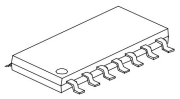
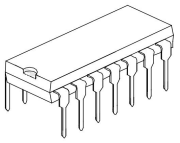
Features

- 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.
- Strong load response

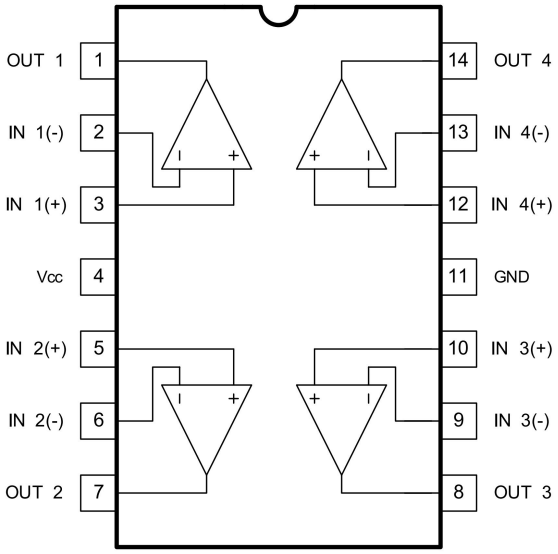


SOP-14

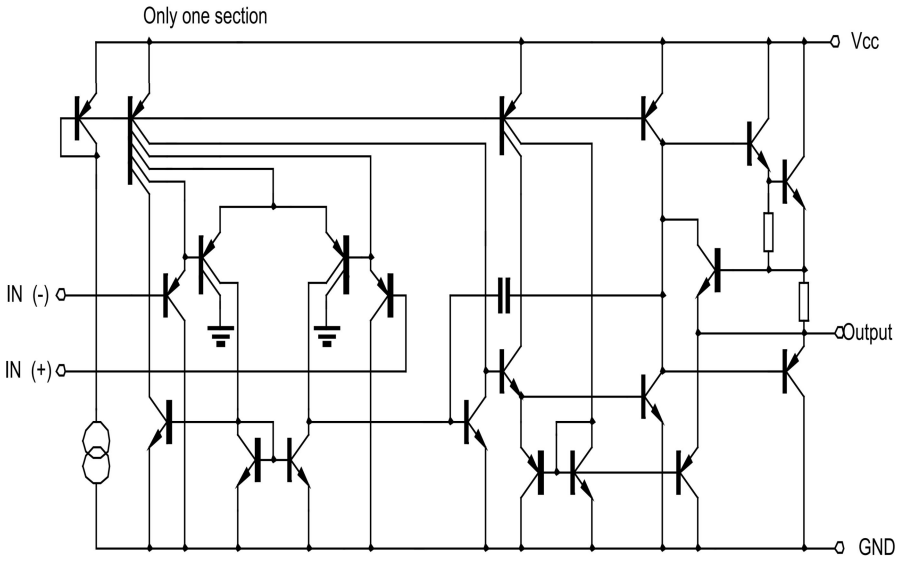


DIP-14

PIN DESCRIPTION



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	TYPICAL VALUES	UNITS
power supply voltage	V_{CC}	±18	V
Differential Input Voltage	$V_{I(DIFF)}$	32	V
Input Voltage	V_I	-0.3~+32	V
Power Dissipation	P_D	570	mW
Operating Temperature Range	T_{OPR}	0~+70	℃
Storage Temperature Range	T_{STG}	-40~+150	℃

