

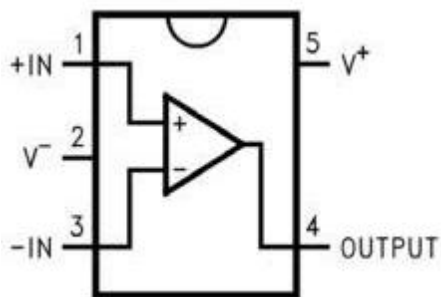


SOT-23-5L Operational Amplifier 运算放大器 IC

■ Features 特点

Wide Supply Voltage Range 宽电压范围 -12 V to 12 V

SOT-23-5L Package 封装



■ Absolute Maximum Ratings 最大额定值

参数名称	数值	单位
电源电压	24 或 ± 12	V
差分输入电压	24	V
输入电压	$-0.3 \sim V_{CC}$	V
输出端对地短路电流（每路放大器）（ $V \leq 15V$ 、 $T_a = 25^\circ C$ ）	持续	
输入电流（ $V_{IN} < -0.3V$ ）	50	mA
最大工作结温	150	$^\circ C$
工作环境温度	$0 \sim 70$	$^\circ C$
贮存温度	$-65 \sim 150$	$^\circ C$

■ Device Marking 产品打标

FS321=A63A

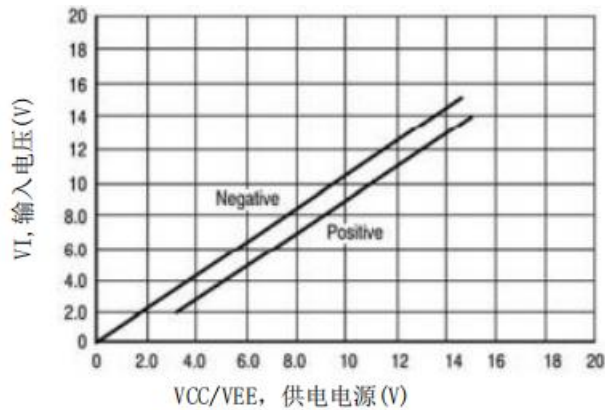


■ Electrical Characteristics 电特性

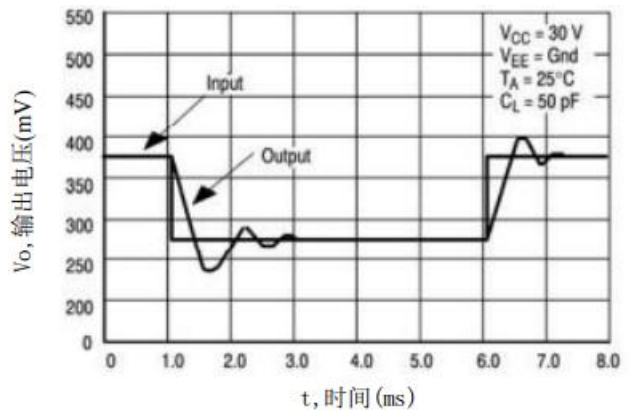
($V_{CC}=5V$ unless otherwise noted 如无特殊说明)

电参数	测试条件		规范值			单位
			最小	典型	最大	
输入失调电压	Ta=25°C			±2	±5	mV
输入偏置电流	Ta=25°C, IIN(+) 或 IIN(-), VCM=0V			±45	±250	nA
输入失调电流	Ta=25°C, IIN(+) - IIN(-), VCM=0V			±3	±50	nA
输入共模电压范围	Ta=25°C, V+=24V		0		V _{CC} -1.5	V
电源电流	RL=∞在所有运算放大器上		V _{CC} =24V	1	2	mA
			V _{CC} =5V	0.5	1.2	mA
大信号电压增益	V _{CC} =15V, Ta=25°C, RL≥2kΩ (对于 Vo=1~11V)		25	100		V/mV
共模抑制比	DC, Ta=25°C, VCM=0~V _{CC} -1.5V		65	90		dB
电源抑制比	DC, Ta=25°C, V _{CC} =5~24V		65	100		dB
输出源电流	VIN(+)=1V, VIN(-)=0V, V _{CC} =15V, Vo=2V, Ta=25°C		20	40		mA
输出吸电流	VIN(-)=1V, VIN(+)=0V, V _{CC} =15V, Vo=2V, Ta=25°C		10	15		mA
	VIN(-)=1V, VIN(+)=0V, V _{CC} =15V, Vo=200mV, Ta=25°C		12	50		μA
对地短路电流	V _{CC} =15V, Ta=25°C			40	60	mA
转换速率	V+ = 15V, RL = 2kΩ, VIN = 0.5 to 3V CL = 100pF,			0.4		V/μs
输出电压摆幅	VOH	V _{CC} =24V	RL=2kΩ	22		V
		V _{CC} =24V	RL=10kΩ	22		V
	VOL	V _{CC} =5V, RL=10kΩ			5	20

