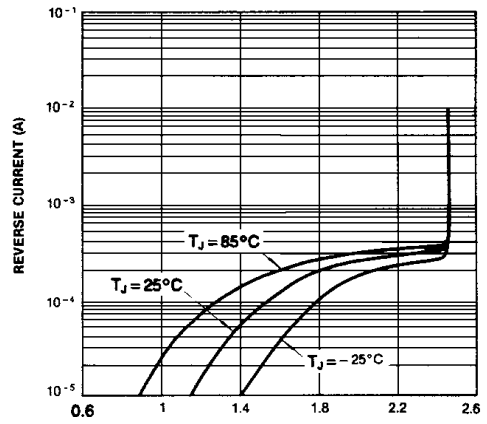

Figure 1. Reverse Voltage Change
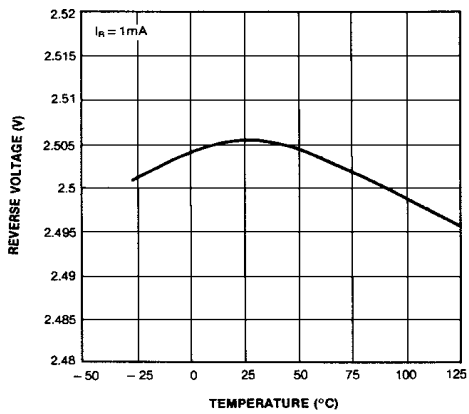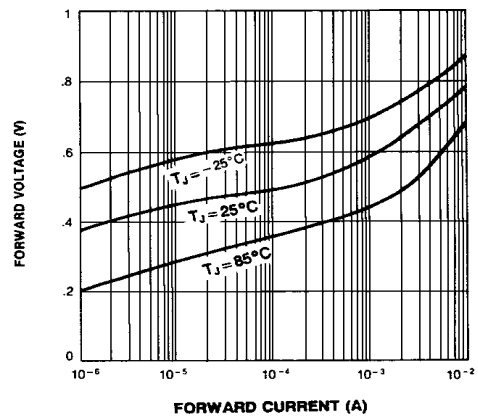

Figure 2. Reverse Characteristics

Figure 3. Temperature Drift

Figure 4. Forward Characteristics