

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

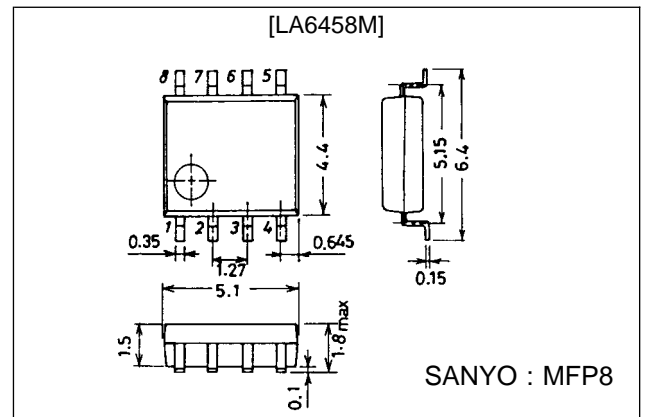
The LA6458 consists of two independent, internally phase compensated operational amplifiers. Application areas include active filters, audio preamplifiers, and various electronic circuits.

**Features**

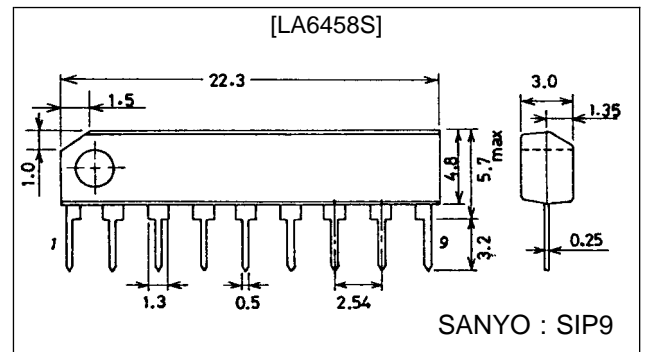
- LA6458M : 8-pin MFP package,  
LA6458S : 9-pin SIP package
- Phase compensation circuit built in.
- High gain, low noise.
- Slew rate : 1.1V/ $\mu$ s typ.

**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	$V_{CC}/V_{EE}$		$\pm 18$	V
Differential input voltage	$V_{ID}$		$\pm 30$	V
Common-mode input voltage	$V_{IN}$		$\pm 15$	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

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

# LA6458M, 6458S

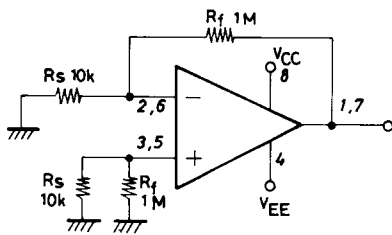
**Operating Characteristics at Ta = 25°C, V<sub>CC</sub> = 15 V, V<sub>EE</sub> = -15 V**

Parameter	Symbol	Conditions	min	typ	max	Unit
Input offset voltage	V <sub>IO</sub>	R <sub>S</sub> = 10 kΩ		0.5	6	mV
Input offset current	I <sub>IO</sub>			5	200	nA
Input bias current	I <sub>B</sub>			60	500	nA
Common-mode input voltage	V <sub>ICM</sub>		±12	±14		V
Common-mode rejection ratio	CMR		70	90		dB
Voltage gain	V <sub>GO</sub>	R <sub>L</sub> ≥ 2 kΩ, V <sub>O</sub> = ±10 V	86	100		dB
Maximum output voltage	V <sub>O</sub> (1)	R <sub>L</sub> ≥ 10 kΩ	±12	±14		V
	V <sub>O</sub> (2)	R <sub>L</sub> ≥ 2 kΩ	±10	±13		V
Slew rate	SR	LA6458M: VG = 0, R <sub>L</sub> ≥ 2 kΩ		1.0		V/μs
		LA6458S: VG = 0, R <sub>L</sub> ≥ 2 kΩ		1.1		V/μs
Equivalent input noise voltage	V <sub>NI</sub>	LA6458M: R <sub>S</sub> = 1 kΩ, B.P.F. = 10 Hz to 30 kHz		1.6		μV
		LA6458S: R <sub>S</sub> = 1 kΩ, B.P.F. = 10 Hz to 30 kHz		1.7		μV
Current drain	I <sub>CC</sub>			3.5	6	mA
Supply voltage rejection	SVR	R <sub>S</sub> ≤ 10 kΩ		30	150	μV/V

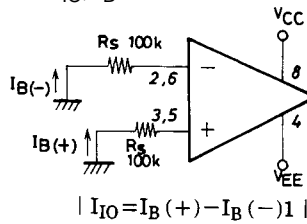
## Test Circuits

(Pin assignment : SIP/MFP package)

