

ZN458

2.45V PRECISION REFERENCE REGULATOR

The ZN458 is a monolithic integrated circuit providing a precise stable reference source of 2.45V in a two lead package without the need for an external shaping capacitor.

FEATURES

- Guaranteed 5mV Maximum Deviation over Full Temperature Range
- Low Temperature Coefficient 0.003%/°C
- Low Slope Resistance - 0.1 Ohms
- Very Good Long Term Stability - 10ppm
- Low Noise - 10 microvolts
- Internally Shaped
- Tight Tolerance ±1.43%
- Two Pin Package
- Wide Operating Current 2-120mA

ABSOLUTE MAXIMUM RATINGS

Dissipation	300mW
Operating temperature range	-20°C to +70°C
Storage temperature range	-55°C to +150°C

ORDERING INFORMATION

Device	TC (ppm/°C)	Temperature range
ZN458	99	-20°C to +70°C
ZN458A	49	-20°C to +70°C
ZN458B	29	-20°C to +70°C

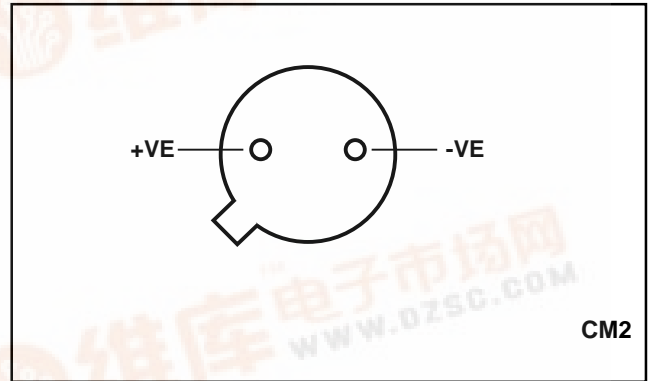


Fig.1 Pin connection - bottom view

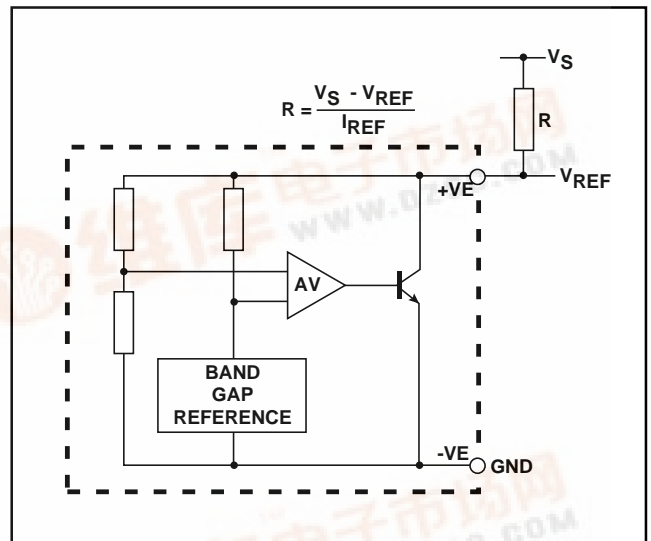


Fig.2 Circuit diagram



ZN458

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units	Test conditions
Output voltage	V_{REF}	2.42	2.45	2.49	V	Measured at 2mA
Slope resistance	R_{REF}	-	0.1	0.2	Ω	
Reference current	I_{REF}	2.0	-	120	mA	
Maximum change in V_{REF}	ΔV_{REF}	-	10	22	mV	-20 to +70°C
ZN458		-	6	11	mV	
ZN458A ZN458B		-	4	6.5	mV	
RMS noise voltage 1Hz-10kHz		-	10	-	μV	
V_{REF} drift at 70°C		-	± 10	-	ppm/1000 hours	

