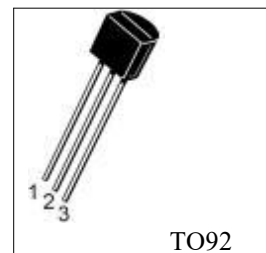


**2.5V Integrated Reference Circuit****General Description**

The LM336-2.5 integrated circuits is precision 2.5V shunt regulator diodes. The monolithic references operate as low-temperature-coefficient 2.5V zeners with a 0.2Ω dynamic impedance. A third terminal provided on the circuit allows the reference voltage and temperature coefficient to be trimmed easily.

The LM336-2.5 is useful as precision 2.5V low-voltage references (Vz) for digital voltmeters, power supplies, or operational-amplifier circuitry. The 2.5V voltage reference makes it convenient to obtain a stable reference from 5-V logic supplies. The LM336-2.5 operate as shunt regulators, and can be used as either positive or negative voltage references.

The LM336-2.5 is available in TO92 package.

**Features**

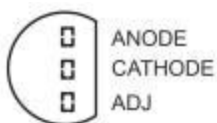
- Low Temperature Coefficient
- Wide Operating Current 400μA to 10mA
- 0.2Ω Dynamic Impedance
- ±1.0% Initial Tolerance Available
- Specified Temperature Stability
- Easily Trimmed for Minimum Temperature Drift

Package Information

Part NO.	Package Description	Package Marking	Package Option
LM336-2.5	TO92	SXXX LM336 Z-2.5	1000/Bag 2000/Tape

LM336Z-2.5:Part NO.

SXXX:Lot NO.

Pin Configuration

(TOP VIEW) LM336-2.5(TO92)

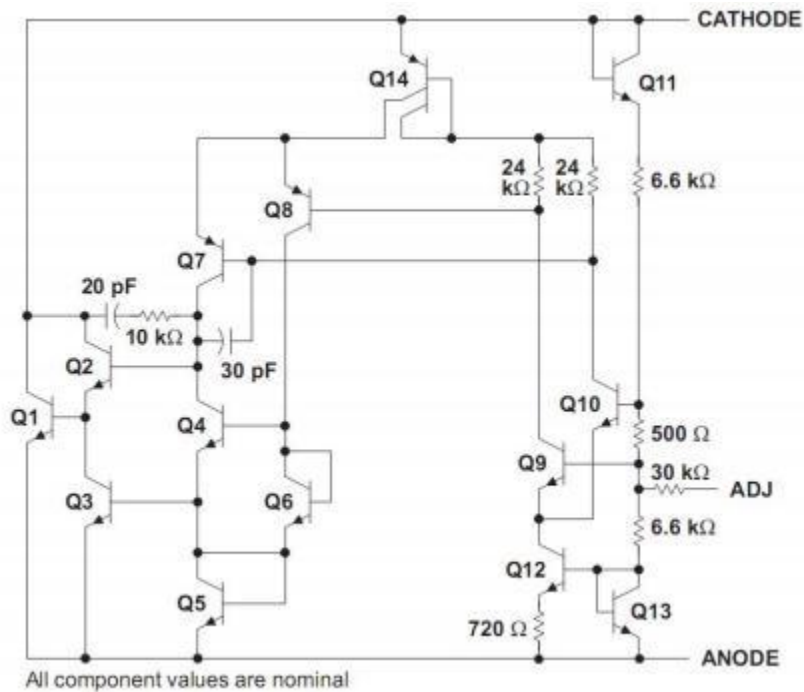


2.5V Integrated Reference Circuit

Symbol Configuration



Functional Block Diagram



Absolute Maximum Ratings (Tamb=25°C)

Parameter	Symbol	Value	Unit
Reverse Current	I _R	20	mA
Forward Current	I _F	10	mA
Thermal Resistance Junction to Ambient	θ _{JA}	156	°C/W
Lead Temperature (10 Seconds)	T _{lead}	260	°C
Storage Temperature Range	T _{stg}	-65~150	°C