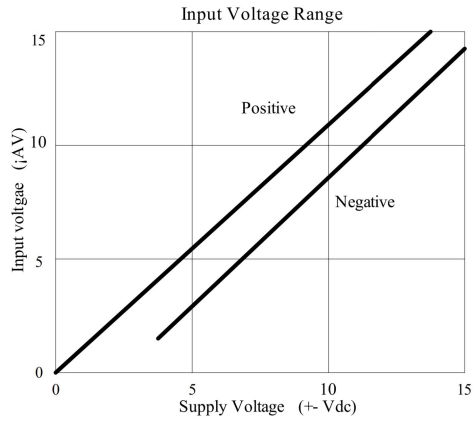
ELECTRICAL CHARACTERISTICS

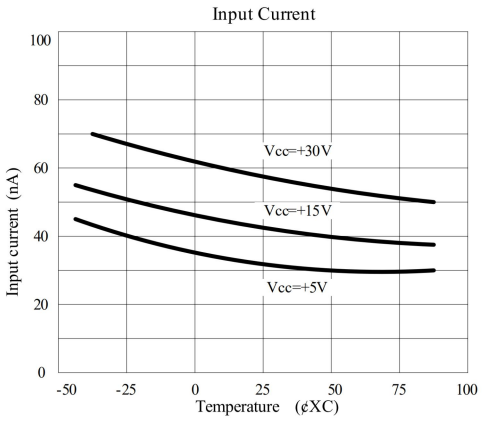
(VCC=5.0V, All voltage referenced to GND unless otherwise specified.)

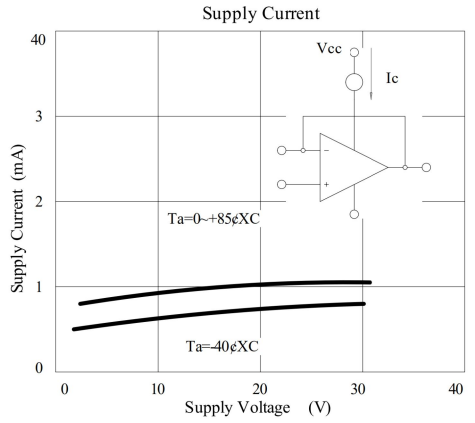
PARAMETER	SYMBOL	test conditions	MIN	TYP	MAX	UNITS
Input Offset Voltage	V_{IO}	V_{CM}=0V to V_{CC}=1.5V, $V_{O(P)}$=1.4V, R_S=0Ω			7.0	mV
Input Offset Current	I_{IO}				50	nA
Input Bias Current	I_{BIAS}				250	nA
Input Common Mode Current	$V_{I(R)}$	V_{CC}=30V	0	VCC =1.5		V
Power Supply Current	I_{CC}	R_L=∞， V_{CC}=30V		1.0	3.0	mA
		V_{CC}=5V		0.7	1.2	mA
Large Signal Voltage Gain	G_V	VCC=15V,RL≧2KΩ $V_{O(P)}$=1V~11V	25	100		V/mV
Output Voltage Swing	$V_{O(H)}$	V_{CC}=30V,R_L=2KΩ	26			V
		V_{CC}=30V,R_L=10KΩ	27	28		V
	$V_{O(L)}$	V_{CC}=5V,R_L>10KΩ		5	20	mV
Common Mode Rejection Ratio	CMRR		65	75		dB
Power Supply Rejection Ratio	PSRR		65	100		dB
Channel Separation	CS	f=1KHz~20KHz		120		dB
Short Circuit Current to Ground	Isc			40	60	mA
Output Current	I_{SOURCE}	V_I(+)=1V,V_I(-)=0V V_{CC}=15V,$V_{O(P)}$=2V	20	40		mA

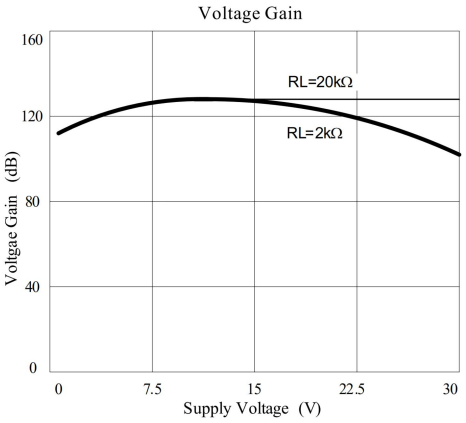
	I_{SINK}	$V_I(+)=0V, V_I(-)=1V$ $V_{CC}=15V, V_{O(P)}=2V$	10	13		mA
		$V_I(+)=0V, V_I(-)=1V$ $V_{CC}=15V, V_{O(P)}=200mV$	12	45		mA
Differential Input Voltage	$V_{I(DIFF)}$				V_{CC}	V

