

Vocal Canceller for "Karaoke" Equipment

Description

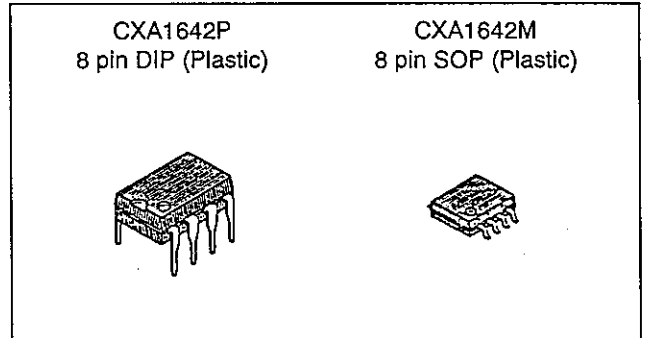
The CXA1642P/M is a bipolar IC for use in "Karaoke" music entertainment systems that provides a built-in means of attenuating the vocal portions of recorded musical programs on CD, laser disks and other entertainment media.

Features

- Vocal cancel feature
- Low-level sound correction
- Internal MIX input amplifier
- Few external components

Absolute Maximum Ratings

- Supply voltage V_{cc} 12 V
- Operating temperature T_{opr} -20 to +75 °C
- Storage temperature T_{stg} -65 to +150 °C
- Allowable power dissipation
 P_D 500 mW (CXA1642P)
 250 mW (CXA1642M)



Applications

Use in all types of "Karaoke" audio systems to implement functions needed to allow singer's voice to override the originally recorded vocal track without disrupting the music tracks.

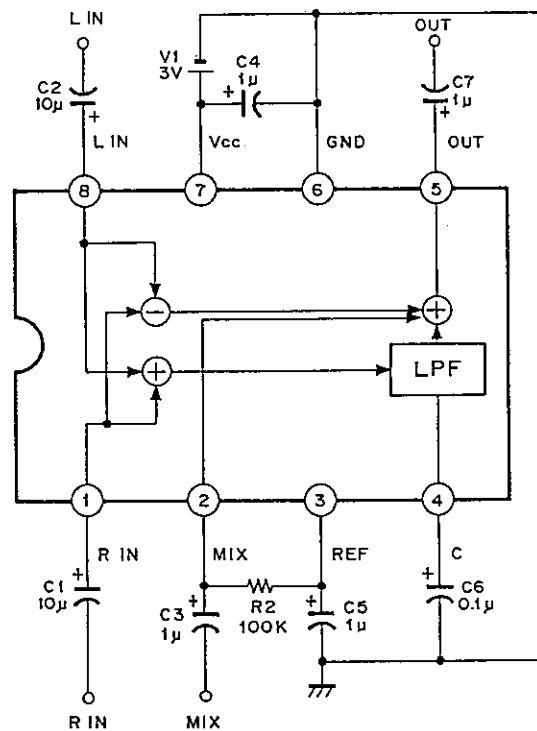
Structure

Bipolar silicon monolithic IC

Recommended Operating Conditions

Supply voltage 1.8 to 10.0 V



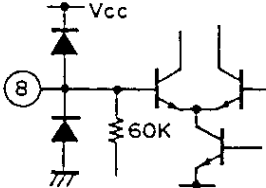
Block Diagram, Pin Configuration, and Application Circuit



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Pin Description

| Pin No. | Symbol | Equivalent circuit | Pin voltage | Description |
|---------|--------|--------------------|-------------|-----------------------|
| 1 | R_IN | | 5.0 | R-channel input |
| 2 | MIX | | 5.0 | Mixing input |
| 3 | REF | | 5.0 | Reference pin |
| 4 | C | | 5.0 | LPF time constant pin |
| 5 | OUT | | 5.0 | Output |

