

ABSOLUTE MAXIMUM RATINGS($T_{amb}=25^{\circ}C$)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage (Low impedance Source)	V_{CC}	30	V
Output Current	I_o	± 1	A
Analog Inputs(pin 2, 3)	$V_{I(ANA)}$	-0.3 to +6.3	V
Error Amplifier Output Sink Current	$I_{SINK(EA)}$	10	mA
Power Dissipation	P_D	1.0	W

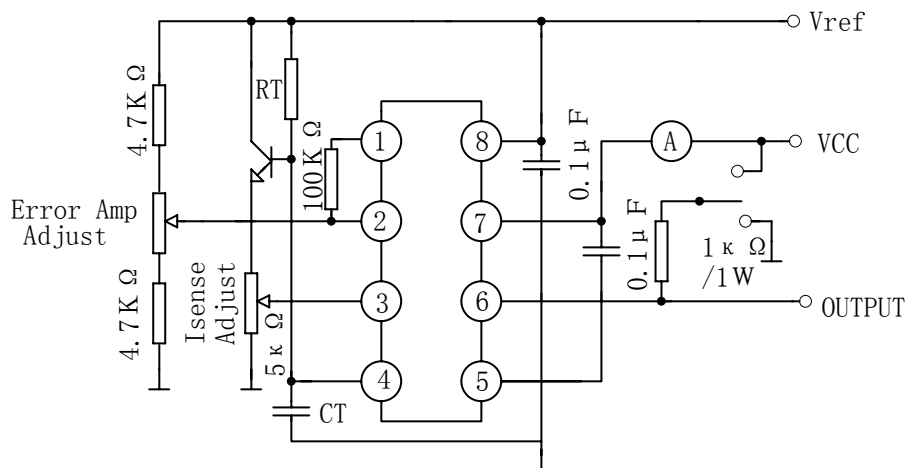
ELECTRICAL CHARACTERISTICS

($T_{amb}=25^{\circ}C$, $V_{CC1}=10V$, $V_{CC2}=9.5V$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reference Section						
Output Voltage	V_{REF}	$T_j=25^{\circ}C$, $I_o=1mA$	4.90	5.00	5.10	V
Line Regulation	ΔV_{REF}	$12 \leq V_{IN} \leq 25V$		6	20	mV
Load Regulation	ΔV_{REF}	$1 \leq I_o = 20mA$		6	25	MV
Output Noise Voltage	V_{ose}	$10Hz \leq f \leq 10kHz$, $T_j=25^{\circ}C$ (note 2)		50	6	mV
Long Term Stability		$T_a=25^{\circ}C$, 1000Hrs (note 2)		5	25	mV
Output Short Circuit	I_{sc}		-30	-100	-180	mA
Oscillator Section						
Initial Accuracy	f	$T_j=25^{\circ}C$	47	52	57	kHz
Voltage Stability	$\Delta f/\Delta V_{CC}$	$12 \leq V_{CC} \leq 25V$		0.2	1	%
Temp Stability		$T_{min} \leq T_A \leq T_{max}$ (note 2)		5		%
Amplitude	V_{osc}	$V_{pin 4}$ peak to peak		1.7		V
Error Amplifier Section						
Input Voltage	$V_{I(EA)}$	$V_{pin 1}=2.5V$	2.42	2.50	2.58	V
Input Bias Current	I_{BIAS}			-0.3	-2	μA
A_{VOL}		$2 \leq V_o \leq 4V$	60	90		dB
Unity Gain Bandwidth		$T_j=25^{\circ}C$ (note 2)	0.7	1	6.0	mHz
PSRR		$12 \leq V_{CC} \leq 25V$	60	70		dB
Output Sink Current	I_{sink}	$V_{pin 2}=2.7V$, $V_{pin 1}=1.1V$	2	6		mA
Output Source Current	I_{source}	$V_{pin 2}=2.3V$, $V_{pin 1}=5V$	-0.5	-0.8		mA
$V_{out High}$	V_{OH}	$V_{pin 2}=2.3V$, $R_L=15k \Omega$ to GND	5	6		V
$V_{out Low}$	V_{OL}	$V_{pin 2}=2.7V$, $V_{pin 1}=1.1V$		0.7	1.1	V

Current Sense Section						
Gain	Gv	(note 3, 4)	2.85	3	3.15	V/V
Maximum Input Signal	V _{I(MAX)}	V _{pin 1} =5V(note 3)	0.9	1	1.1	V
PSRR		12 ≤ V _{cc} ≤ 25V		70		dB
Input Bias Current	I _{BIAS}			-2	-10	μ A
Delay to Output		V _{pin 3} =0 to 2V		150	300	ns
Output Section						
Output Low Level	V _{OL}	I _{sink} =20mA		0.1	0.4	V
		I _{sink} =200mA		1.5	2.2	V
Output High Level	V _{OH}	I _{source} =20mA	13	13.5		V
		I _{source} =200mA	12	13.5		V
Rise Time	t _r	T _j =25°C, C _L =1nF (note 2)		50	150	ns
Fall Time	t _f	T _j =25°C, C _L =1nF(note 2)		50	150	ns
UVLO Saturation		V _{cc} =5V, I _{sink} =10mA		0.7	1.2	V
Under-Voltage lockout Output Section						
Start Threshold	V _{TH(ST)}		14.5	16	17.5	V
Min. Operating Voltage After Turn On	V _{OPR(min)}		8.5	10	11.5	V
PWM Section						
Maximum Duty Cycle	D _(MAX)		95	07	100	%
Minimum Duty Cycle	D _(MIN)				0	%
Total Standby Current						
Start-up Current	I _{ST}			0.5	1	mA
Operating Supply Current	I _{CC(OPR)}	V _{pin 2} =V _{pin 3} =0V		11	17	mA
V _{cc} Zener Voltage	V _Z	I _{cc} =25mA		34		V

APPLICATION CIRCUIT



OUTLINE DRAWING

DIP-8

unit:mm

