KA334

Dual Power Operational Amplifier

Features

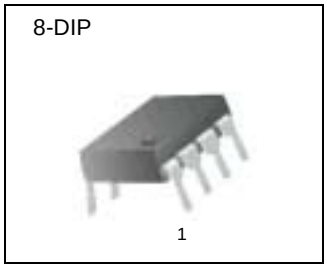
- Output Current upto 1A
- Operates at Low Voltage ($V_{S(MIN)}$=4V)
- Low Saturation Voltage (Ip=0.5A, V_O=1.5V)
- Thermal Shutdown (Tsd=145°C)
- Ground Compatible Inputs
- Large Common-mode & Differential-mode Range

Applications

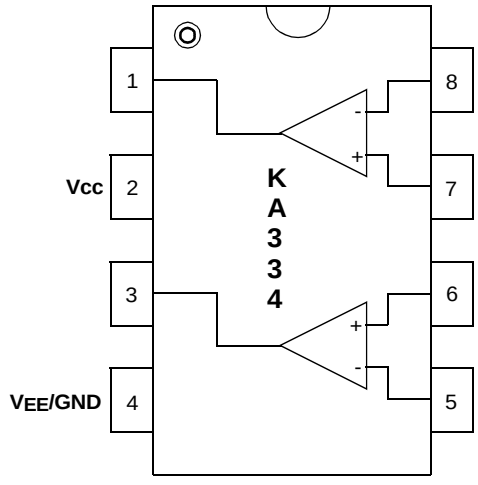
- Servo Amplifier
- Power Supply
- Compact Disc
- VCR
- Monitor

Description

The KA334 is a high-power dual operational amplifier provided as a 8-DIP package. The operational amplifier is designed for low impedance loads and will deliver output current upto 1A. The KA334 can be used in a wide range of applications in cluding power supply, VCR, monitor, servo amplifier, compact disc, etc



Internal Block Diagram



(8 DIP)

PIN Definitions

Pin Number	Pin Function Descrition
1	Amp Output 1
2	Positive Supply Voltage
3	Amp Output 2
4	Vegative Supply Voltage (GND)
5	Amp Negative Input 2
6	Amp Positive Input 2
7	Amp Positive Input 1
8	Amp Negative Input 1

Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Supply Voltage	V_S	40	V
Input Voltage	V_i	V_S	-
Differential Input Voltage	V_i	$\pm V_S$	-
Dc Output Current	I_O	1	A
Peak Output Current (non repetitive)	I_P	1.5	A
Power dissipation at: T_{amb}=50°C	R_{tot}	1	W
Operating Temperature Range	T_{op}	-40 to 85	°C
Storage and Junction Temperature	T_{stg}, T_j	-40 to 150	°C

Thermal Data

Parameter	Symbol	Value	Unit
Thermal Resistance Junction-Ambient	$R\theta ja$	100	°C/W

