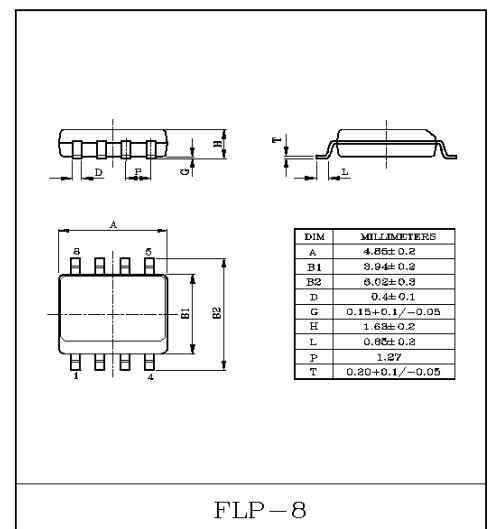
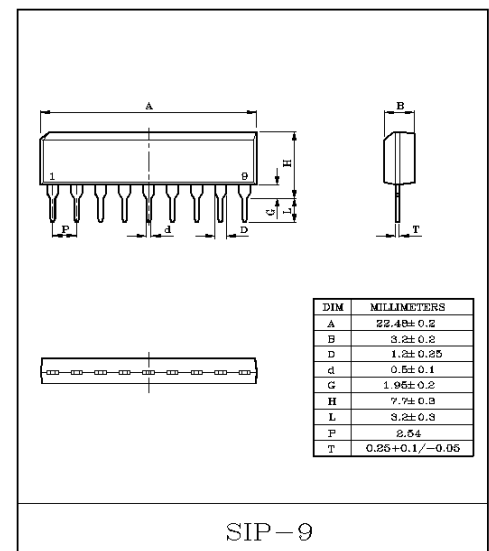
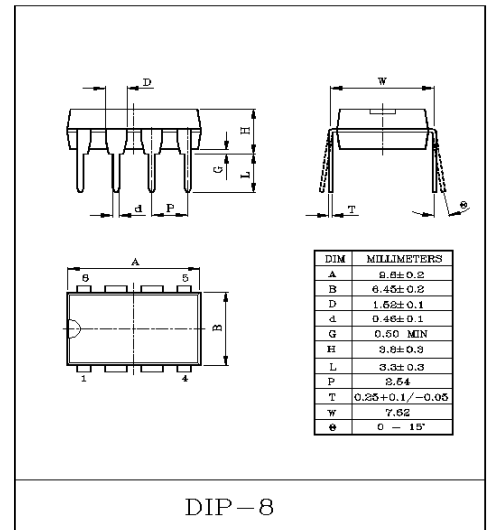
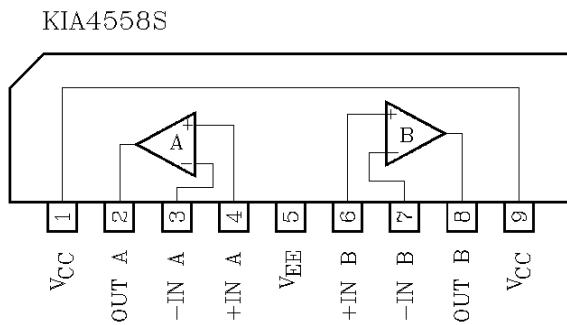
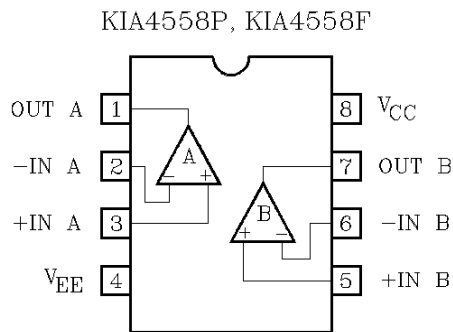


DUAL LOW NOISE OPERATIONAL AMPLIFIER

- Internal Frequency Compensation Type.
- Possible to Exchange the Position of Pin ⑨ for Pin ① Because of Pin Connection Being Symmetric (KIA4558S Device Only).
- Pin ① and Pin ⑨ of lead frame was each other connected (KIA4558S Only).
- Wide Band Range : $f_T=3\text{MHz}$ (Typ.).
- Suitable Application for Active Filter and Equalizer Amplifier.

