

**SANYO****LA6540M****4-output Power Operational Amplifier****Overview**

The LA6540M is a 4-output power operational amplifier developed for use in consumer and industrial equipment.

**Functions**

- High output current ( $I_O$  max = 0.7 A : typ)
- Includes a current limiter
- Wide operating voltage range ( $\pm 2$  to  $\pm 16$  V)
- Single-supply operation possible (4 to 32 V)
- Thermal shutdown built in

**Specifications****Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

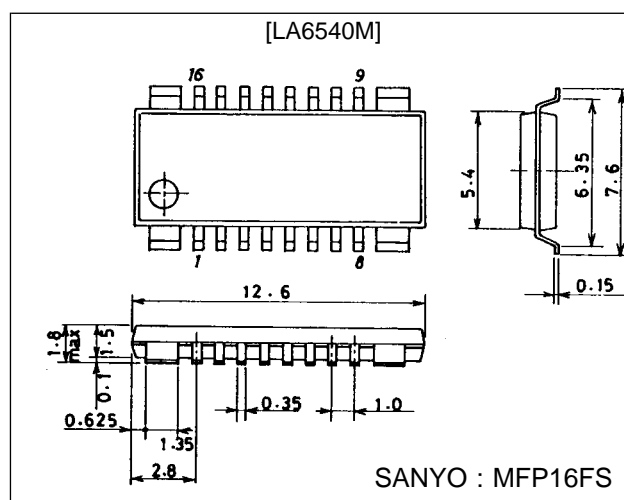
| Parameter                   | Symbol          | Conditions | Ratings         | Unit             |
|-----------------------------|-----------------|------------|-----------------|------------------|
| Maximum supply voltage      | $V_{CC}/V_{EE}$ |            | $\pm 18$        | V                |
| Input voltage               | $V_{IN}$        |            | $\pm 17$        | V                |
| Allowable power dissipation | $P_d$ max       |            | 0.7             | W                |
| Operating temperature       | $T_{opr}$       |            | $-20$ to $+75$  | $^\circ\text{C}$ |
| Storage temperature         | $T_{stg}$       |            | $-40$ to $+150$ | $^\circ\text{C}$ |

**Operation Characteristics at  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = +15$  V,  $V_{EE} = -15$  V**

| Parameter                          | Symbol   | Conditions                                                             | min      | typ      | max   | Unit             |
|------------------------------------|----------|------------------------------------------------------------------------|----------|----------|-------|------------------|
| No-load current drain              | $I_{CC}$ | Mute OFF                                                               |          | 15       | 30    | mA               |
| Input offset voltage               | $V_{IO}$ | $R_S \leq 10$ k $\Omega$                                               |          | 2        | 7     | mV               |
| Input offset current               | $I_{IO}$ |                                                                        |          | 10       | 100   | nA               |
| Input bias current                 | $I_B$    |                                                                        |          | 50       | 300   | nA               |
| Input common-mode voltage range    | $V_{ID}$ |                                                                        | $-14$    |          | $+13$ | V                |
| Common-mode signal rejection ratio | CMRR     |                                                                        | 60       | 75       |       | dB               |
| Maximum output voltage             | $V_O$    | $R_L = 33$ $\Omega$                                                    | $\pm 11$ | $\pm 12$ |       | V                |
| Slew rate                          | SR       | $R_L = 33$ $\Omega$ , $R_1 = 2.2$ $\Omega$ , $C_1 = 0.1$ $\mu\text{F}$ |          | 0.15     |       | V/ $\mu\text{s}$ |
| Limiting current (built in)        | $I_{SC}$ |                                                                        | 0.5      | 0.7      |       | A                |