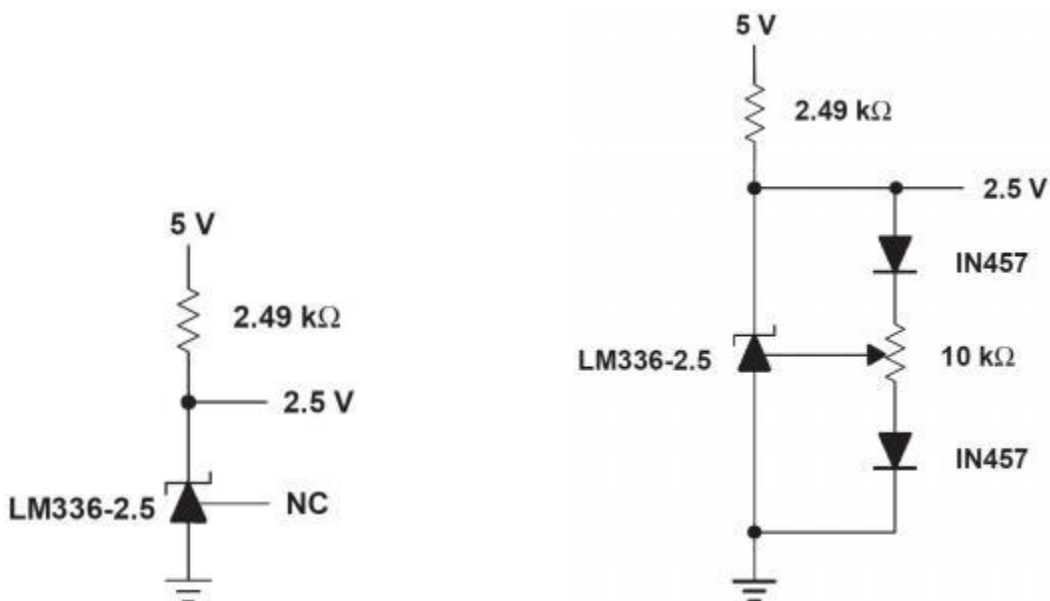
**2.5V Integrated Reference Circuit****Recommended Operating Conditions**

Parameter	Symbol	Min.	Max.	Unit
Operating Free-air Temperature	T _A	0	70	°C

Electrical Characteristics at specified free-air temperature (Unless otherwise specified)

Parameter	Test conditions	T _A	Symbol	Min.	Typ.	Max.	Unit
Reference Voltage	I _Z = 1 mA	25° C	V _Z	2.39	2.49	2.59	V
Change in Reference Voltage with Temperature	V _Z adjusted to 2.490V I _Z = 1 mA	Full range	ΔV _{Z(ΔT)}		1.8	6.0	mV
Change in Reference Voltage with Current	I _Z = 400 μA to 10 mA	25° C	ΔV _{Z(ΔI)}		2.6	10	mV
		Full range			3	12	
Long-term Change in Reference Voltage	I _Z = 1 mA	25° C	ΔV _{Z(Δt)}		20		ppm/khr
Reference Dynamic Impedance	I _Z = 1 mA, f = 1 kHz	25° C	Z _D		0.2	1.0	Ω
		Full range			0.4	1.4	

*Full range is 0°C to +70°C.