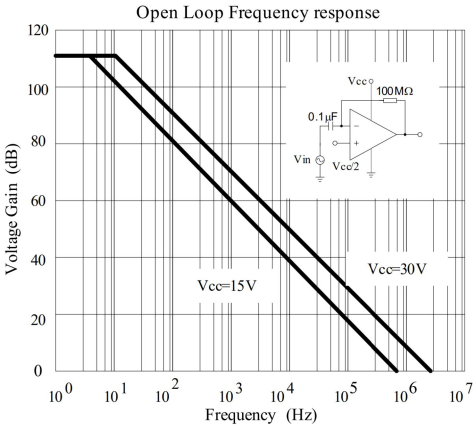
TYPICAL CHARACTERISTICS

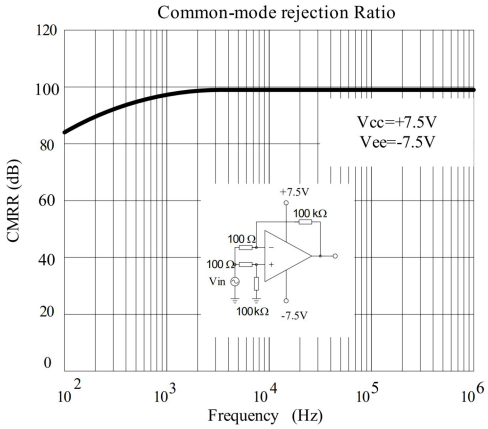






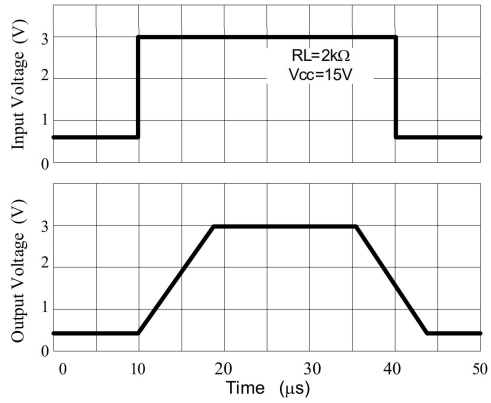




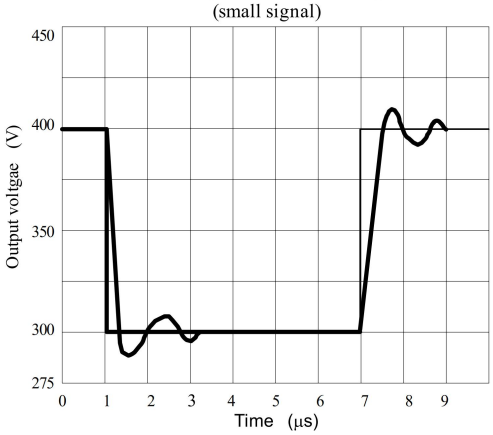


TYPICAL CHARACTERISTICS(cont.)

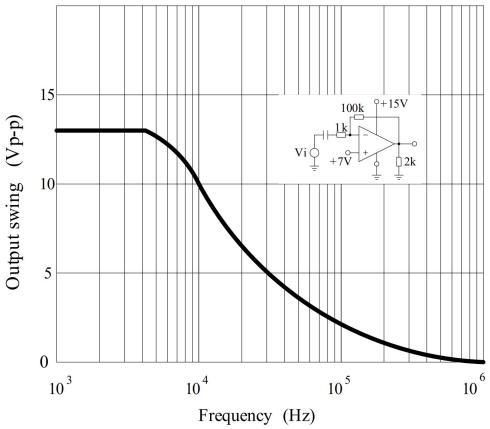
Voltage and Time



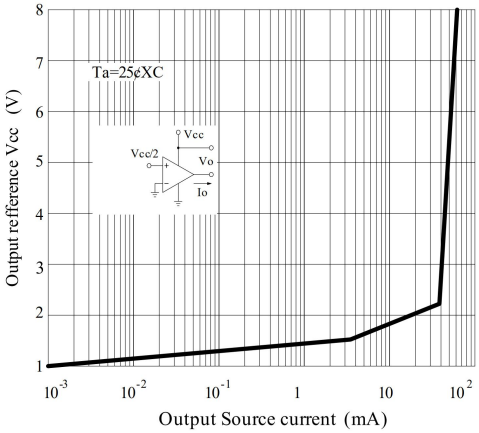
Voltage Follower pulse response (small signal)



