

### LOW NOISE DUAL PRE-AMPLIFIER

The KIA6259P and KIA6259S are dual low noise pre-amplifier improved on operational amplifier(4558type) for consumer applications.

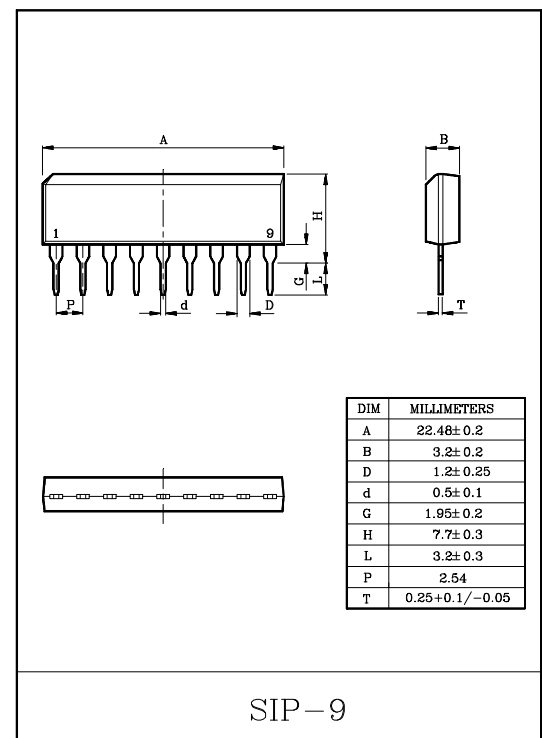
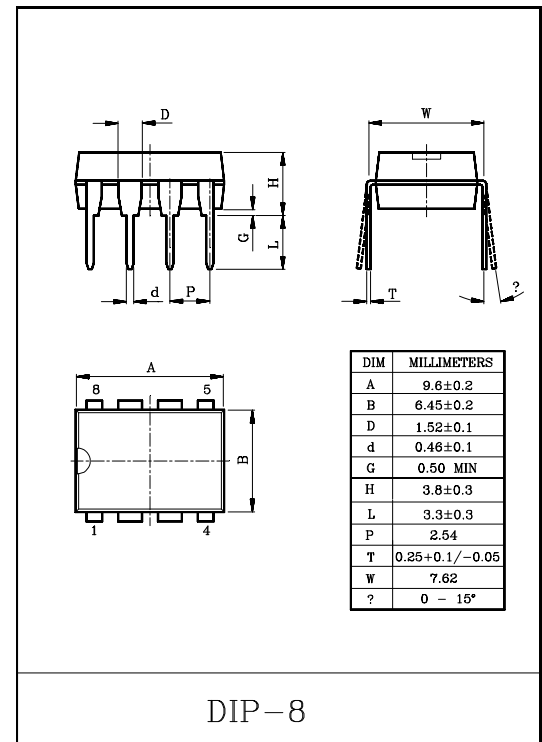
#### FEATURES

- Wide operating supply voltage range  
:  $V_{CC}, V_{EE} \pm 1.5V \sim \pm 18.0V$
- Low Noise, Low Distortion  
:  $V_{NI} = 1\mu V_{rms}$  (Typ.)  
( $R_g = 2.2k\Omega$ , NAB,  $f = 1kHz$ ,  $G_v = 40dB$ )  
: THD=0.005%, ( $V_{OUT} = 2.0V_{rms}$ )
- The recommended closed loop voltage gain in more than 20dB.

#### MAXIMUM RATINGS ( $T_a = 25^\circ C$ )

CHARACTERISTIC		SYMBOL	RATING	UNIT
Supply Voltage		$V_{CC}$	$\pm 22$	V
Power Dissipation (Note)	KIA6259P	$P_D$	500	mW
	KIA6259S		750	
Operating Temperature		$T_{opr}$	$-25 \sim 75$	$^\circ C$
Storage Temperature		$T_{stg}$	$-55 \sim 150$	$^\circ C$

Note : Derated about  $T_a = 25^\circ C$  in the proportion of  $4mW/^\circ C$  for KIA6259P, and of  $6mW/^\circ C$  for KIA6259S



# KIA6259P/S

## ELECTRICAL CHARACTERISTICS

(Unless otherwise specified,  $V_{CC}=4.5V$ ,  $V_{EE}=-4.5V$ ,  $f=1kHz$ ,  $T_a=25^{\circ}C$ )

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	$I_{CCQ}$	1	$V_{IN}=0$	–	2.7	4.0	mA
Equivalent Input Noise Voltage	$V_{NI}$	1	$R_g=2.2k\Omega$ , NAB, $G_V=40dB$ $BW=20Hz \sim 20kHz$	–	1.0	1.3	$\mu V_{rms}$
Open Loop Voltage Gain	$G_{VO}$	1	$V_{OUT}=2.0V_{rms}$	75	85	–	dB
Total Harmonic distortion	THD	1	$V_{OUT}=2.0V_{rms}$	–	0.005	0.01	%
Maximum Output Voltage	$V_{OM}$	1	THD=0.5%	2.0	2.7	–	$V_{rms}$
Cross Talk	C.T.	1	$R_g=2.2k\Omega$ , $V_{OUT}=2.0V_{rms}$	65	76	–	dB
Input Bias Current	$I_{IB}$	1	–	–	0.65	–	$\mu A$

## DC CHARACTERISTICS

( $V_{CC}=4.5V$ ,  $V_{EE}=-4.5V$ ,  $R_g=2.2k\Omega$ , Terminal Voltage at No Signal)

(Unit in mV)

<div> <div>TERMINAL NO.</div> <div>TYPE</div> </div>	1	2	3	4	5	6	7	8	9
KIA6259S	$V_{CC}$	15	75	75	$V_{EE}$	75	75	15	$V_{CC}$
KIA6259P	15	75	75	$V_{EE}$	75	75	15	$V_{CC}$	–

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## EQUIVALENT CIRCUIT