PIN CONNECTION (TOP VIEW)

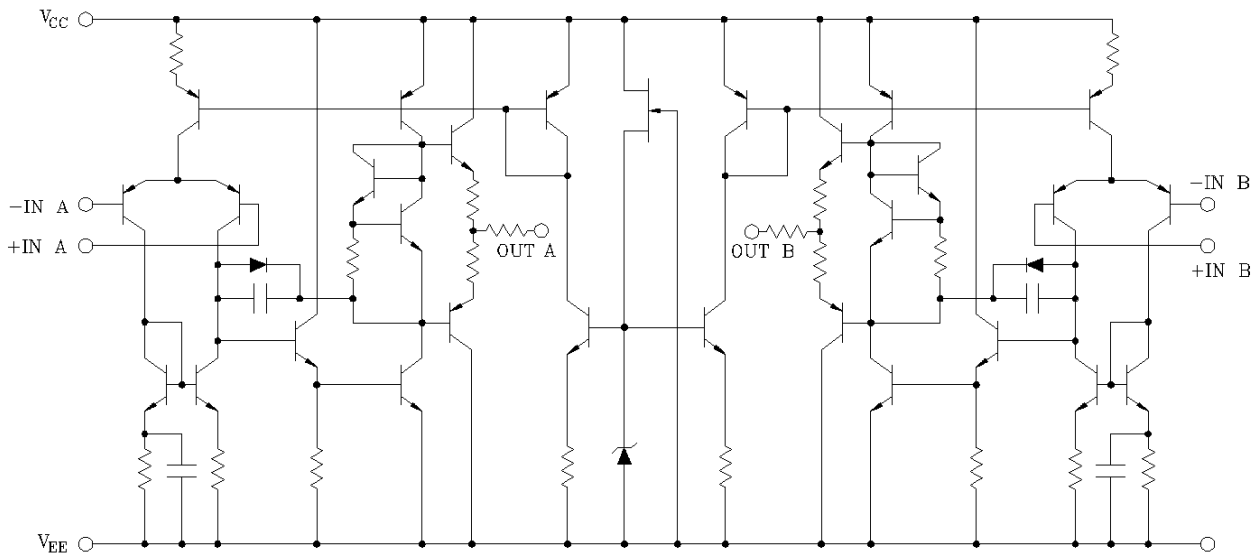


KIA4558P/S/F

MAXIMUM RATINGS (Ta=25°C)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|-----------------------------------|----------------------|----------------------|-----------------------|------|
| Supply Voltage | | V_{CC} V_{EE} | 36,+18 or 0,-18 | V |
| Differential Voltage | | D_{VIN} | ± 30 | V |
| Input Voltage | | V_{IN} | $V_{CC} \sim V_{EE}$ | V |
| Power Dissipation | KIA4558P KIA4558S | P_D | 500 | mW |
| | KIA4558F | | 240 | |
| Operating Temperature | | T_{opr} | -40~85 | °C |
| Storage Temperature | | T_{stg} | -55~125 | °C |
| Pin ① to Pin ⑨ Maximum Current | KIA4558S | I_{max} | 1 | A |

EQUIVALENT CIRCUIT



KIA4558P/S/F

ELECTRICAL CHARACTERISTICS ($V_{CC}=15V$, $V_{EE}=-15V$, $T_a=25^\circ C$)

| CHARACTERISTIC | SYMBOL | TEST-CIRCUIT | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|--|------------------|--------------|--------------------------------------|----------|----------|------|---------------|
| Input Offset Voltage | V_{IO} | - | $R_g \leq 10k\Omega$ | - | 0.5 | 6 | mV |
| Input Offset Current | I_{IO} | - | - | - | 5 | 200 | nA |
| Input Bias Current | I_I | - | - | - | 60 | 500 | nA |
| Common Mode Input Voltage | CMV_{IN} | - | - | ± 12 | ± 14 | - | V |
| Maximum Output Voltage | V_{OM} | - | $R_L=10k\Omega$ | ± 12 | ± 14 | - | V |
| | V_{OMR} | | $R_L=2k\Omega$ | ± 10 | ± 13 | - | |
| Source Current | I_{source} | - | - | 27 | - | - | mA |
| Sink Current | I_{sink} | - | - | 27 | - | - | mA |
| Voltage Gain (Open Loop) | G_V | - | $V_{OUT} = \pm 10V$, $R_L=2k\Omega$ | 86 | 100 | - | dB |
| Common Mode Input Signal Rejection Ratio | CMRR | - | $R_g \leq 10k\Omega$ | 70 | 90 | - | dB |
| Supply Voltage Rejection Ratio | SVRR | - | $R_g \leq 10k\Omega$ | - | 30 | 150 | $\mu V/V$ |
| Slew Rate | SR | - | $G_V=1$, $R_L=2k\Omega$ | - | 1.0 | - | V/ μS |
| Unity Gain Cross Frequency | f_T | - | Open Loop | - | 3.0 | - | MHz |
| Supply Current | I_{CC}, I_{EE} | - | - | - | 4.0 | 6.0 | mA |
| Equivalent Input Noise Voltage | V_{NI} | - | $R_S=1k\Omega$, $f=30Hz \sim 30kHz$ | - | 2.5 | - | μV_{rms} |

KIA4558P/S/F

