THIS DOCUMENT IS FOR MAINTENANCE PURPOSES ONLY AND IS NOT RECOMMENDED FOR NEW DESIGNS

GEC PLESSEY
SEMICONDUCTORS

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.

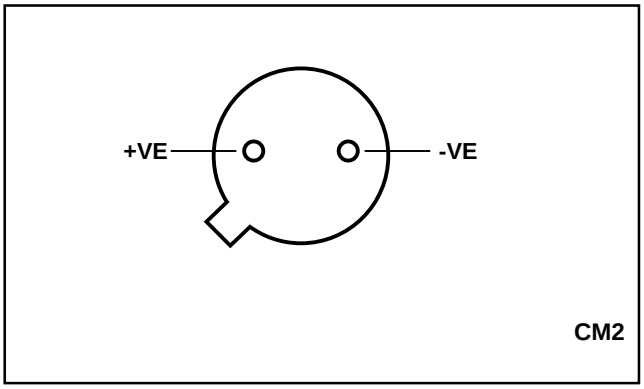

Fig.1 Pin connection - bottom view

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

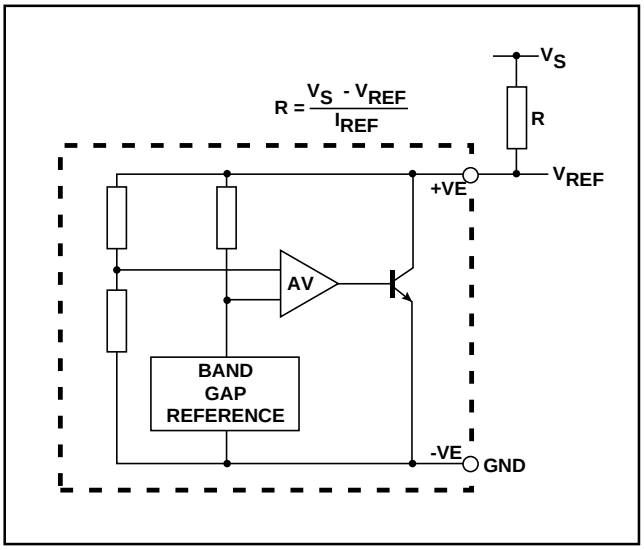

Fig.2 Circuit diagram

ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°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}	ZN458	ΔV_{REF}	-	10	22	mV	-20 to +70°C
	ZN458A		-	6	11	mV	
	ZN458B		-	4	6.5		
RMS noise voltage 1Hz-10kHz			-	10	-	μV	
V_{REF} drift at 70°C			-	±10	-	ppm/1000 hours	