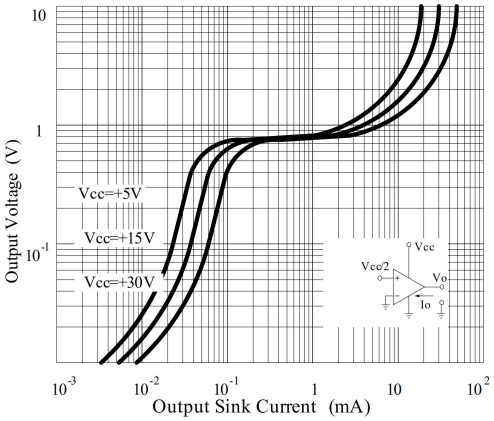
Large signal Frequency Response



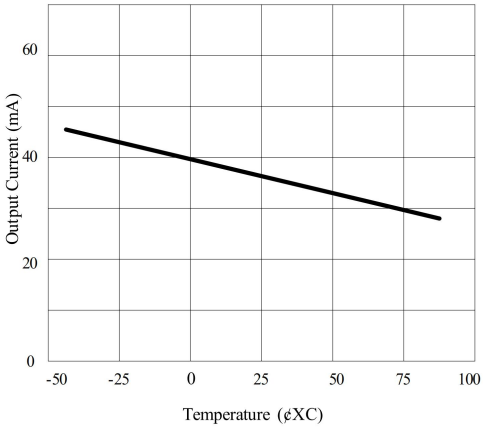
Output Characteristics current sourcing



Output Characteristics Current sinking



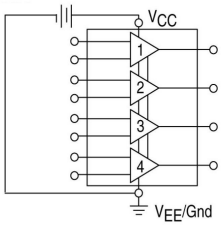
Current Limiting



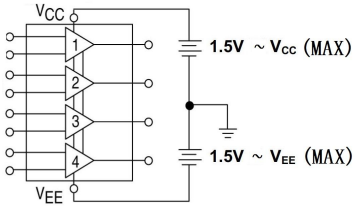
typical circuit

single supply

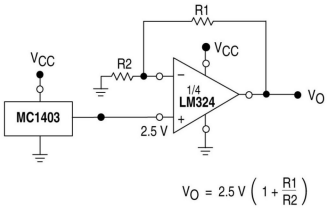
3.0V ~ V_{CC} (MAX)



