

SANYO

No.4424

LA6512,6513**High-Voltage
Dual Power Operational Amplifiers****Overview**

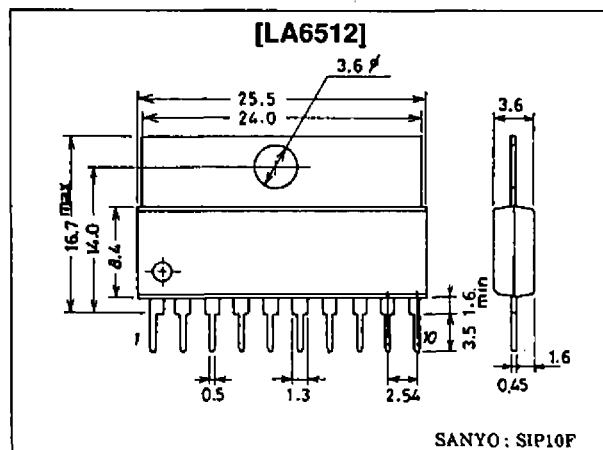
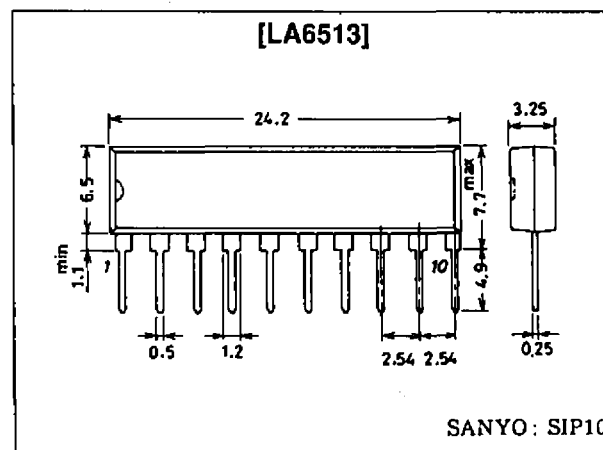
LA6512 (SIP10F) and LA6513 (SIP10) are power operational amplifier ICs capable of withstanding high voltages of ± 30 V/1 A and are best suited for such voltage division devices as LCD drivers and general-purpose power operational amplifiers.

Features

- High output current (I_O max = 1.0A)
- High gain
- Equipped with current limiter pin (Adjustable by external settings)
- Supports single power source operation
- Withstands high voltages (± 30 V)

Package Dimensions

unit : mm

3046B-SIP10F**3043A-SIP10****Specifications****Maximum Ratings at $T_a = 25^\circ\text{C}$**

			unit
Maximum supply voltage	V_{CC}/V_{EE} max	± 30	V
Differential input voltage	V_{IDIF}	56	V
Common mode input voltage	V_{ICOM}	± 28	V
Maximum output current	I_O max	1.0	A
Allowable power dissipation	P_d max	LA6512	2.5
		LA6513	1.3
Operating temperature	T_{opr}	-20 to +75	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

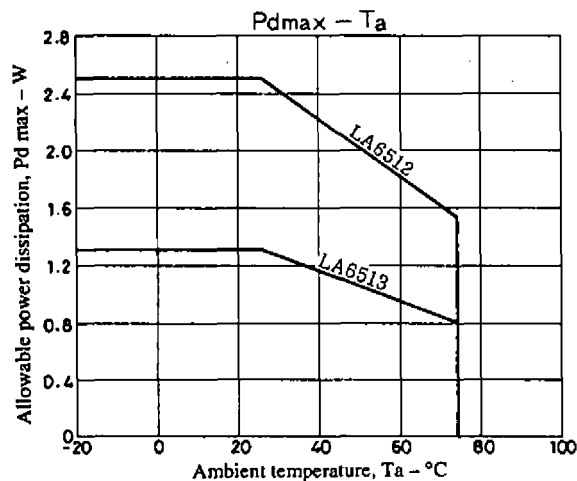
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Operating Characteristics at $T_a = 25^\circ\text{C}$, $V_{CC}/V_{EE} = \pm 15$

			min	typ	max	unit
No-load dissipation current	I_{CCO}		6	12	20	mA
Input offset voltage	V_{IO}	$R_s \leq 10\text{k}\Omega$		2	6	mV
Input offset current	I_{IO}			10	200	nA
Input bias current	I_B			100	700	nA
Common mode input voltage range	V_{ICM}		-14		13	V
Common mode signal rejection ratio	C_{RM}		70	80		dB
Maximum output voltage	$V_{O\text{max}}$		± 12	± 13		V
Voltage gain	V_{GO}			100		dB
Slew rate	SR	$G_V = 0$, $R_L = 33\Omega$, $R = 2.2\Omega$, $C = 0.1\mu\text{F}$		0.15		V/ μs
Supply voltage rejection ratio	SVRR			30	150	$\mu\text{V/V}$
Limiting current	I_{SC}	$R_{SC} = 2.2\Omega$		0.35		A

