

SANYO**LA6458M, 6458S****High-Performance
Dual Operational Amplifiers****Overview**

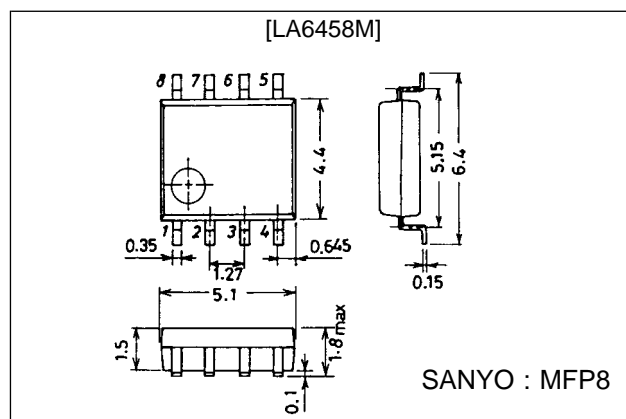
The LA6458 consists of two independent, internally phase compensated operational amplifiers. Application areas include active filters, audio preamplifiers, and various electronic circuits.

Features

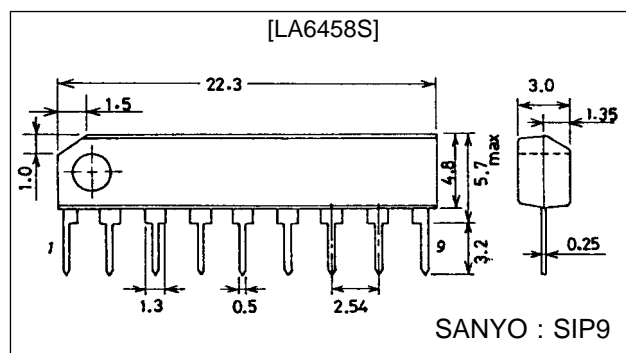
- LA6458M : 8-pin MFP package,
LA6458S : 9-pin SIP package
- Phase compensation circuit built in.
- High gain, low noise.
- Slew rate : 1.1V/ μ s typ.

Package Dimensions

unit : mm

3032B-MFP8

unit : mm

3017C-SIP9**Specifications****Maximum Ratings at Ta = 25°C**

Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC}/V_{EE}		± 18	V
Differential input voltage	V_{ID}		± 30	V
Common-mode input voltage	V_{IN}		± 15	V
Allowable power dissipation	Pd max	LA6458M	300	mW
		LA6458S	500	mW
Operating temperature	Topr		-20 to +75	°C
Storage temperature	Tstg		-40 to +125	°C

SANYO Electric Co.,Ltd. Semiconductor Business Headquarters

TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN

63096HA(II)/1100YT/8237KI/8064KI/O064KI,TS No.911-1/5

LA6458M, 6458S

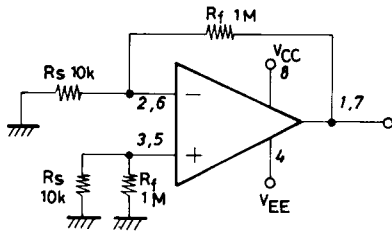
Operating Characteristics at Ta = 25°C, VCC = 15 V, VEE = -15 V