Application Circuit



2.5V Integrated Reference Circuit

Characteristic Curves

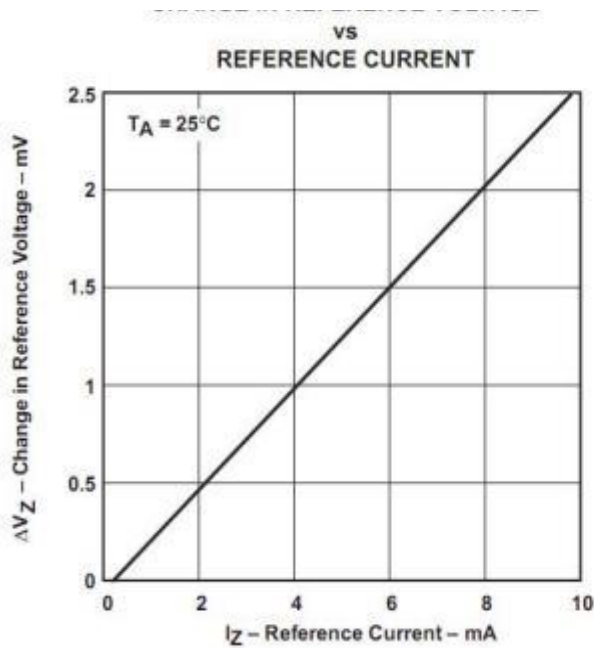


Figure 1

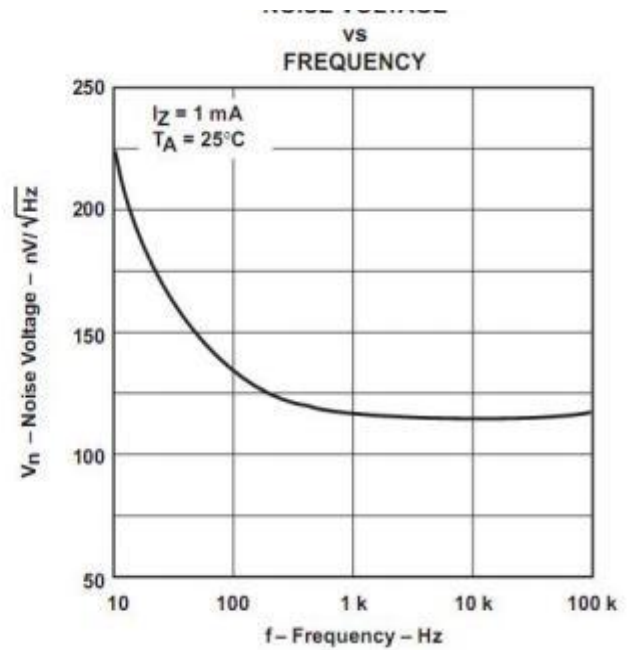


Figure 2

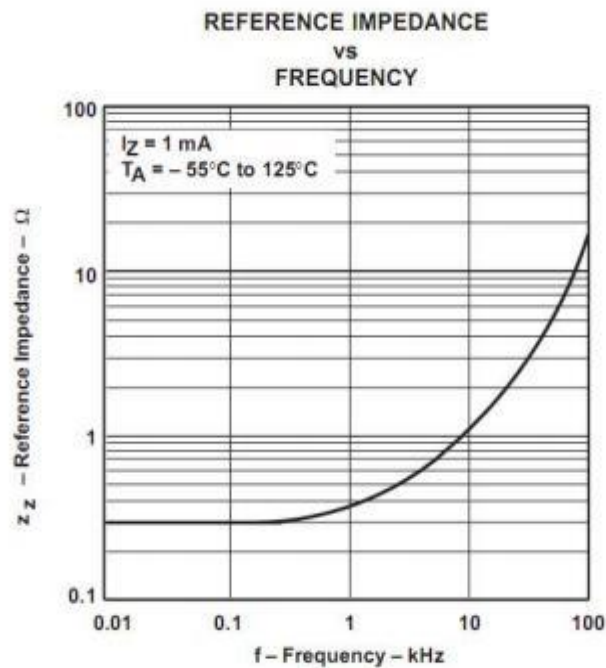


Figure 3



2.5V Integrated Reference Circuit

Outline Dimensions

TO92: Unit:mm

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.420	1.620	0.056	0.064
A1	0.660	0.860	0.026	0.034
A2	0.350	0.480	0.014	0.019
D	3.050	3.250	0.120	0.128
E	0.350	0.550	0.014	0.022
E1	3.900	4.100	0.154	0.161
e	1.270 (BSC)		0.050 (BSC)	



2.5V Integrated Reference Circuit

Statements

- HSETCL reserves the right to make changes without further notice to any products or specifications herein. Before customers place an order, customers need to confirm whether datasheet obtained is the latest version, and to verify the integrity of the relevant information.

- Failure or malfunction of any semiconductor products may occur under particular conditions, customers shall have obligation to comply with safety standards when customers use HSETCL products to do their system design and machine manufacturing, and take corresponding safety measures in order to avoid potential risk of failure that may cause personal injury or property damage.

- The product upgrades without end, HSETCL will wholeheartedly provide customers integrated circuits that have better performance and better quality.