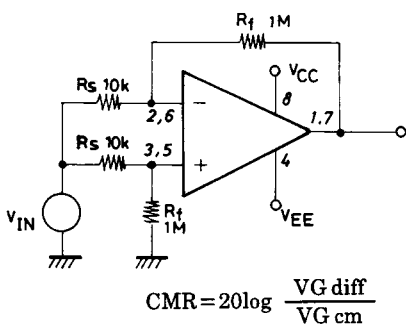
1. V<sub>IO</sub>, SVR



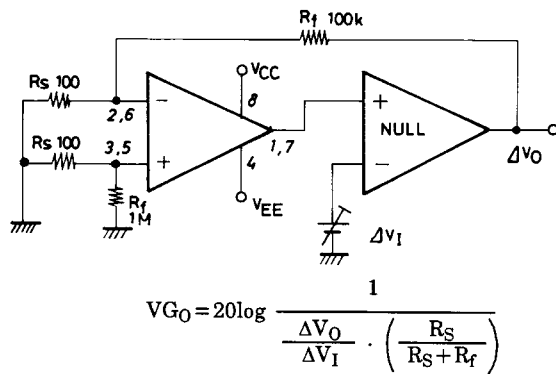
2. I<sub>IO</sub>, I<sub>B</sub>



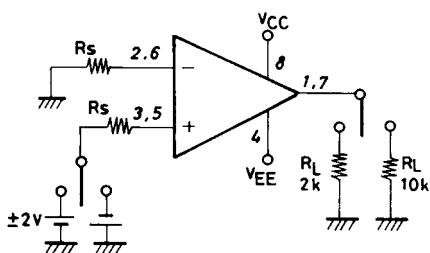
3. V<sub>ICM</sub>, CMR



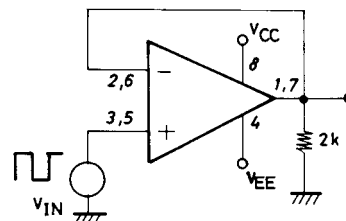
4. V<sub>GO</sub>



5. V<sub>O</sub>



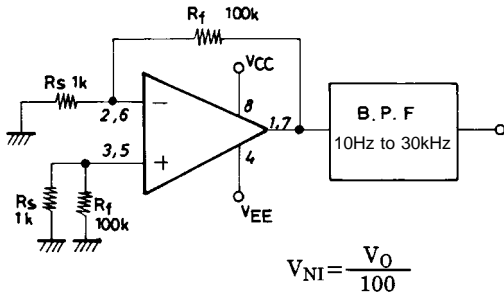
6. SR



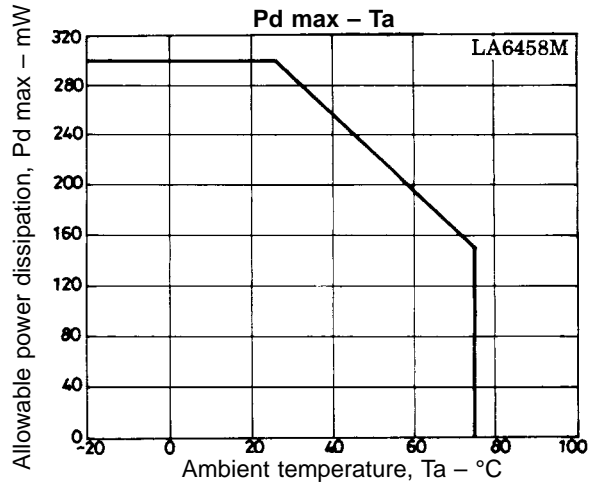
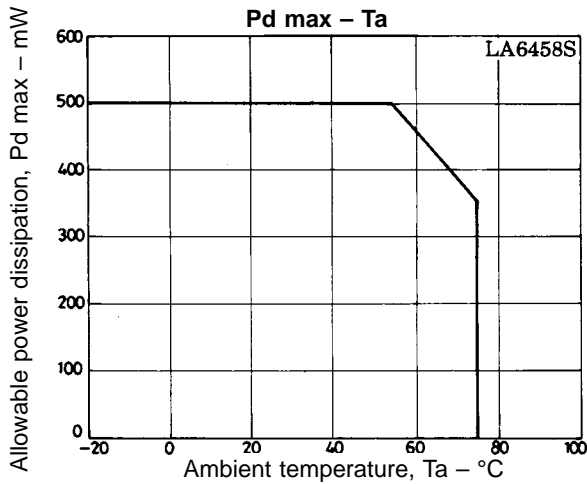
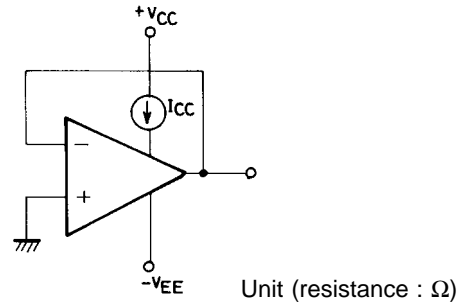
Unit (resistance: Ω)