Parameter	Symbol	Conditions	min	typ	max	Unit
Input offset voltage	V_{IO}	$R_S = 10\text{ k}\Omega$		0.5	6	mV
Input offset current	I_{IO}			5	200	nA
Input bias current	I_B			60	500	nA
Common-mode input voltage	V_{ICM}		± 12	± 14		V
Common-mode rejection ratio	CMR		70	90		dB
Voltage gain	V_{GO}	$R_L \geq 2\text{ k}\Omega$, $V_O = \pm 10\text{ V}$	86	100		dB
Maximum output voltage	$V_O(1)$	$R_L \geq 10\text{ k}\Omega$	± 12	± 14		V
	$V_O(2)$	$R_L \geq 2\text{ k}\Omega$	± 10	± 13		V
Slew rate	SR	LA6458M: $V_G = 0$, $R_L \geq 2\text{ k}\Omega$		1.0		V/ μ s
		LA6458S: $V_G = 0$, $R_L \geq 2\text{ k}\Omega$		1.1		V/ μ s
Equivalent input noise voltage	V_{NI}	LA6458M: $R_S = 1\text{ k}\Omega$, B.P.F. = 10 Hz to 30 kHz		1.6		μ V
		LA6458S: $R_S = 1\text{ k}\Omega$, B.P.F. = 10 Hz to 30 kHz		1.7		μ V
Current drain	I_{CC}			3.5	6	mA
Supply voltage rejection	SVR	$R_S \leq 10\text{ k}\Omega$		30	150	μ V/V

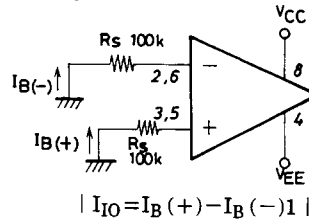
Test Circuits

(Pin assignment : SIP/MFP package)

