DUAL OPERATIONNAL AMPLIFIER—YD358

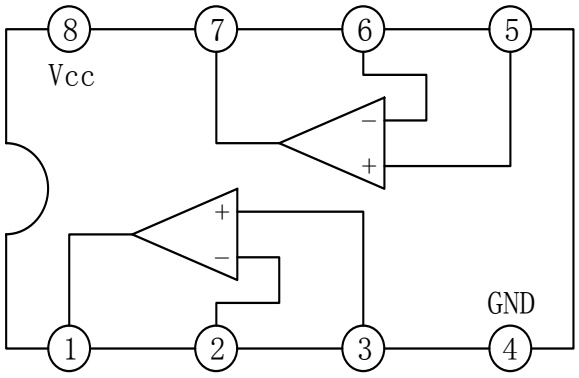
DESCRIPTION

The YD358 consists of dual independent, high Gain internally frequency compensated operational amplifiers which were designed specifically to operation from a single power supply over a wide voltage range.

FEATURES

*Internally frequency compensated for unity gain；
*Large DC voltage gain：100dB；
*Wide operating supply range (Vcc=3V~32V)；
*Input common-mode voltage includes ground；
*Large output voltage swing: from 0V to Vcc-1.5V；
*Power drain suitable for battery operation.

BLOCK DIAGRAM



WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China
Tel: 86-510-85205117 86-510-85205106 Fax: 86-510-85205110 Website: www.e-youda.com
SHENZHEN OFFICE Tel：86-755-83740369 Fax：86-755-83741418

ABSOLUTE MAXIMUM RATINGS (Tamb=25℃)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	Vcc	32	V
Differential Input Voltage	$V_{I\,(DIFF)}$	±32	V
Input Voltage	V_I	-0.3~32V	V
Power Dissipation(DIP8)	P_{D1}	570	mW
Power Dissipation(SOP8)	P_{D2}	260	mW
Operating Temperature	Topr	0 ～ +70	℃
Storage Temperature	Tstg	-65 ～ +150	℃

ELECTRICAL CHARACTERISTICS

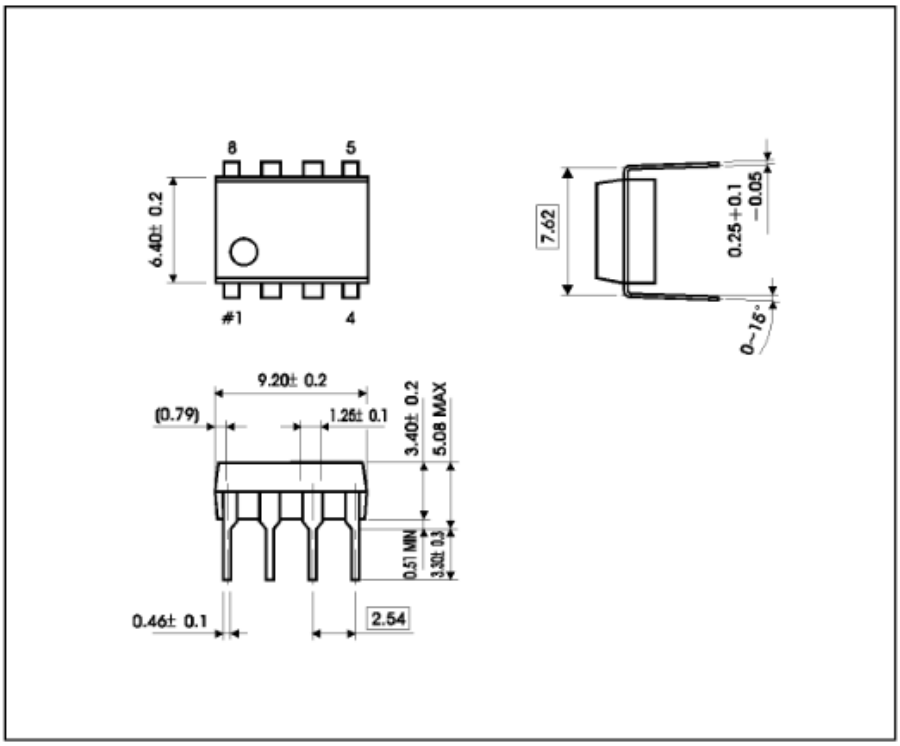
（Ta=25℃, Vcc=5.0V, all voltage referenced to GND unless otherwise specified）

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Input Offset Voltage	V_{IO}	V_{CM}=0 to V_{CC}-1.5 $V_{O(P)}$=1.4V, Rs=0		3.0	7.0	mV
Input Offset Current	I_{IO}			2.0	50	nA
Input Bias Current	Ib			20	250	nA
Input Common-mode Voltage Range	$V_{I(R)}$	V_{CC}=30V	0		V_{CC}-1.5	V
Supply Current	I_{CC}	R_L=∞, V_{CC}=30V,		0.8	2.0	mA
		V_{CC}=5V		0.5	1.2	mA
Large Signal Voltage Gain	G_V	V_{CC}=15V, R_L＞2kΩ $V_{O(P)}$=1V to 11V	25	100		V/mV
Output Voltage Swing	$V_{(OH)}$	V_{CC}=30V, R_L=2kΩ	26			V
		V_{CC}=30V, R_L=10kΩ	27	28		V
	$V_{(OL)}$	V_{CC}=5V, R_L＞10kΩ		5	20	mV
Common-mode Rejection Radio	CMRR		65	80		dB
Power Supply Rejection Ratio	PSRR		65	100		dB
Channel Separation	CS	f=1kHz to 20kHz		5	20	mV
Short Circuit To GND	I_{SC}			40	60	mA
Output Current	Isource	$V_{I(+)}$=1V,$V_{I(-)}$=0 V_{CC}=15V, $V_{O(P)}$=2V	20	40		mA
Output Current	Isink	$V_{I(+)}$=0V, $V_{I(-)}$=1V V_{CC}=15V, $V_{O(P)}$=2V	10	20		mA
		$V_{I(+)}$=0V, $V_{I(-)}$=1V V_{CC}=15V, $V_{O(P)}$=200mV	12	50		μA
Differential Input Voltage	V_{ID}				V_{CC}	V

OUTLINE DRAWING

DIP-8

unit:mm



SOP-8

unit:mm