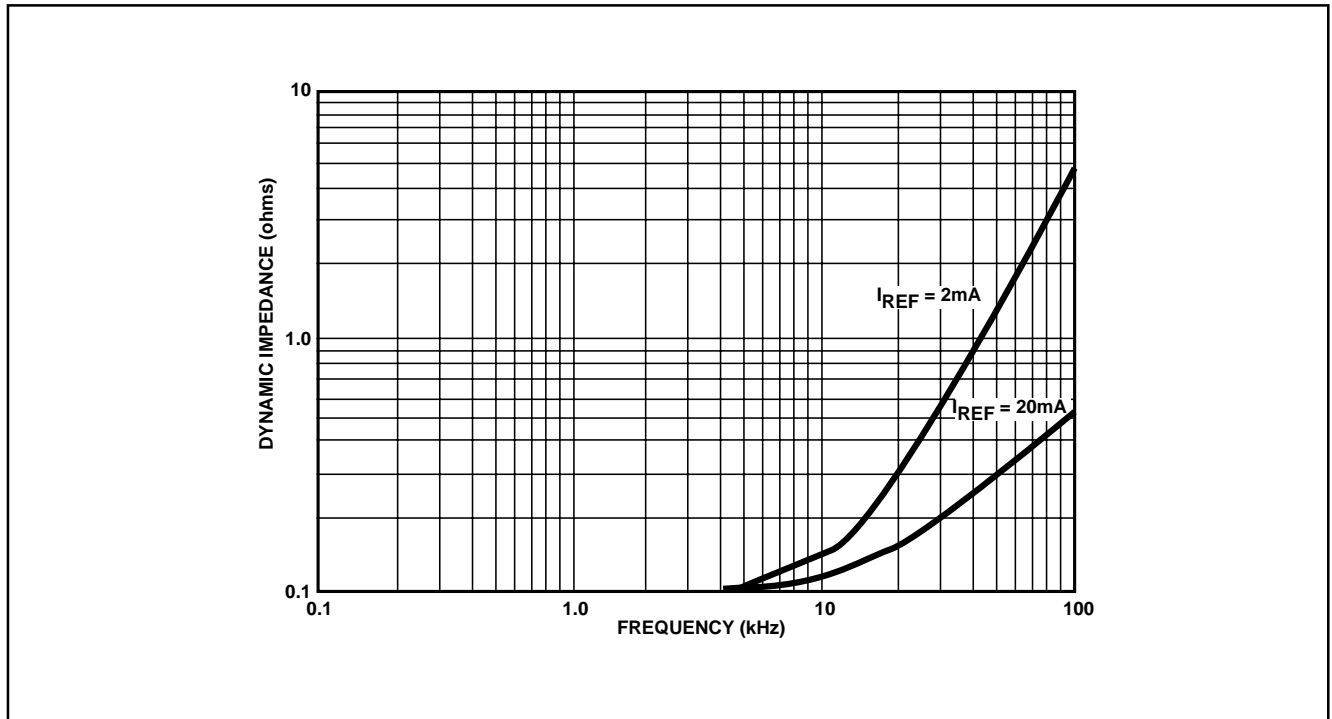


Fig.3 Dynamic impedance

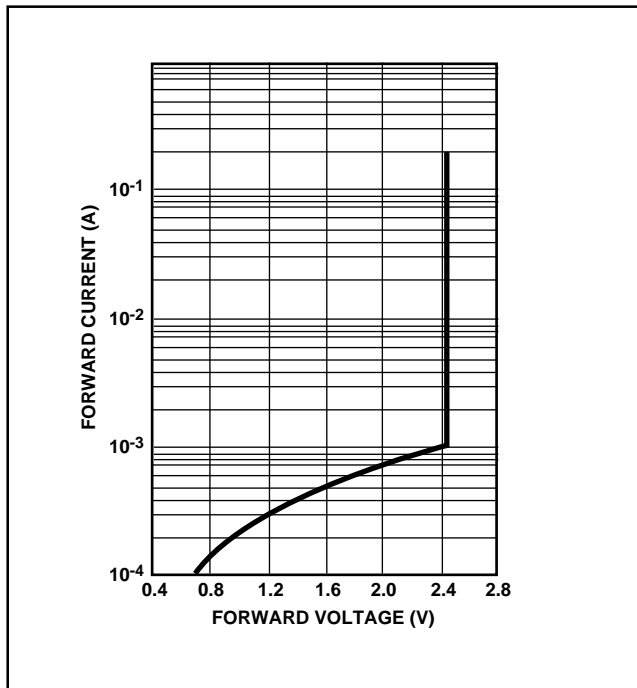


Fig.4 Forward characteristic

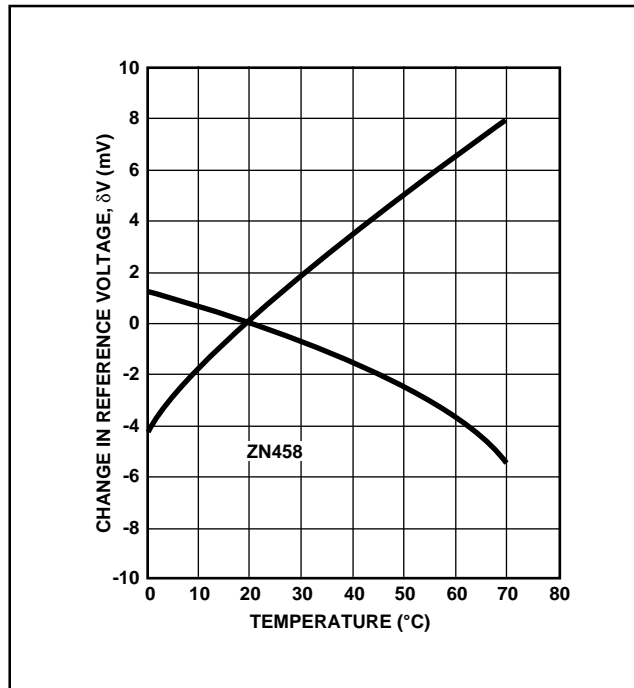


Fig.5 Temperature characteristic (typical)