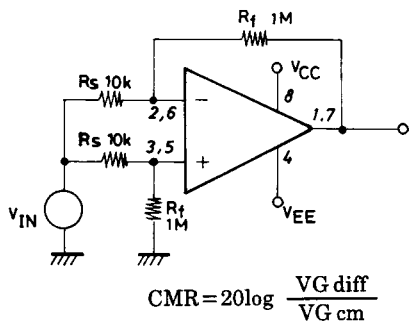
1. V_{IO} , SVR



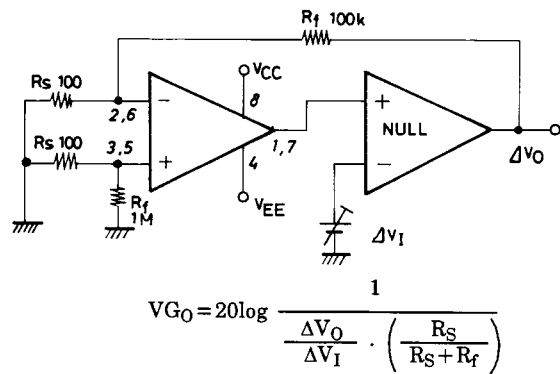
2. I_{IO} , I_B



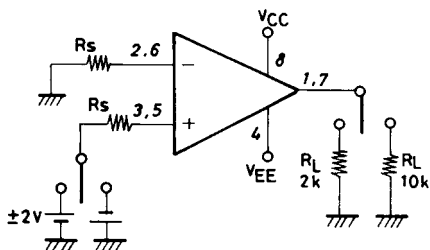
3. V_{ICM} , CMR



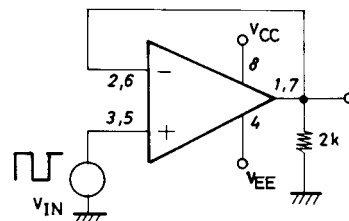
4. V_{GO}



5. V_O



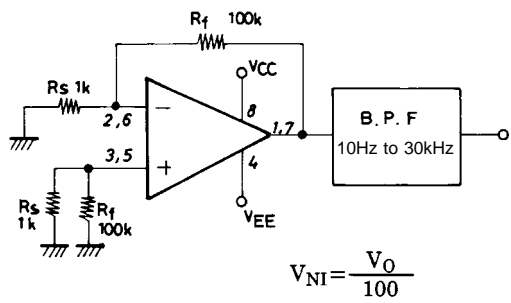
6. SR



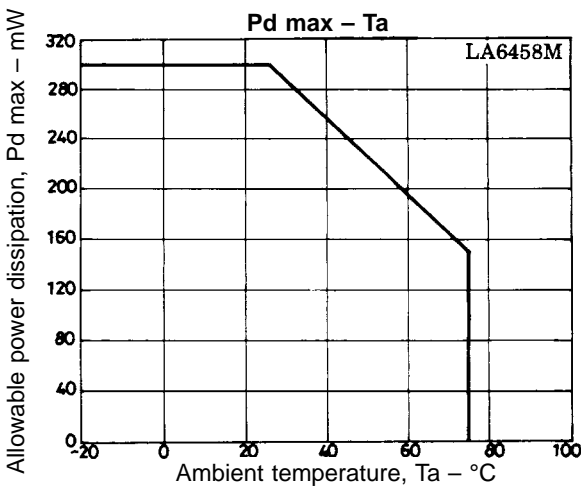
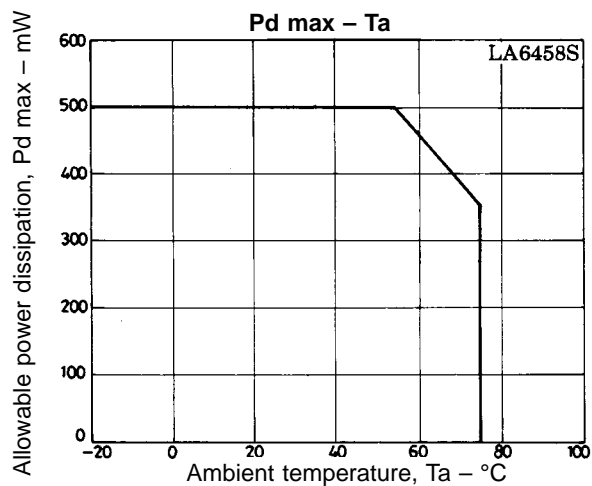
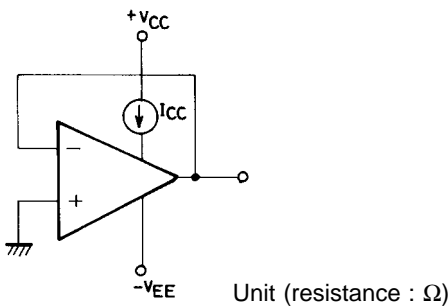
Unit (resistance: Ω)