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7.  $V_{NI}$

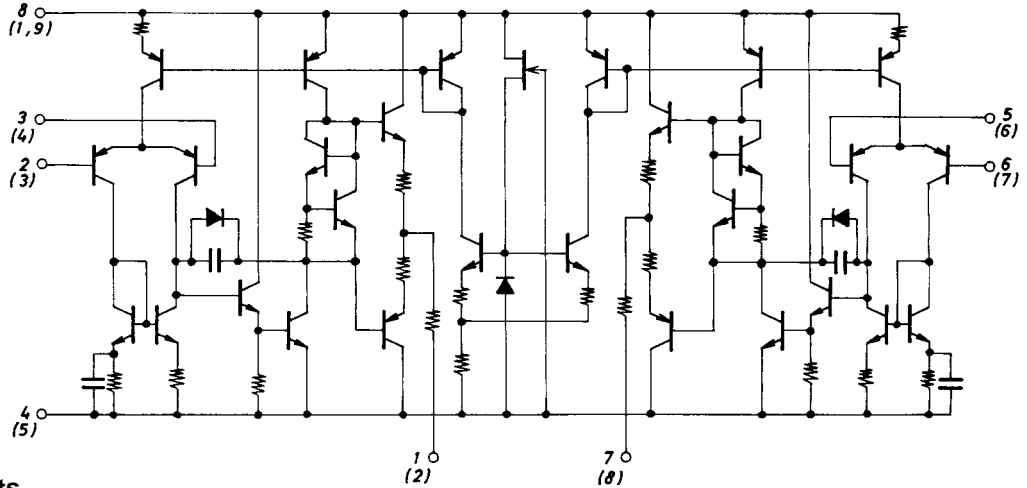


8.  $I_{CO}$

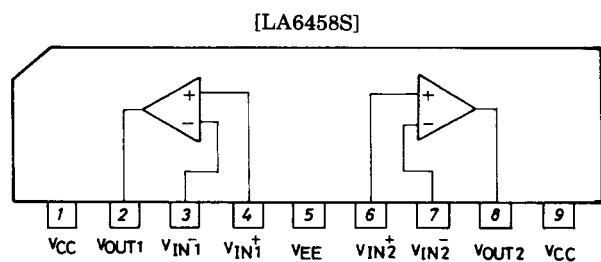
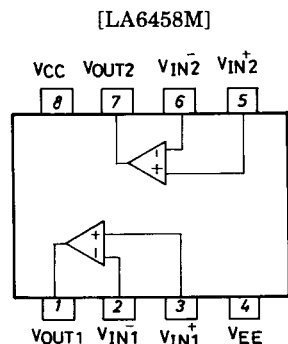