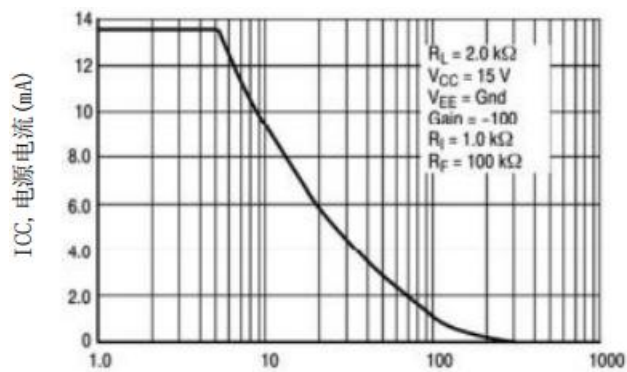
■ Typical Characteristic Curve 典型特性曲线



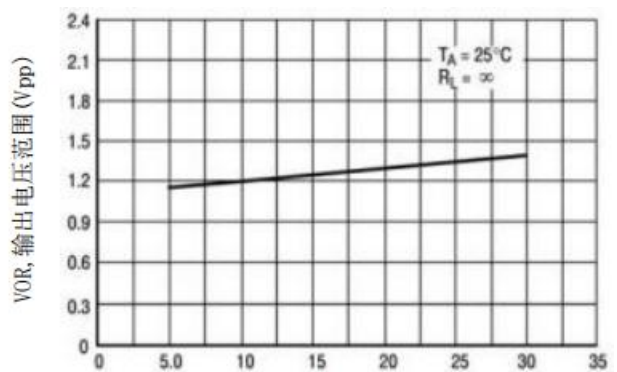
输入电压范围



小信号电压跟随器脉冲响应 (同向)

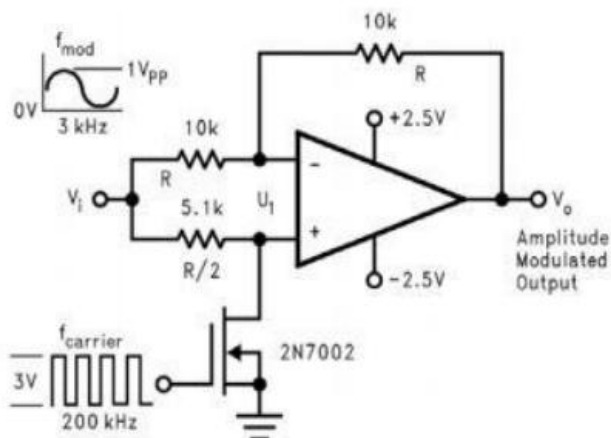


电源电流 (静态功耗)

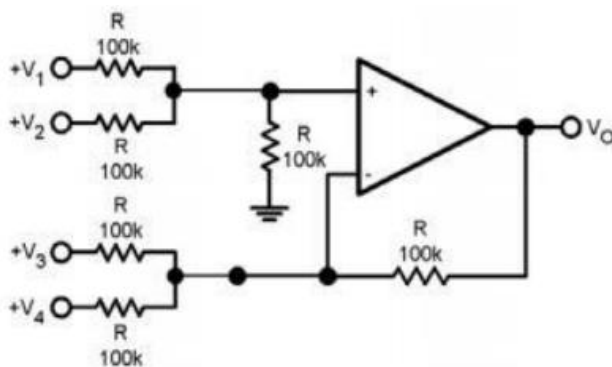


大信号频率响应

Typical Application 典型应用



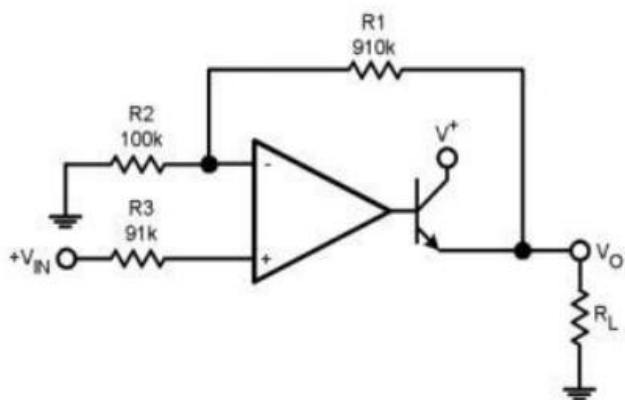
幅度调制器电路



注: $V_o = V_1 + V_2 - V_3 - V_4$, $(V_1 + V_2) \geq (V_3 + V_4)$ 以保持 $V_o \geq 0V_{DC}$