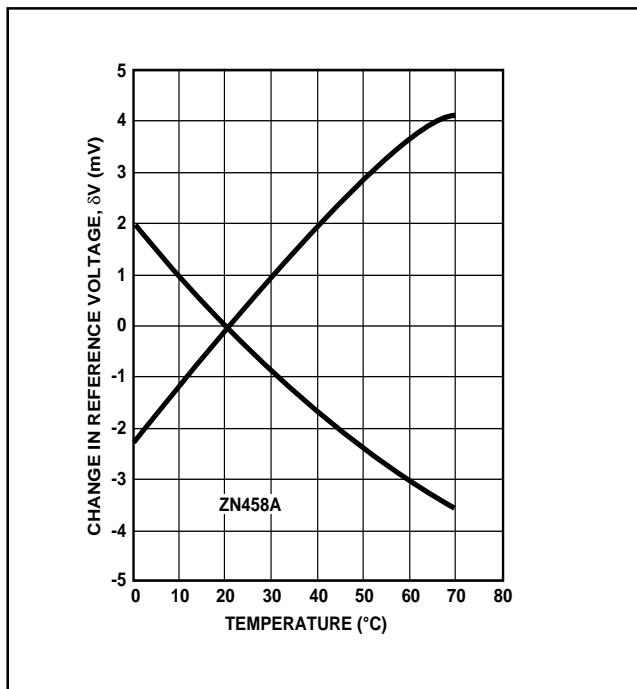


Fig.6 Temperature characteristic (typical)

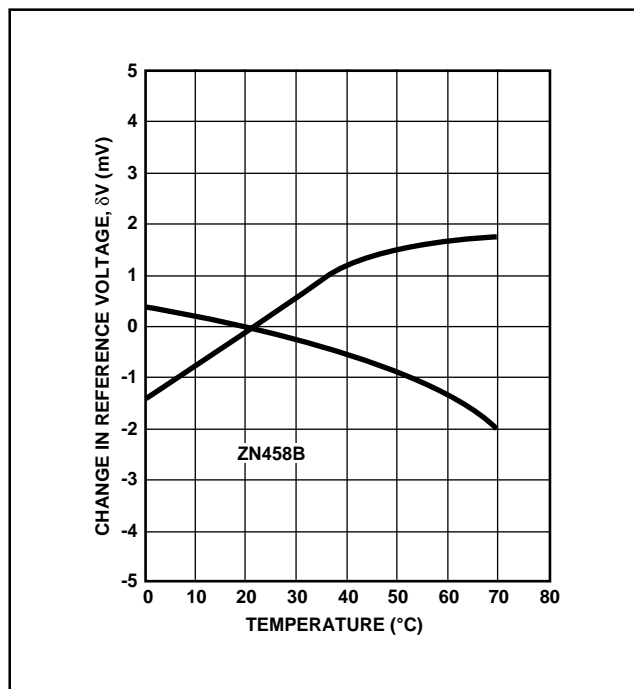


Fig.7 Temperature characteristic (typical)

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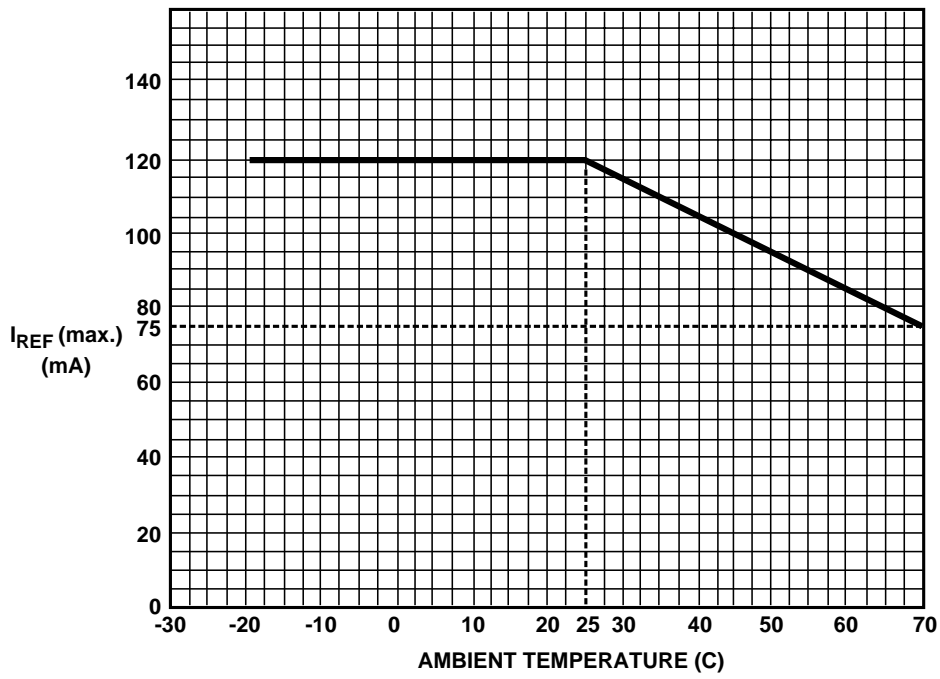


Fig.8 Derating curve

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