## Equivalent Circuit

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



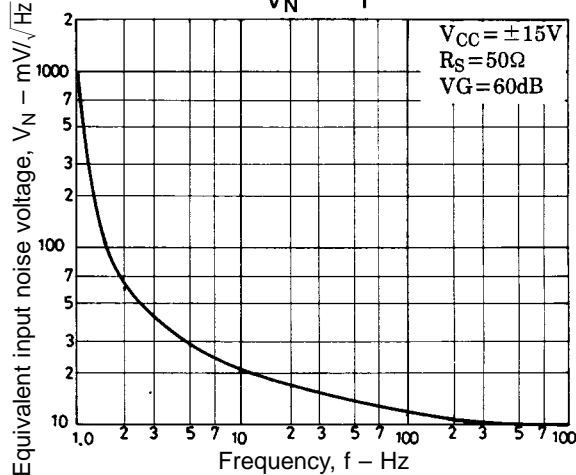
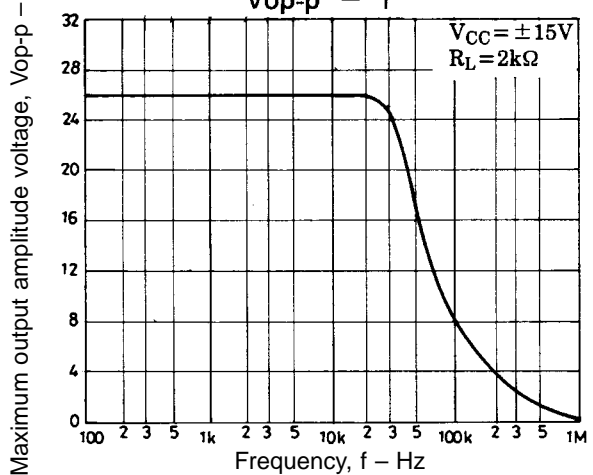
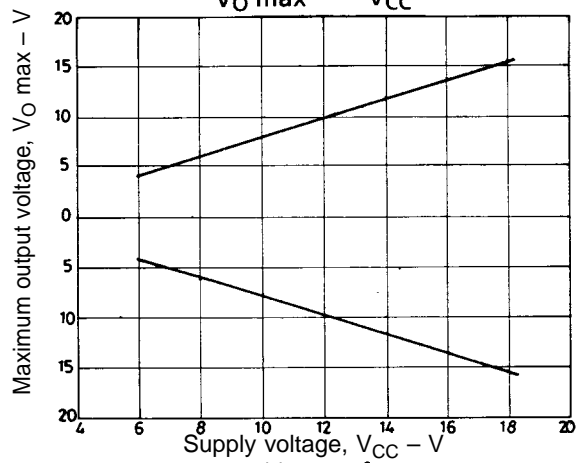
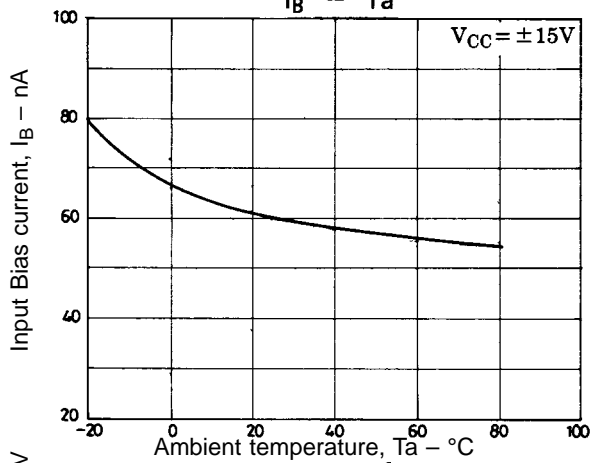
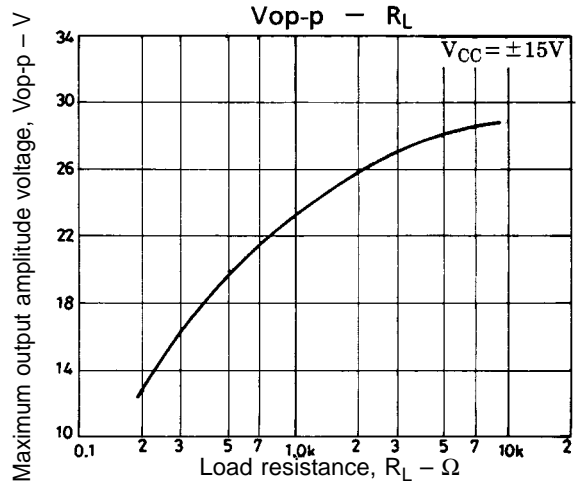
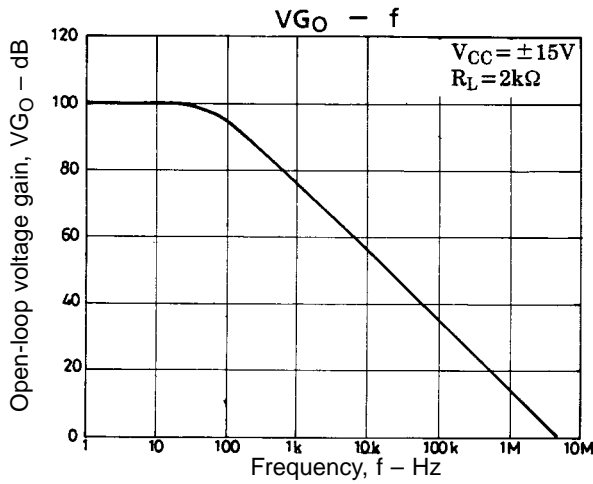
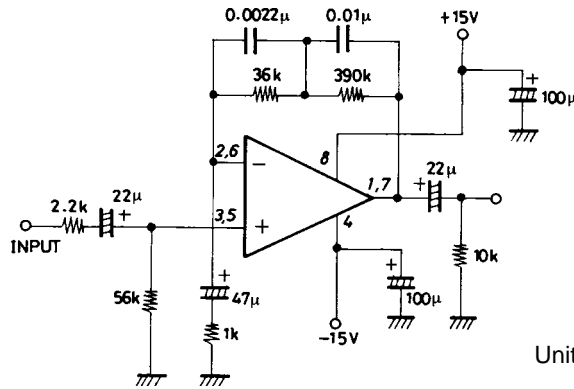
## Pin Assignments



Top view

# LA6458M, 6458S

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



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