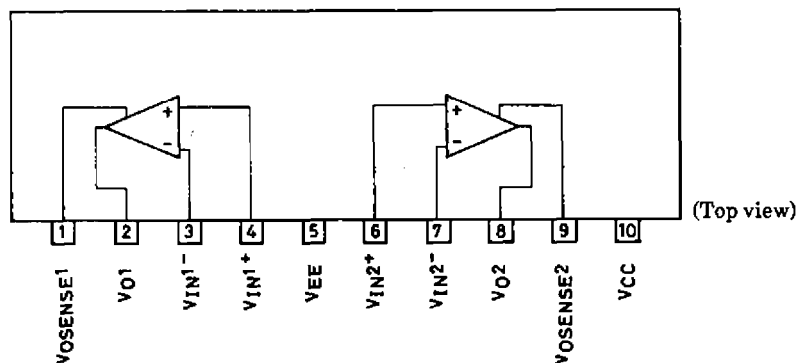


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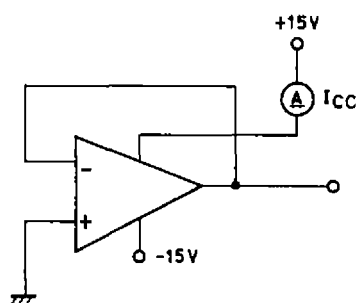
Pin Assignment

(LA6512, 6513 common)

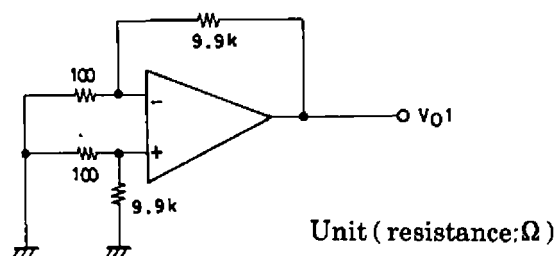


Test Circuit

I_{CC}



V_{IO} , SVRR

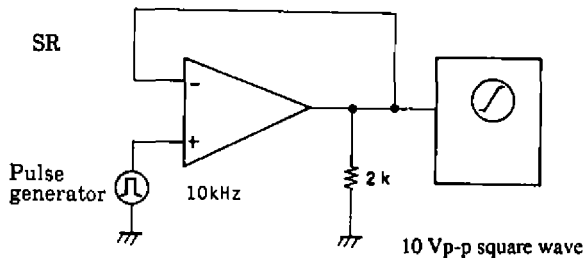
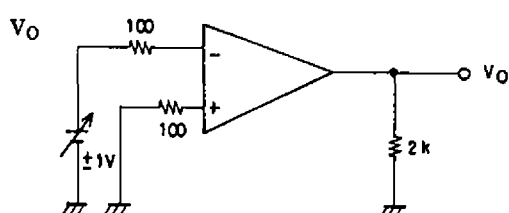
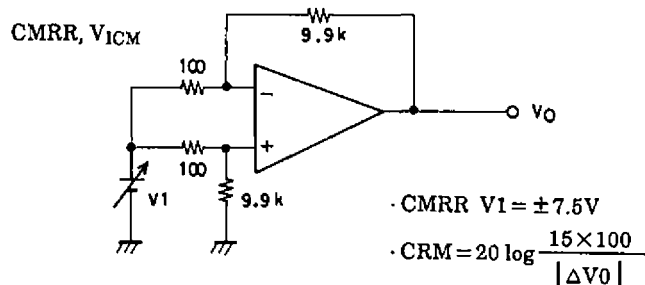
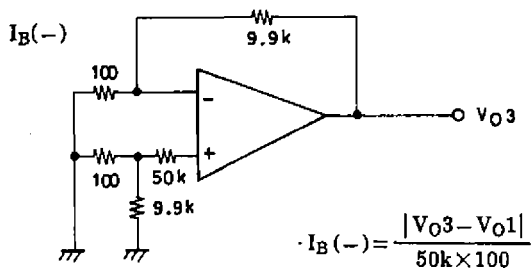
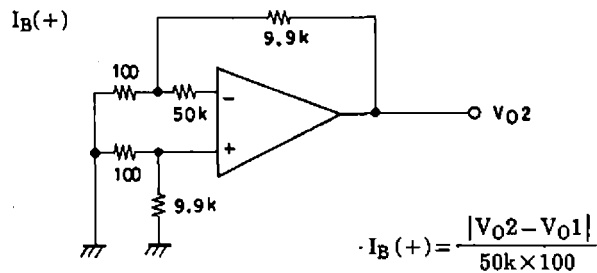
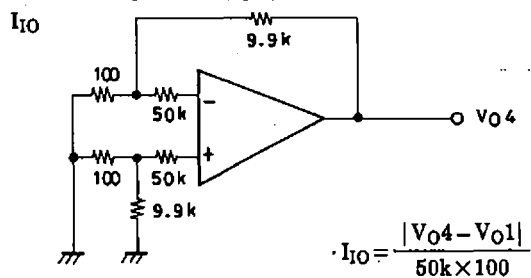


