FERRANTI semiconductors ®

ADVANCE PRODUCT INFORMATION

ZNREF Low Power Precision Reference Sources

FEATURES
• Trimmable output
• Excellent Temperature Stability
• Low output noise figure
• Low Dynamic Impedance
• Available in three temperature ranges
• 1%, 2% and 3% initial voltage tolerance versions available

DESCRIPTION

The ZNREF series is a range of monolithic integrated circuits providing precise reference voltages from 2.5 volts (ZNREF025) to 10 volts (ZNREF100).

The range features a knee current of 150 μA and operation over a wide range of temperatures and currents.

The devices are available in transistor packages with one of the pins offering a trim facility whereby the output voltage can be adjusted using the circuits overleaf—(Fig 2 for ZNREF100 and Fig 1 for other voltages).

ZNREF SERIES

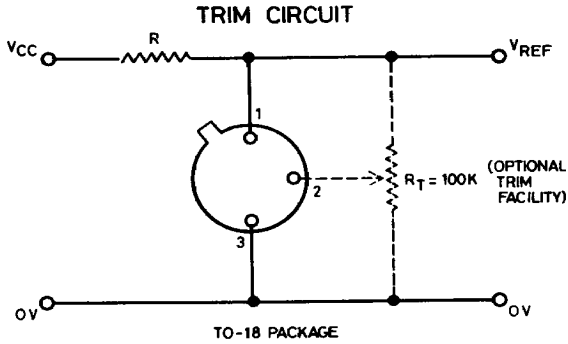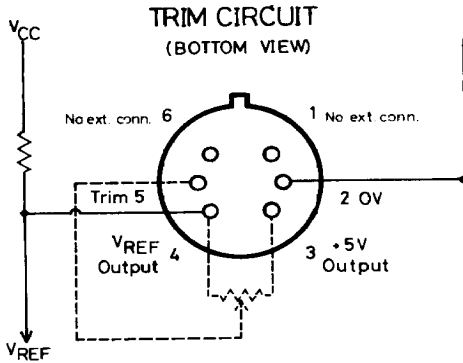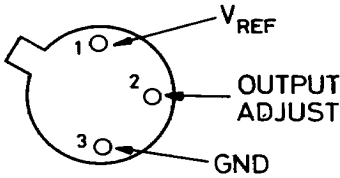## Fig 1

TRIM CIRCUIT

Vcc ○—R—〜〜〜—●————————————————●——○ Vref

1

○—2 → RT = 100K (OPTIONAL TRIM FACILITY)

3

0V ○————————●————————————●——○ 0V

TO-18 PACKAGE

Fig 2

TRIM CIRCUIT
(BOTTOM VIEW)

Vcc

No ext. conn. 6   1 No ext conn.

Trim 5   2 0V

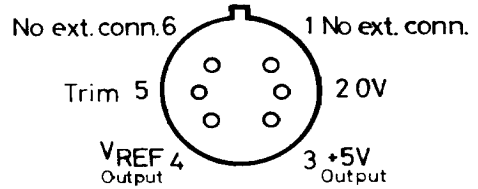Vref 4   3 +5V
Output   Output

Vref

CONNECTION DIAGRAM

TO-18 Metal Can
(Bottom View)

TO-39 Metal Can
(Bottom View)

Type Number	Nominal Output Voltage	Maximum Operating Current (mA)	Dynamic Impedance Typ	Dynamic Impedance Max	Trim Range	Package
ZNREF025	2.49	10	1.5	2.0	±5%	TO-18
ZNREF040	4.01	75	2.0	3.0	±5%	TO-18
ZNREF050	4.98	60	1.5	2.0	±5%	TO-18
ZNREF062	6.17	50	2.0	3.0	±5%	TO-18
ZNREF100	9.96	50	3.0	4.0	±2.5%	6 lead TO-39

ORDERING INFORMATION

DEVICE		TOL %	T.C. PPm/°C	Temp. Range
ZNREF	A1	1	50	−55°C to + 125°C
ZNREF	A2	2	50	−55°C to + 125°C
ZNREF	A3	3	80	
ZNREF	B1	1	30	−20°C to +85°C
ZNREF	B2	2	30	−20°C to +85°C
ZNREF	B3	3	40	
ZNREF	C1	1	25	0°C to + 70°C
ZNREF	C2	2	25	0°C to + 70°C
ZNREF	C3	3	30	