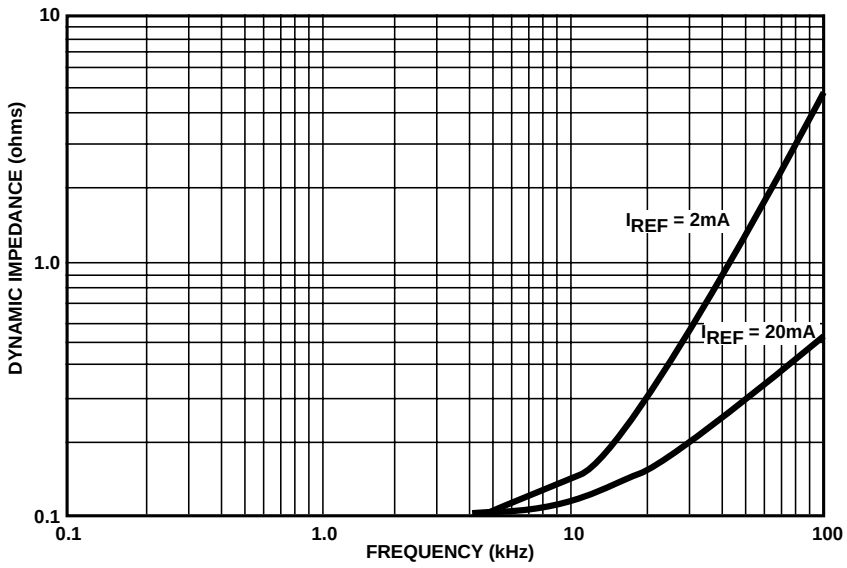

Fig.3 Dynamic impedance

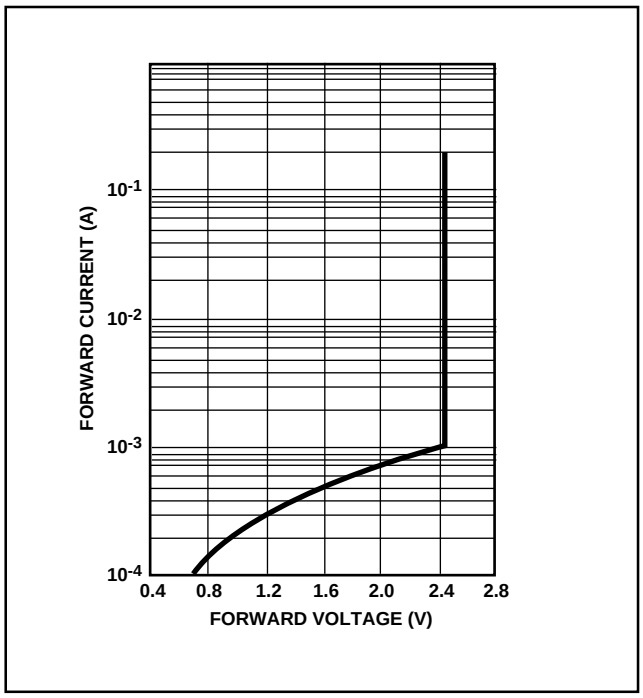

Fig.4 Forward characteristic

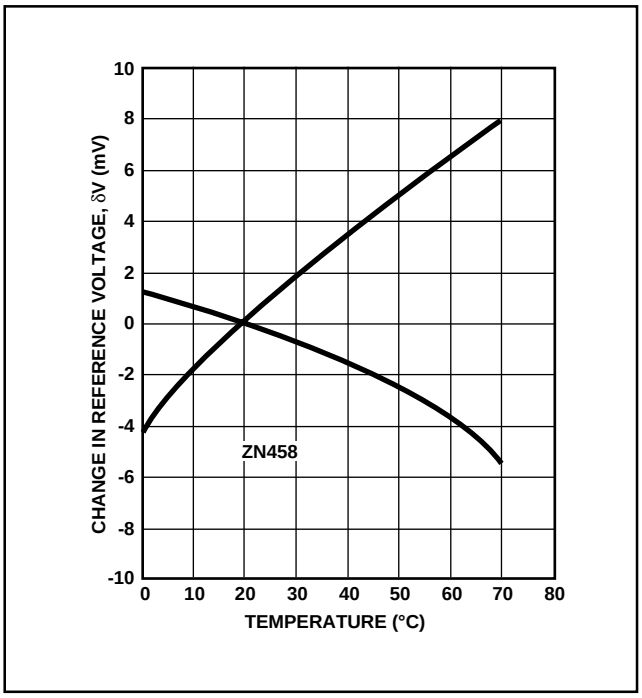

Fig.5 Temperature characteristic (typical)

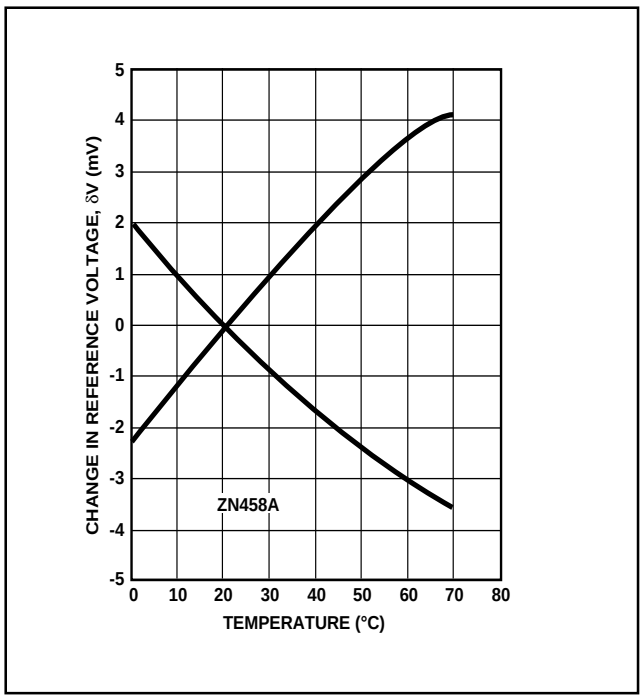

Fig.6 Temperature characteristic (typical)

