

KA334

Dual Power Operational Amplifier

Features

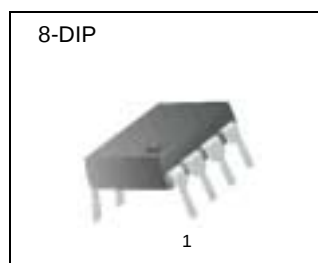
- Output Current upto 1A
- Operates at Low Voltage ($V_{S(MIN)}=4V$)
- Low Saturation Voltage ($I_p=0.5A$, $V_O=1.5V$)
- Thermal Shutdown ($T_{sd}=145^{\circ}C$)
- Ground Compatible Inputs
- Large Common-mode & Differential-mode Range

Applications

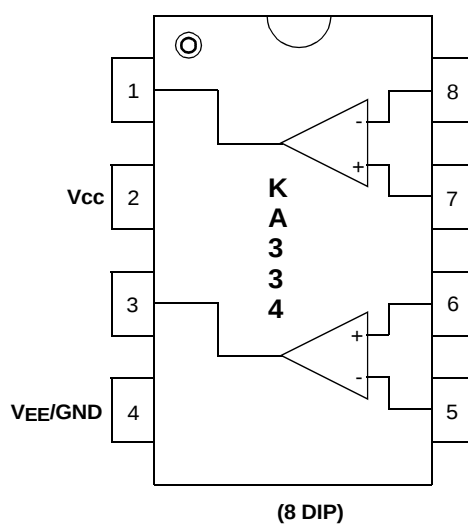
- Servo Amplifier
- Power Supply
- Compact Disc
- VCR
- Monitor

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 including power supply, VCR, monitor, servo amplifier, compact disc, etc



Internal Block Diagram



PIN Definitions

Pin Number	Pin Function Description
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	±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 _{θja}	100	°C/W

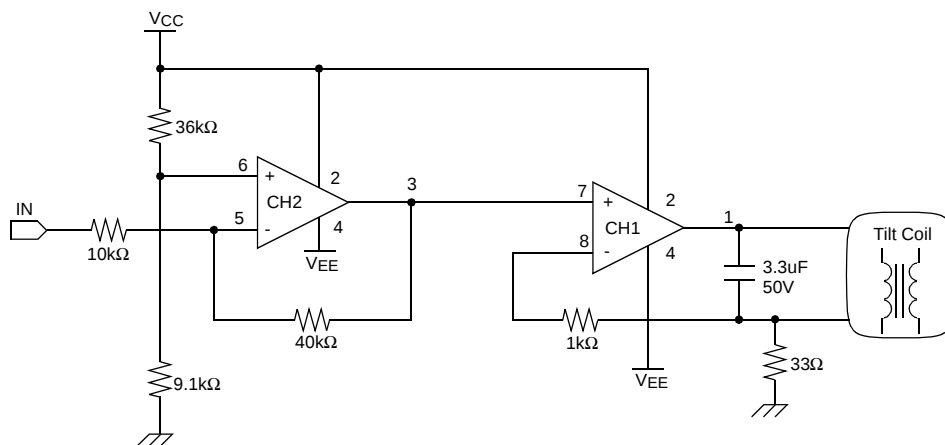
Electrical Characteristics

($V_{CC} = +12V$, $V_{EE} = -12V$, $T_a = 25^{\circ}C$ 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	$V_O = V_{CC}/2$	-	8	12	mA
		$V_{CC}=24V, V_{EE}=0V$ $V_{CC}=12V, V_{EE}=0V$	-	7.5	11	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	$V_{in} = 1V_{pp}$, Unit Gain	-	1	-	V/ μs
Gain-Bandwidth Product	B	-	-	350	-	KHz
Input Resistance	R_i	-	500	-	-	K Ω
Large Signal	G_V	$V_{O(pp)} = \pm 10V$	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	$V_{CC} = 24V, V_{EE} = 0V$	21	23	-	V
		$I_p = 0.4A$ $I_p = 0.5A$	21	22.5	-	V
Channel Separation	CS	f = 1kHz; $R_L = 10\Omega$, $G_V = 30dB$	-	60	-	dB
Total Harmonic Distortion	THD	f = 1kHz, $R_L = G_V = 1dB$	-	0.5	-	%
Thermal Shutdown Junction Temperature	TSD	-	-	160	-	$^{\circ}C$