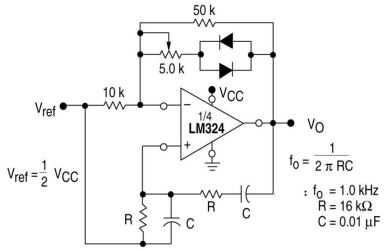
The separation of the power supply



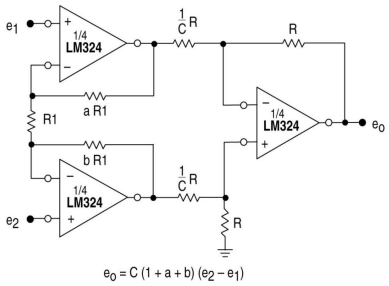
Voltage reference



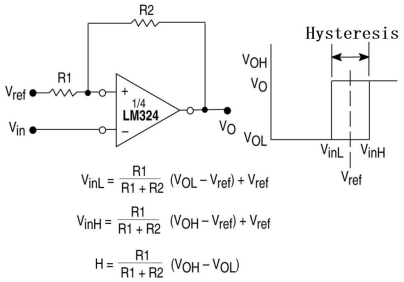
Wiese bridge oscillator



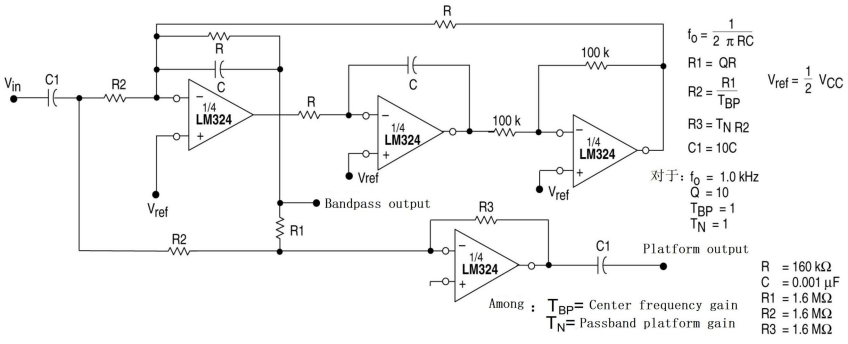
High impedance differential amplifier



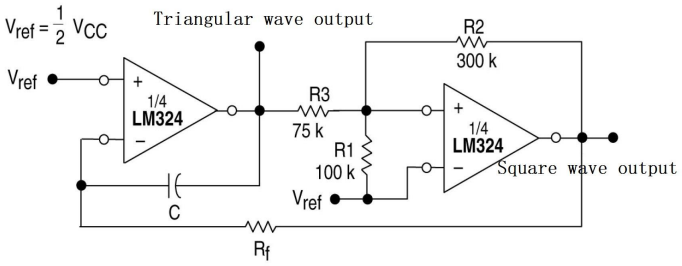
Hysteresis comparator



Double quaternary filter

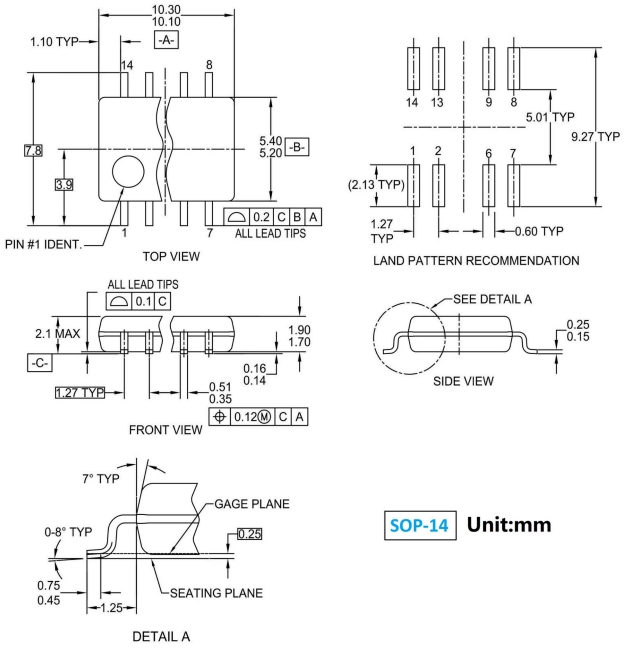


function generator

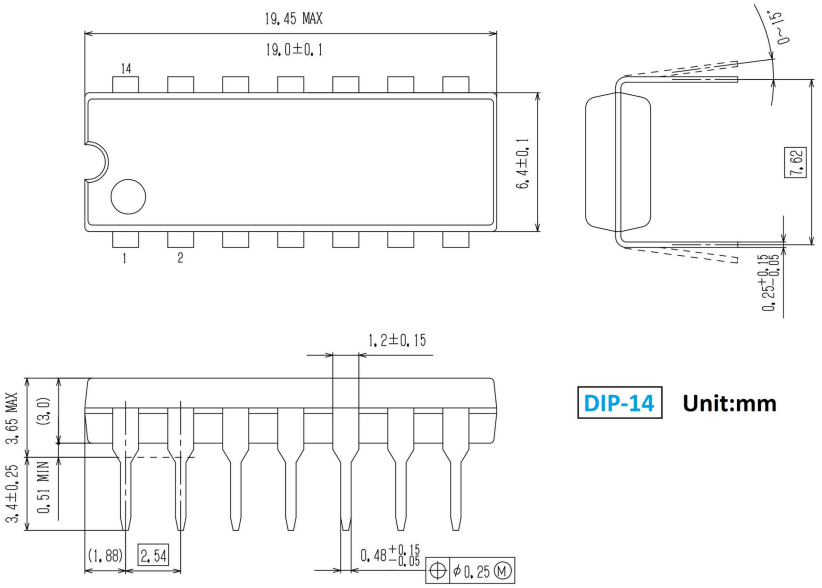


$$f = \frac{R1 + R_C}{4\,CR_f\,R1} \qquad R3 = \frac{R2\,R1}{R2 + R1}$$

Package Mechanical DATA



SOP-14 Unit:mm



DIP-14 Unit:mm