

1W SINGLE AUDIO POWER AMPLIFIER

KIA6278P/S/F are suitable for the audio power amplifier of portable radio cassette.

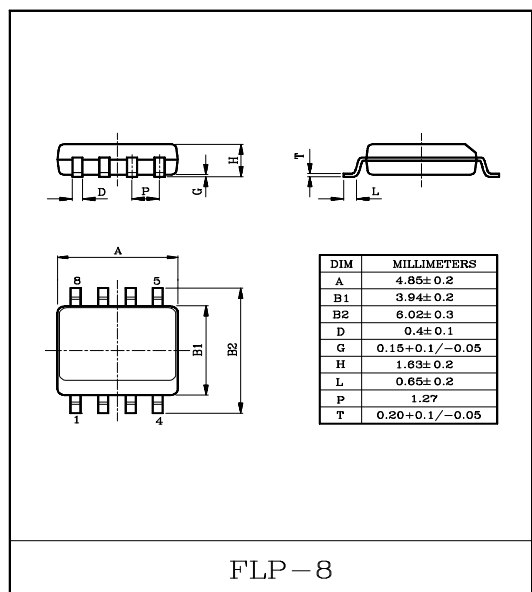
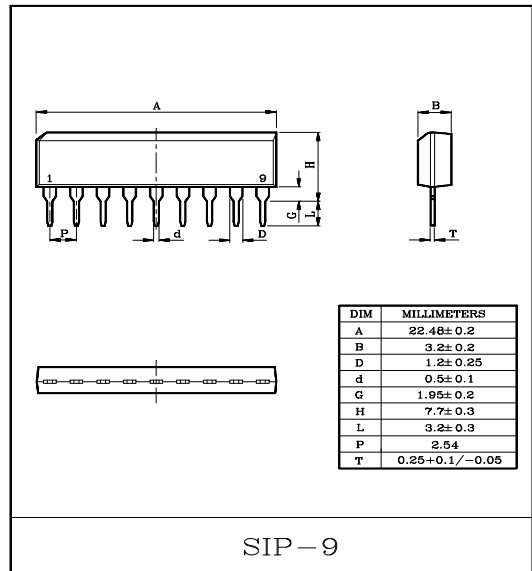
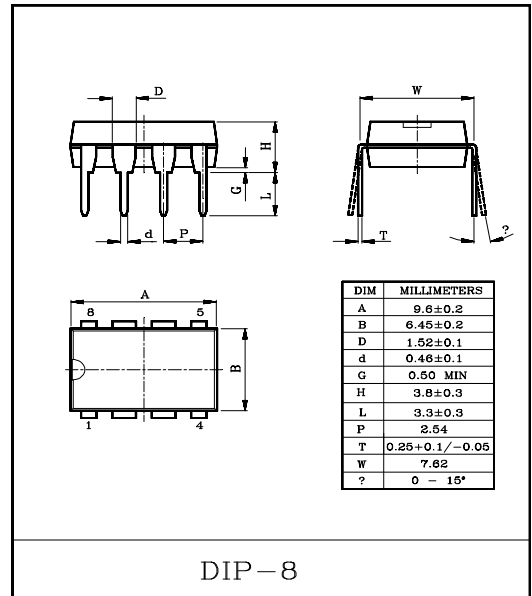
FEATURES

- Very few external parts counts (only three capacitor)
- Low Quiescent Current
: $I_{CCQ}=6.6\text{mA(Typ.)}$ ($V_{CC}=6\text{V}$)
- Wide operating supply voltage range.
: $V_{CC}=2\sim 10\text{V}$
- Output Power
: $P_{OUT}=720\text{mW(Typ.)}$ ($V_{CC}=6\text{V}$, $R_L=4\Omega$, THD=10%)
- Voltage Gain : $G_V=40\text{dB(Typ.)}$

MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	14	V
Power Dissipation (Peakage Limitation) (Note)	KIA6278P	900	mW
	KIA6278S	950	
	KIA6278F	400	
Operating Temperature	T_{opr}	$-25\sim 75$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-55\sim 150$	$^\circ\text{C}$

Note : Derated above $T_a=25^\circ\text{C}$ in the proportion of $7.2\text{mW}/^\circ\text{C}$.