LA6458M, 6458S

7. V_{NI}

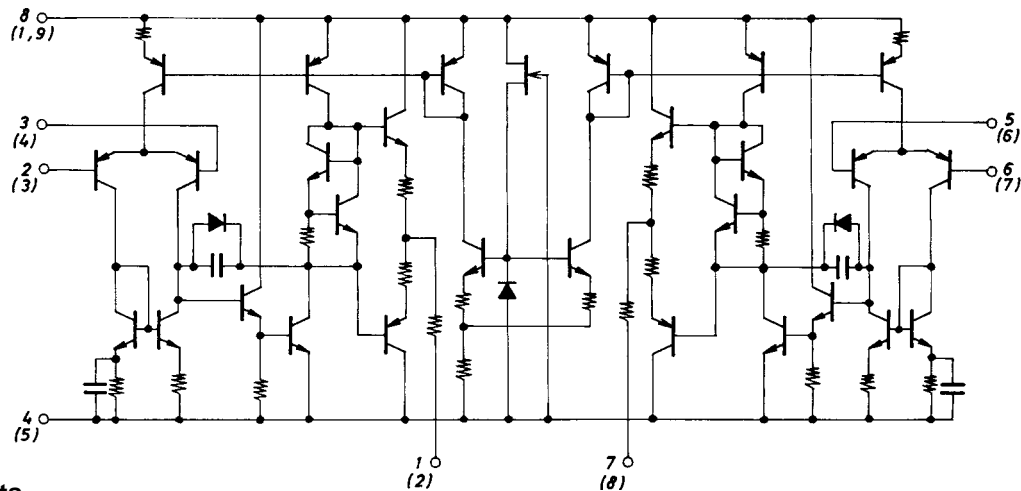


8. I_{CO}

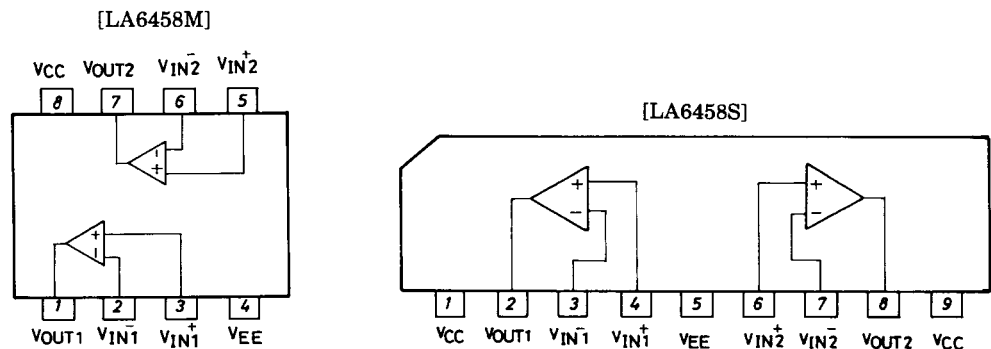


Equivalent Circuit

Pin No. : LA6458M, () of pin No. : LA6458S

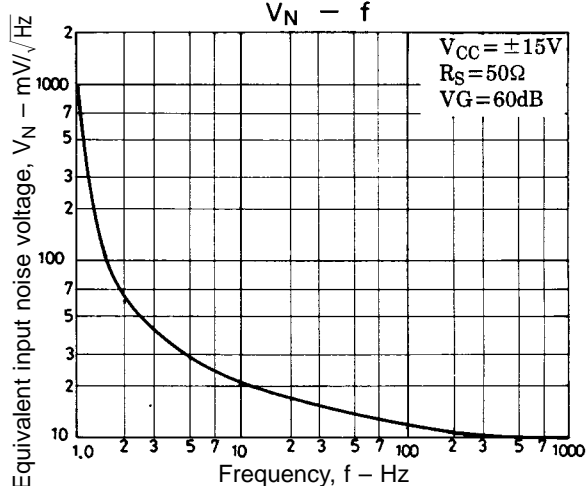
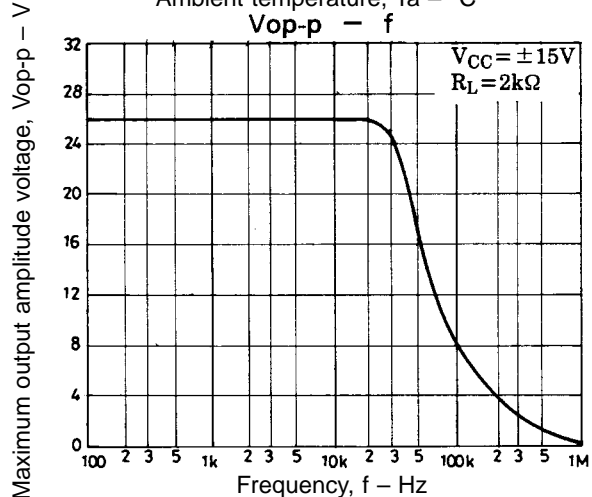
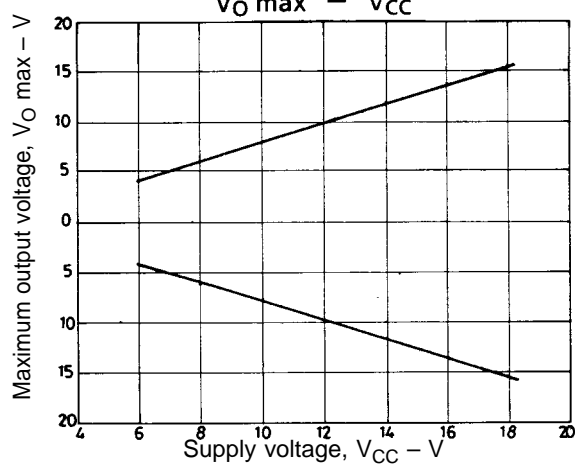
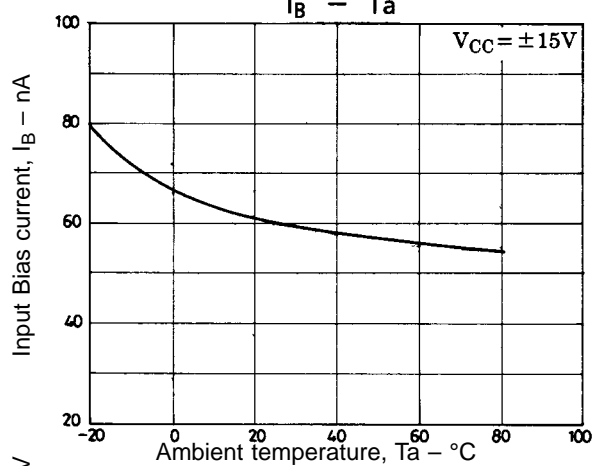
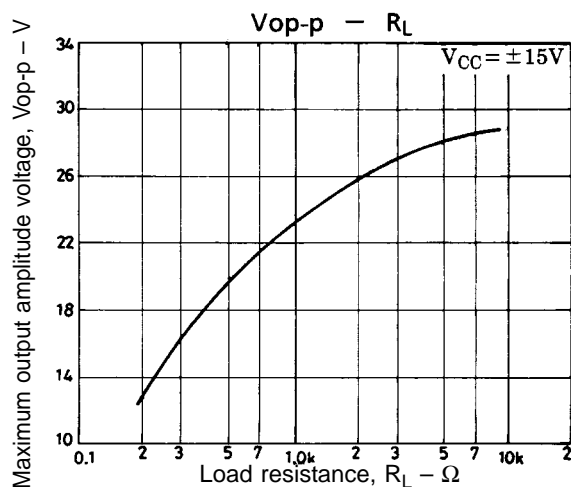