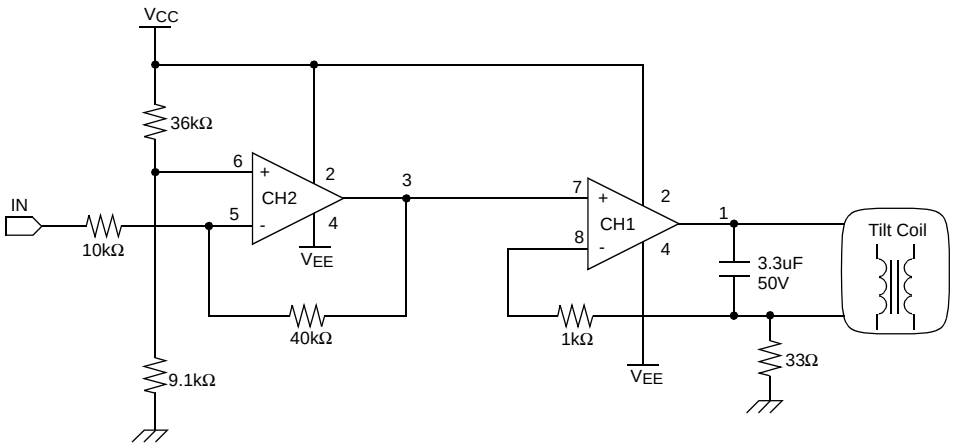
Electrical Characteristics

(V_{CC} = +12V, V_{EE} = -12V, Ta = 25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Supply Voltage (V_{CC} - V_{EE})	V_S		4	-	28	V
Supply Current	I_S	$V_O = V_{CC}/2$ V_{CC}=24V, V_{EE}=0V V_{CC}=12V, V_{EE}=0V	 - -	 8 7.5	 12 11	 mA mA
Input Bias Current	I_b	-	-	0.3	2.5	μA
Input Offset Voltage	V_{OS}	-	-	15	60	mV
Input Offset Current	I_{OS}	-	-	50	250	nA
Slew Rate	SR	Vin = 1Vpp, Unit Gain	-	1	-	V/μs
Gain-Bandwidth Product	B	-	-	350	-	KHz
Input Resistance	R_i	-	500	-	-	KΩ
Lange Signal	G_V	$V_{O(pp)}$ = ±10V	65	75	-	dB
Input Noise Voltage	e_N	B = 20KHz	-	10	-	μV
Input Noise Current	I_N	B = 20KHz	-	200	-	pA
Common Mode Rejection Ratio	CMRR	-	60	75	-	dB
Supply Voltage Rejection Ratio	PSRR	V_{CC} =+15V, V_{EE} = -15V V_{CC} =+5V, V_{EE} = -5V	54	62	-	dB
Output Voltage Swing	V_O	V_{CC} = 24V, V_{EE} = 0V Ip = 0.4A Ip = 0.5A	 21 21	 23 22.5	 - -	 V V
Channel Separation	C_S	f = 1kHz; R_L = 10Ω, G_V = 30dB	-	60	-	dB
Total Harmonic Distortion	THD	f = 1kHz, R_L = G_V = 1dB	-	0.5	-	%
Thermal Shutdown Junction Temperature	TSD	-	-	160	-	°C

Applications

< Tilt Coil Current Control Circuit in Monitor>

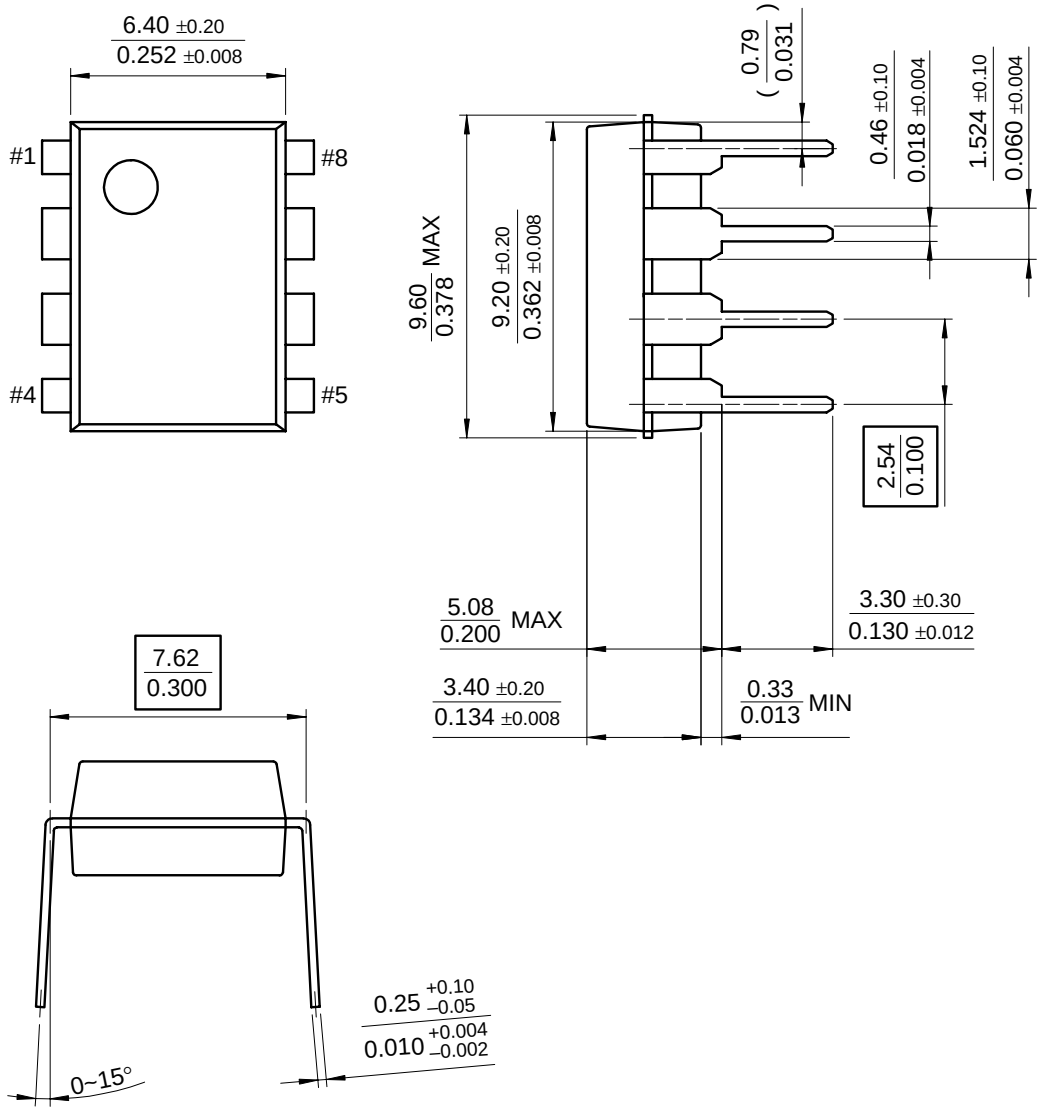


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP



Ordering Information

Product Number	Package	Operating Temperature
KA334	8-DIP	0°C ~ +105°C