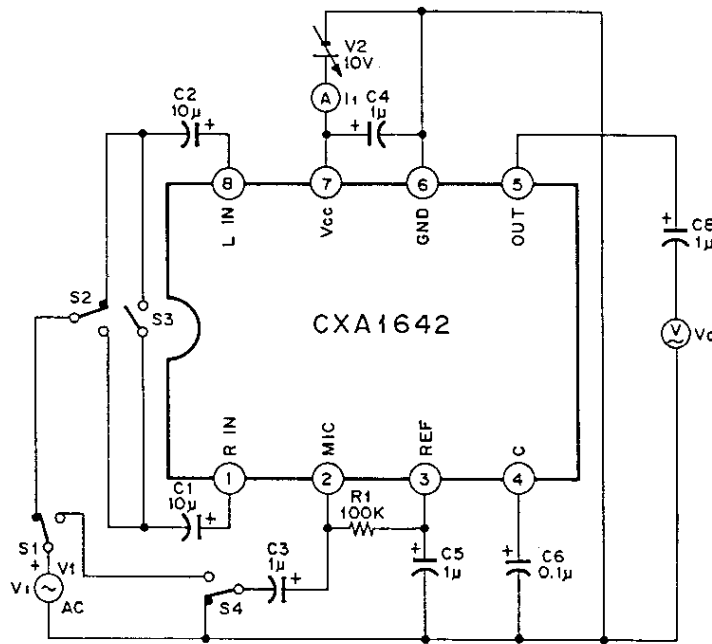
| Pin No. | Symbol | Equivalent circuit | Pin voltage | Description |
|---------|--------|---|-------------|-----------------|
| 6 | GND |  | 0 | GND |
| 7 | Vcc |  | 10.0 | Power supply |
| 8 | L_IN |  | 5.0 | L-channel input |

Electrical Characteristics

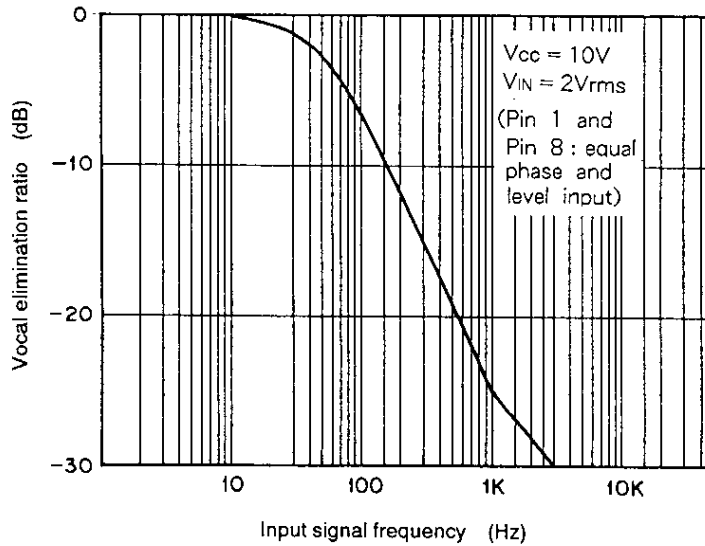
(Ta=25°C, Vcc=10)

| Test No. | Test item | SW conditions | | | | Test point | Output waveform and test method | Min. | Typ. | Max. | Unit |
|----------|--------------------|---------------|-----|-----|-----|----------------|---------------------------------|------|------|------|------|
| | | S1 | S2 | S3 | S4 | | | | | | |
| 1 | Circuit current | OFF | OFF | OFF | OFF | I _i | — | 1.6 | 3.0 | mA | |
| 2 | Mixer gain | ON | | | ON | V _o | -1 | 0 | 1 | dB | |
| 3 | Noise level | OFF | | | OFF | V _o | — | -86 | -70 | dBm | |
| 4 | Vocal suppression | | | ON | | V _o | 20 | 24 | — | dB | |
| 5 | Low frequency gain | | | | | V _o | -1 | 0 | 1 | dB | |

