



7-58-07
CA5010

PRELIMINARY DATA

1.2V Band-Gap Reference

FEATURES

- 50 ppm/°C Temperature Coefficient
- 25µA to 10mA Operating Current Range
- 1 Dynamic Impedance
- Low Cost TO-92 Plastic Package,
- 1% Output Tolerance

APPLICATIONS

- ADC and DAC Reference
- Current Source Generation
- Threshold Detectors
- Power Supplies
- Multimeters

DESCRIPTION

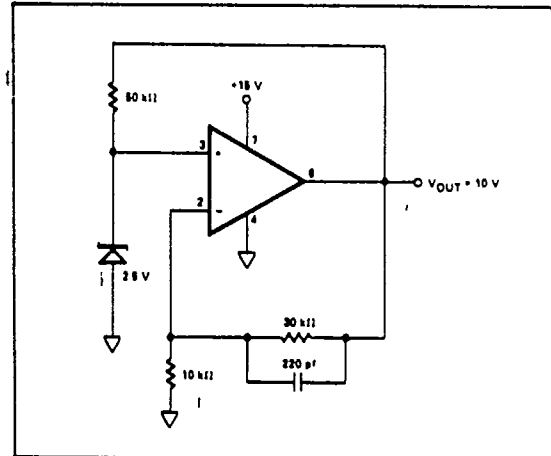
The CA5010 1.2 V Output bipolar two terminal band-gap voltage references offers precision performance without a premium price. A 50ppm/°C output temperature coefficient and 25µA to 5mA operating current range make the device attractive multimeter, data acquisition converter, and telecommunication voltage reference.

ABSOLUTE MAXIMUM RATINGS

Maximum Temperature:

- Storage Temperature, JT-KT-LT-MT-NT -65°C +200°C
- Storage Temperature, GN-HN-LN -65°C to +150°C
- Operating Range, JT-KT-LT -55°C to +125°C
- Operating Range, GN-HN-LN-MT-NT 0° to +70 °C
- Lead Temperature (soldering, 10 sec.) +260°C
- Maximum Power Dissipation:**
- Power Dissipation (free air), JT-KT-LT-MT-NT 750mW
- Power Dissipation (free air), GN-HN-LN..... 600mW
- Linear Derating Factor, JT-KT-LT-MT-NT .. 4.3mW/°C
- Linear Derating Factor, GN-HN-LN 5 mW/°C
- Maximum Current:**
- Forward Current10mA
- Reverse Current10mA
- Packaging TO-92 and TO -52

Typical Application



ORDER INFORMATION

MAX. TEMPCO ppm/°C	TEMP. RANGE	ORDER PART
100	COM	CA5010GN
50	COM	CA5010HN
25	COM	CA5010LN
10	COM	CA5010MT
5	COM	CA5010NT
100	MIL	CA5010JT
50	MIL	CA5010KT
25	MIL	CA5010LT

CA5010

ELECTRICAL CHARACTERISTICS

CHARACTERISTICS	MIN	TYP	MAX	UNITS	CONDITIONS
Reference Current	50	100	5000	μA	
Reference Voltage	1.20	1.237	1.25	V	$I_R = 100 \mu A$
Output Impedance		.6			$I_R = 100 \mu A$
RMS Noise Voltage		.6	2		$I_R = 500 \mu A$
		5		V	$10 \text{ Hz} \leq f \leq 10 \text{ k Hz}$ $I_R = 500 \mu A$
Breakdown Voltage					
Temperature coefficient					
MP5010 G-J		30	100	ppm/ $^{\circ}C$	$50 \mu A \leq I_R \leq 5 \text{ mA}$ $T_{\text{min}} \leq T_A \leq T_{\text{max}}$
MP5010 H-K		25	50	ppm/ $^{\circ}C$	
MP5010 L	10	25		ppm/ $^{\circ}C$	
MP5010 M	5	10		ppm/ $^{\circ}C$	
MP5010 N		3	5	ppm/ $^{\circ}C$	
Reverse Current	50		1000	μA	To Rated Specs

NOTES:

Optimum performance is obtained at currents below $500 \mu A$.

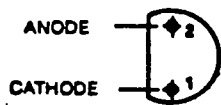
Stray shunt capacitances should be minimized.

If strays cannot be avoided, a shunt capacitor of at least 1000 pF is recommended.

PIN CONNECTIONS (bottom view)



TO-52
(T-SUFFIX)



TO-92
(N-SUFFIX)
PLASTIC