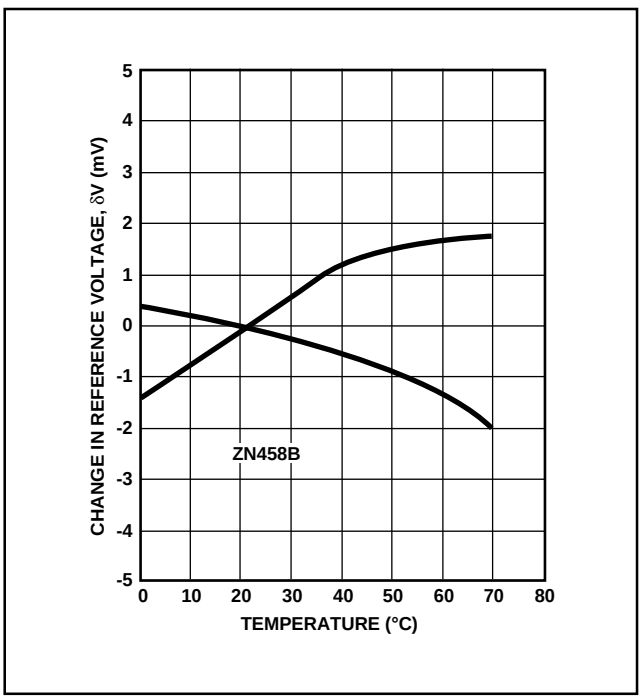

Fig.7 Temperature characteristic (typical)

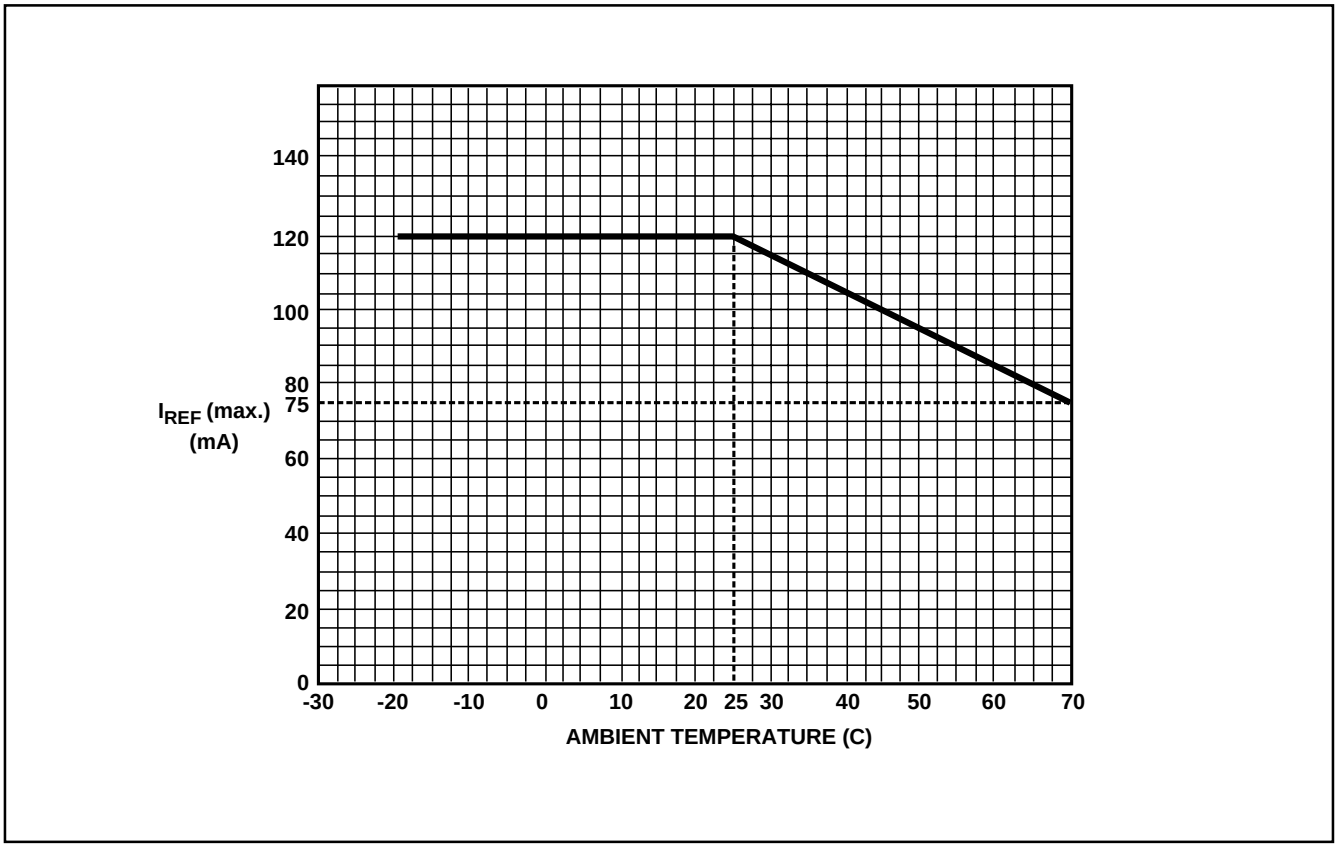

Fig.8 Derating curve

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