Electrical Characteristics Test Circuit



CXA1642 Vocal Elimination Ratio



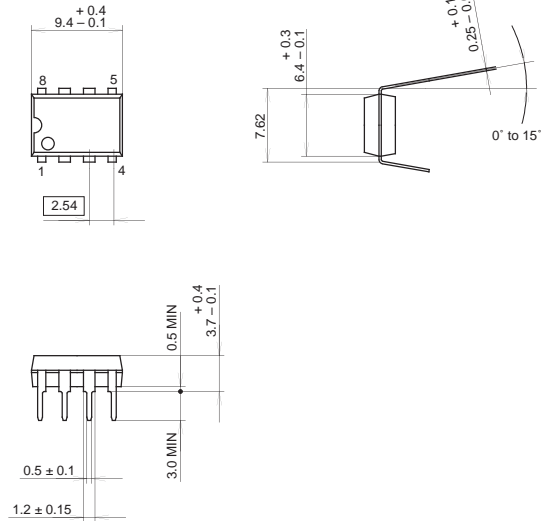
Package Outline

Unit: mm

8PIN DIP (PLASTIC)

CXA1642P

Code No.:75205750,75208420



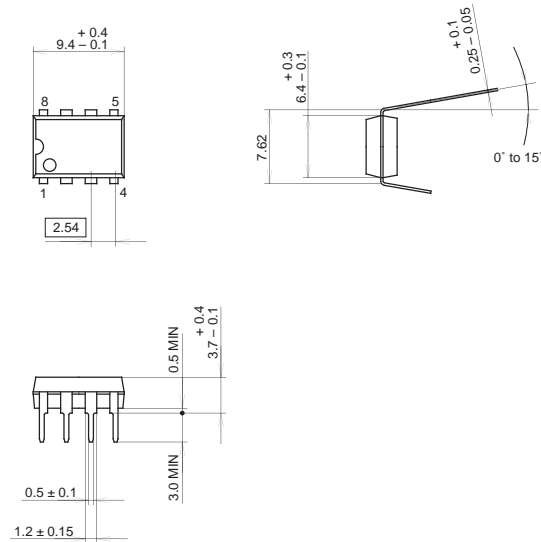
PACKAGE STRUCTURE

| | |
|------------|---------------|
| SONY CODE | DIP-8P-01 |
| EIAJ CODE | DIP008-P-0300 |
| JEDEC CODE | |

| | |
|------------------|----------------|
| PACKAGE MATERIAL | EPOXY RESIN |
| LEAD TREATMENT | SOLDER PLATING |
| LEAD MATERIAL | COPPER ALLOY |
| PACKAGE MASS | 0.5g |

8PIN DIP (PLASTIC)

Code No.:75211135



PACKAGE STRUCTURE

| | |
|------------|---------------|
| SONY CODE | DIP-8P-01 |
| EIAJ CODE | DIP008-P-0300 |
| JEDEC CODE | |

| | |
|------------------|----------------|
| PACKAGE MATERIAL | EPOXY RESIN |
| LEAD TREATMENT | SOLDER PLATING |
| LEAD MATERIAL | COPPER ALLOY |
| PACKAGE MASS | 0.5g |