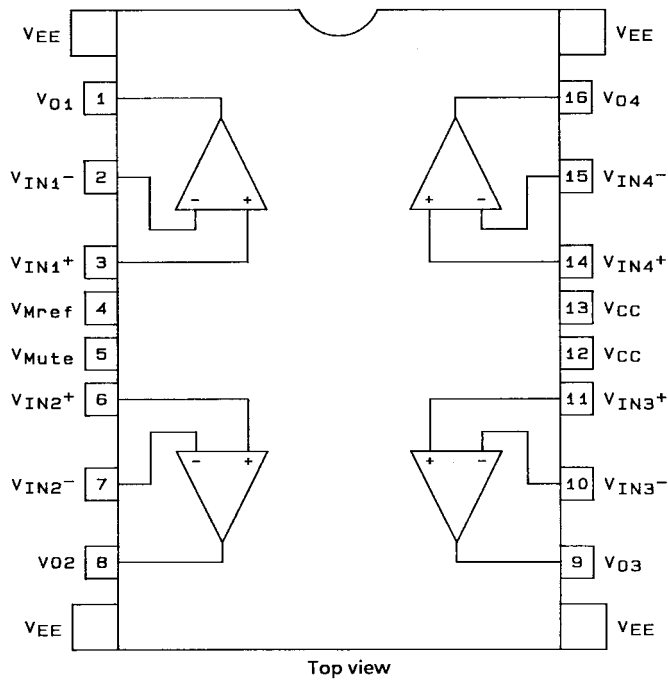
**Package Dimensions**

unit : mm

**3097-MFP16FS**

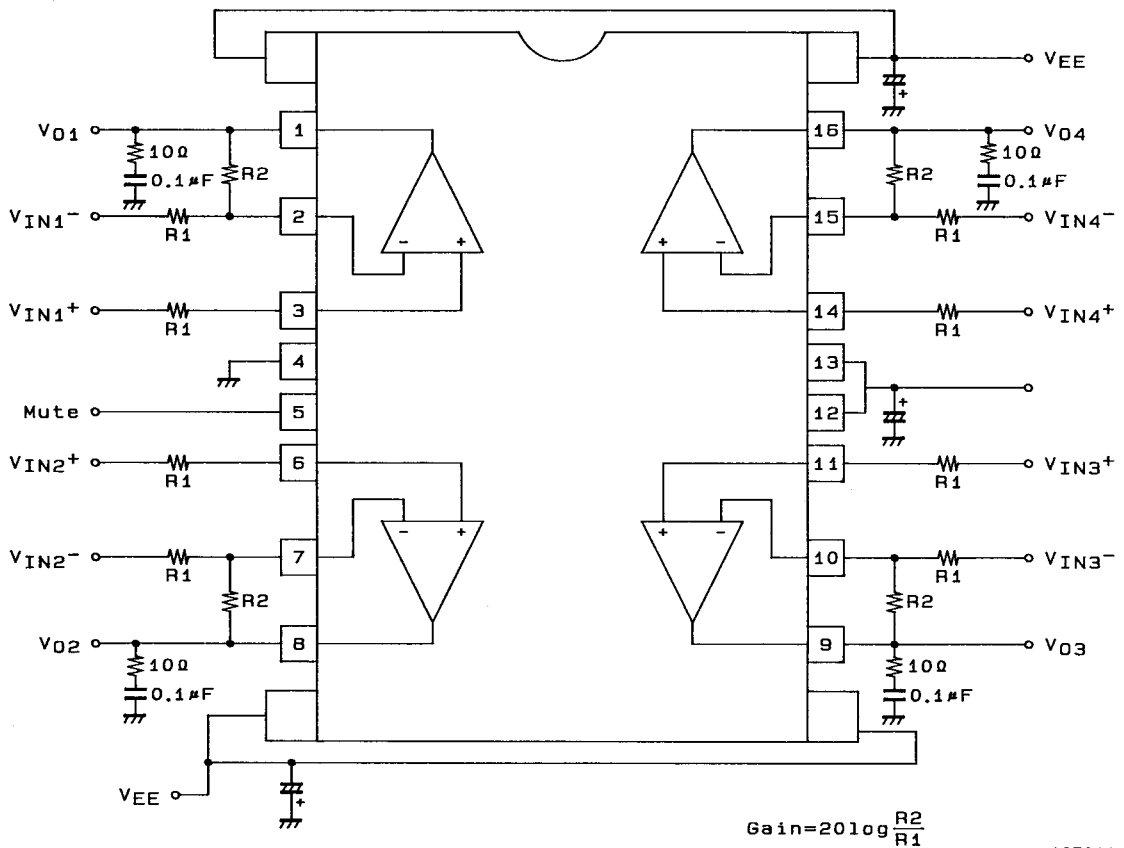
# LA6540M

## Pin Assignment



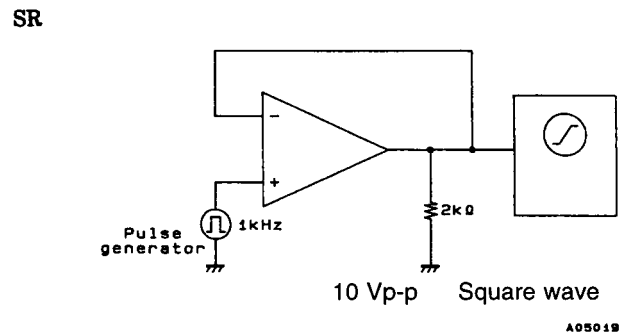
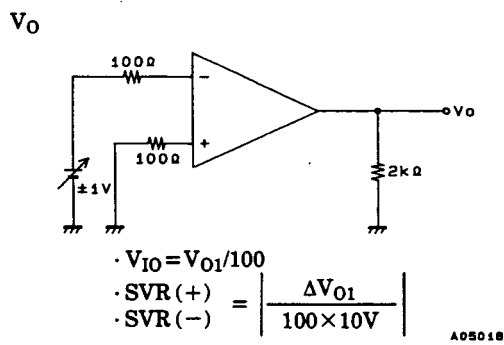
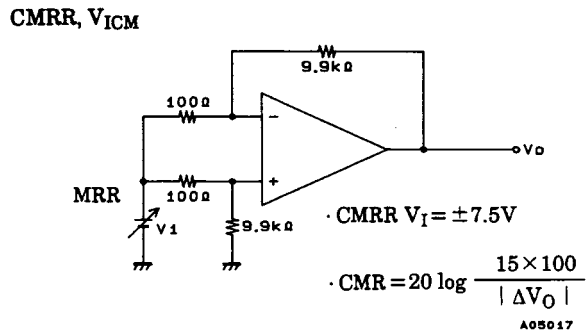
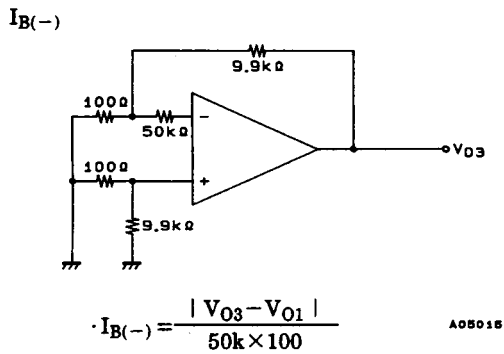
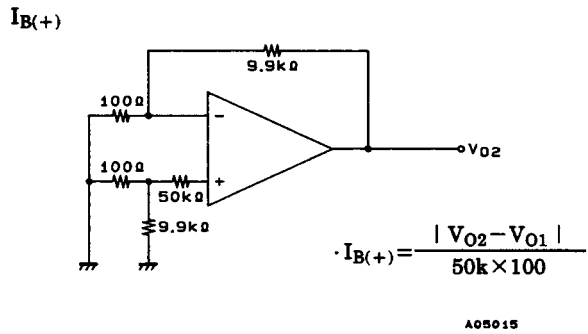