Unit (resistance: Ω)

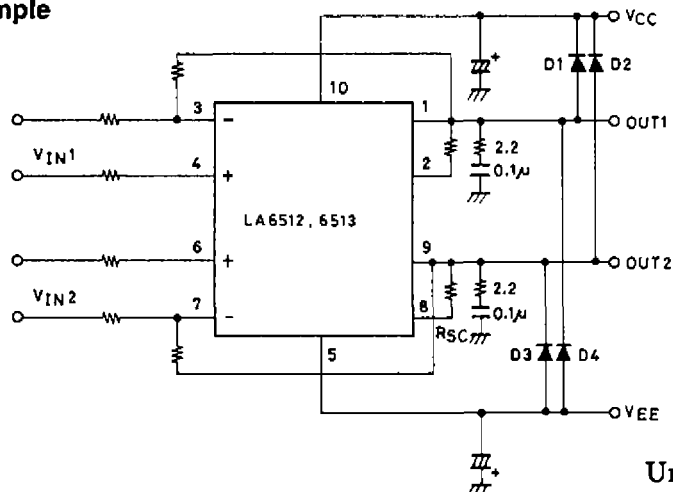
- V_{IO} is with $V_{CC}/V_{EE} = \pm 15\text{ V}$
- $SVRR$ is with $\begin{bmatrix} V_{CC} = 15.5\text{ V} \\ V_{EE} = -5, -15\text{ V} \end{bmatrix}$
- $V_{IO} = V_{O1}/100$
- $SVR (+) = \left| \frac{\Delta V_{O1}}{100 \times 10\text{ V}} \right|$
- $SVR (-) = \left| \frac{\Delta V_{O1}}{100 \times 10\text{ V}} \right|$

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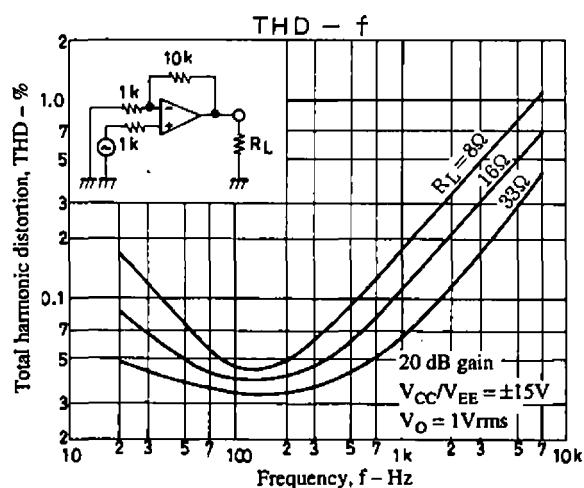
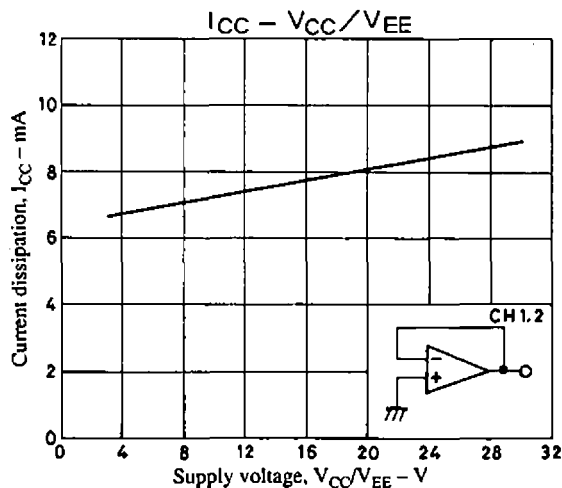


Application Circuit Example



Unit (resistance:Ω capacitance:F)

Note: When driving an inductive load, a D1 to D4 protective diode should be installed.



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