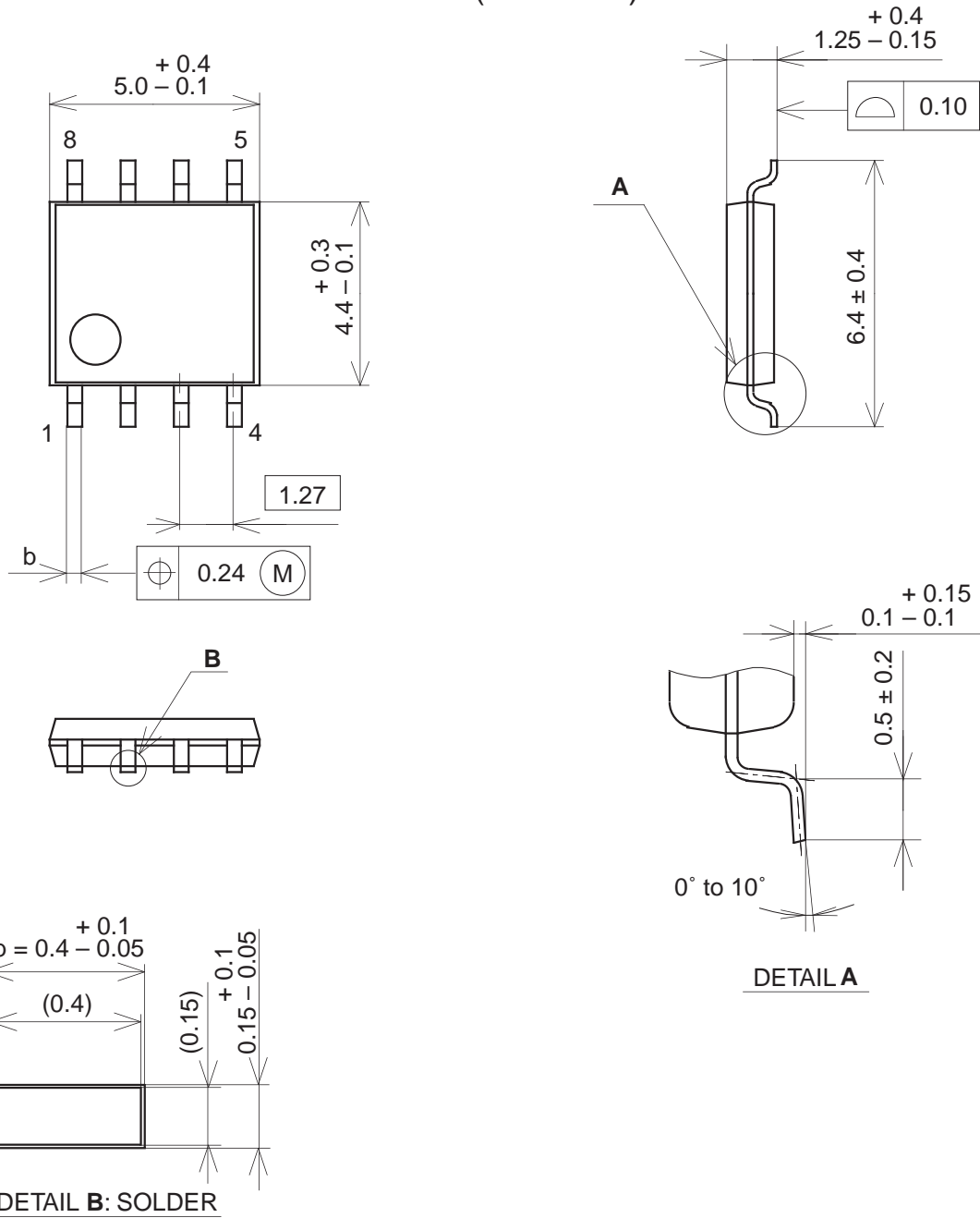
LEAD PLATING SPECIFICATIONS

| ITEM | SPEC. |
|--------------------|-----------------|
| LEAD MATERIAL | COPPER ALLOY |
| SOLDER COMPOSITION | Sn-Bi Bi:1-4wt% |
| PLATING THICKNESS | 5-18µm |

Package Outline Unit: mm

CXA1642M

8PIN SOP (PLASTIC)



PACKAGE STRUCTURE

| | |
|------------|---------------------|
| SONY CODE | SOP-8P-L03 |
| EIAJ CODE | P-SOP8-4.4x5.0-1.27 |
| JEDEC CODE | — |

| | |
|------------------|-----------------|
| PACKAGE MATERIAL | EPOXY RESIN |
| LEAD TREATMENT | SOLDER PLATING |
| LEAD MATERIAL | 42/COPPER ALLOY |
| PACKAGE MASS | 0.1g |