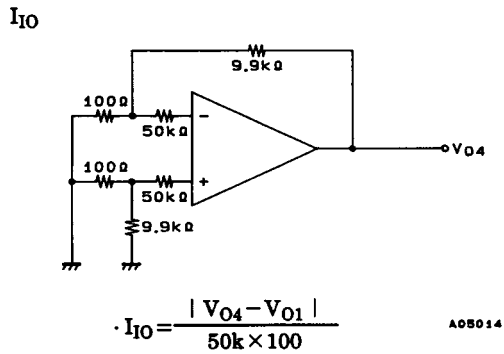
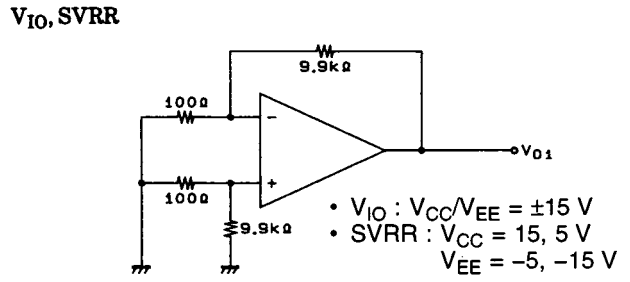
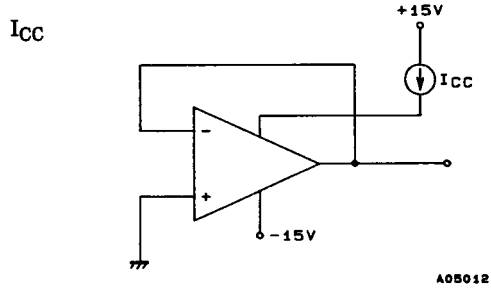
A05010

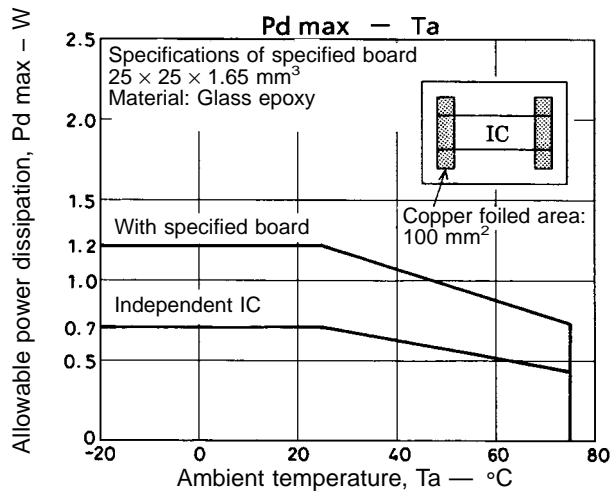
## Sample Application Circuit



A05011

Test Circuits





- 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 February, 1996. Specifications and information herein are subject to change without notice.