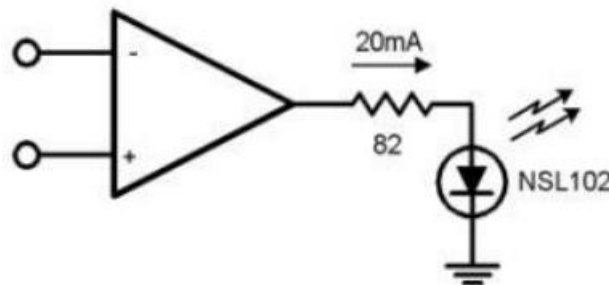
直流加法放大器

$(V_{IN} \text{'s} \geq 0V_{DC}, V_o \geq V_{DC})$

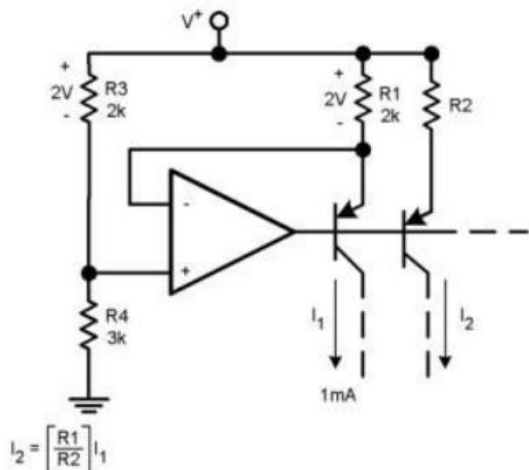


$V_o = 0V_{DC}$ for $V_{IN} = 0V_{DC}$, $A_v = 10$

功率放大器

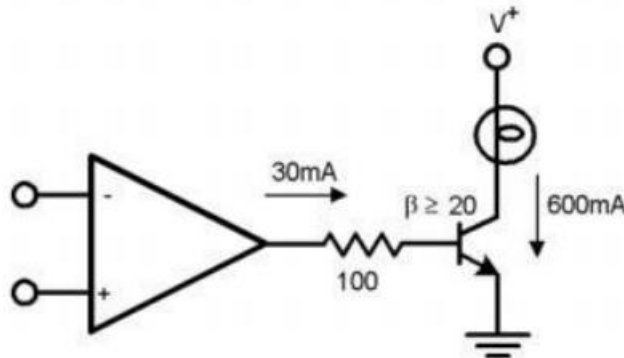


LED 驱动器



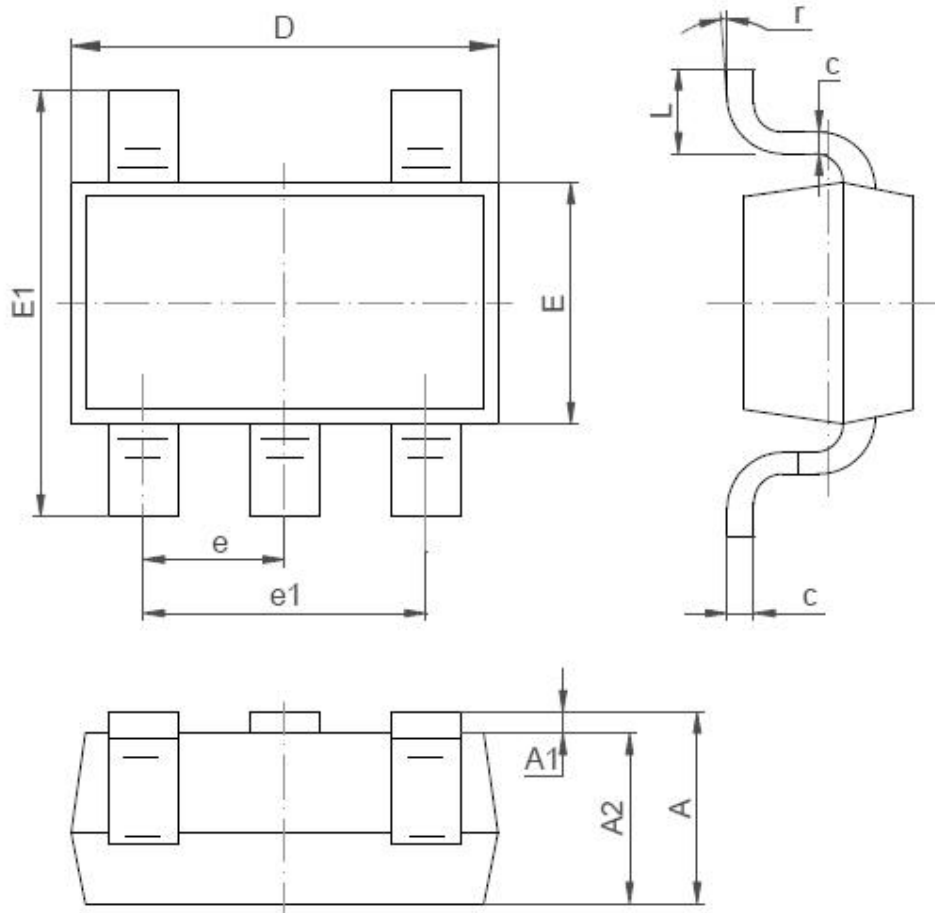
$$I_2 = \left[\frac{R_1}{R_2} \right] I_1$$

固定电流源



灯驱动器

■SOT-23 Dimension 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 (BSC)		0.037 (BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
r	0°	8°	0°	8°