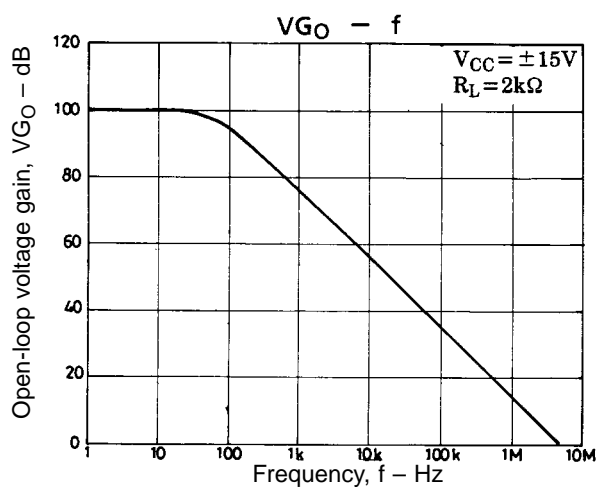
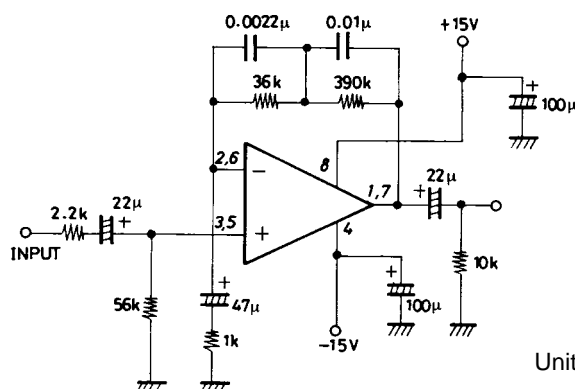


Pin Assignments



Top view

Sample Application Circuit RIAA preamplifier ($V_G = 32.5 \text{ dB}$)



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

This catalog provides information as of June, 1996. Specifications and information herein are subject to change without notice.