Applications

< Tilt Coil Current Control Circuit in Monitor >

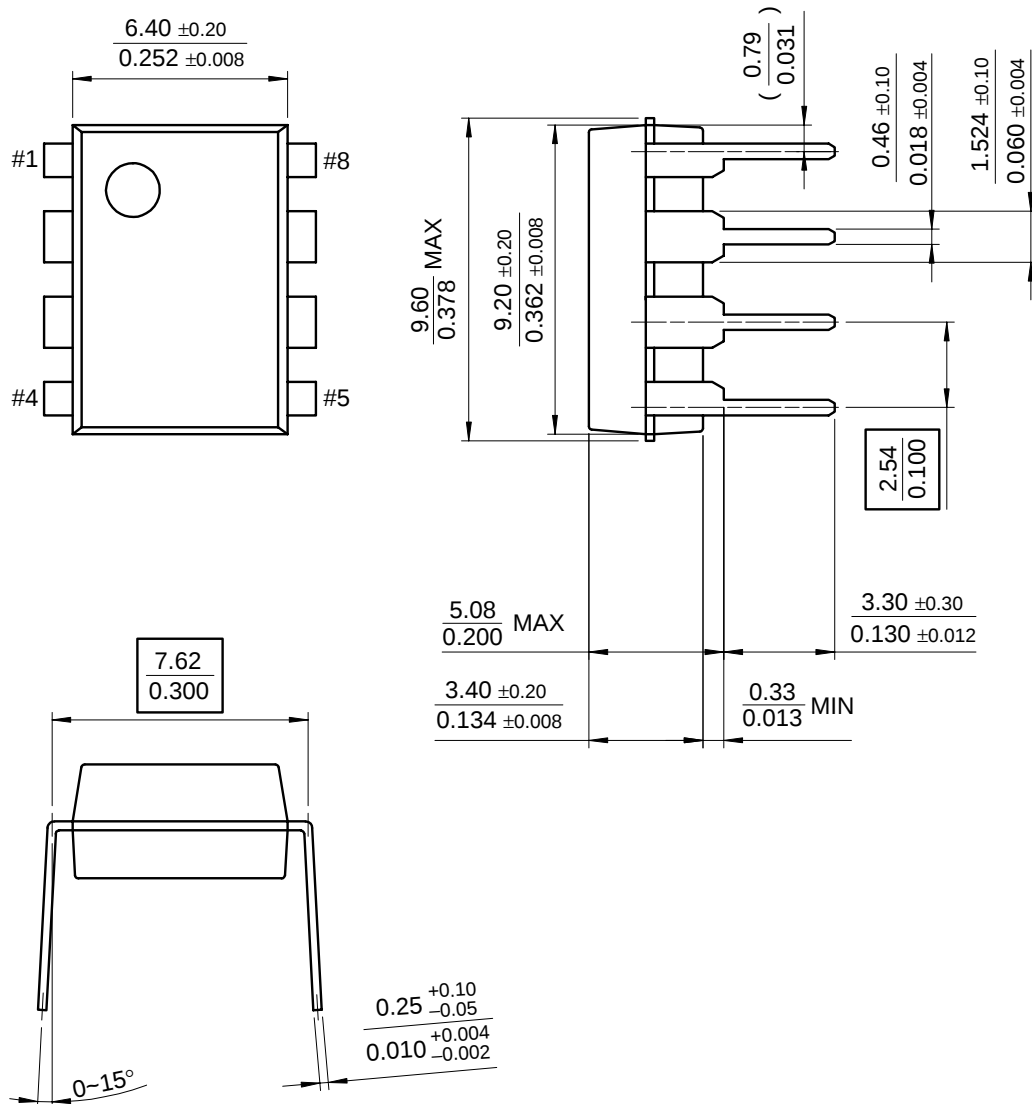


Mechanical Dimensions

Package

Dimensions in millimeters

8-DIP



Ordering Information

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

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