KIA6278P/S/F

ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, $V_{CC}=6V$, $f=1kHz$, $R_g=600\Omega$, $R_L=4\Omega$, $T_a=25^\circ C$)

CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_{CCQ}	-	$V_{CC}=3V$, $V_{IN}=0V$	-	5.5	-	mA
			$V_{CC}=6V$, $V_{IN}=0V$	-	6.6	15	
			$V_{CC}=9V$, $V_{IN}=0V$	-	7.5	18	
Output Power	P_{OUT}	-	$V_{CC}=3V$, $R_L=4\Omega$, THD=10%	-	120	-	mW
			$V_{CC}=6V$, $R_L=4\Omega$, THD=10%	500	720	-	
			$V_{CC}=6V$, $R_L=8\Omega$, THD=10%	300	450	-	
			$V_{CC}=9V$, $R_L=8\Omega$, THD=10%	800	1100	-	
			$V_{CC}=9V$, $R_L=16\Omega$, THD=10%	450	610	-	
Total Harmonic Distortion	THD	-	$P_{OUT}=100mW$	-	0.3	1.0	%
Voltage Gain	G_V	-	$V_{IN}=0.5mV_{rms}$	37	40	43	dB
Output Noise Voltage	V_{NO}	-	$R_g=10k\Omega$, $BW=20Hz\sim 20kHz$	-	0.2	0.5	mV_{rms}
Ripple Rejection Ratio	R.R.	-	$f_{RIP}=100Hz$, $V_{RIP}=0.3V_{rms}$ Without C_{RIP}	-	25	-	dB
Input Resistance	R_{IN}	-		-	27	-	$k\Omega$

TYPICAL VOLTAGE OF EACH TERMINAL (KIA6278S)

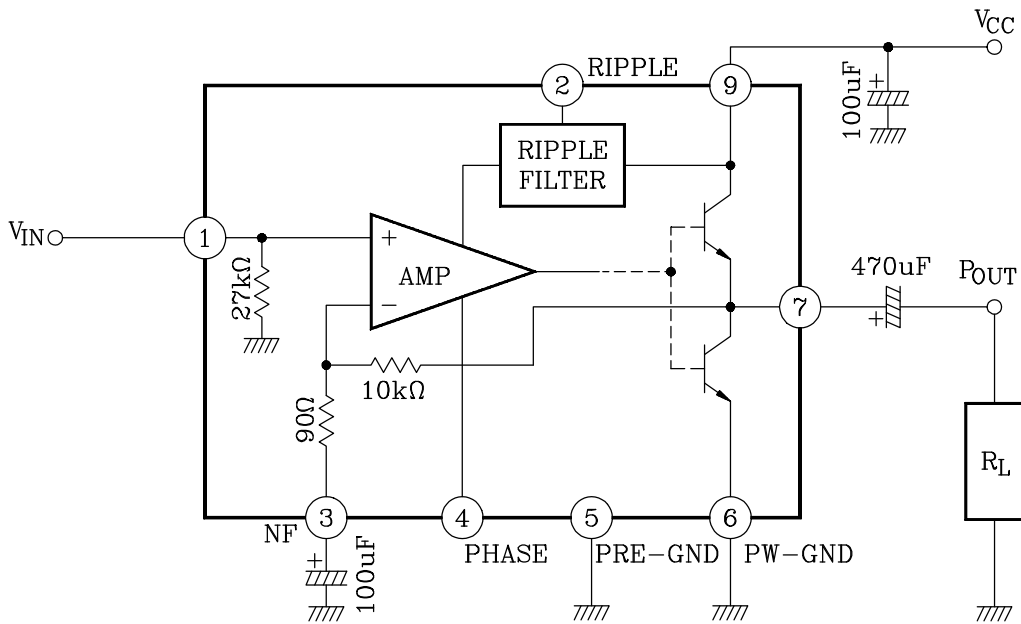
($V_{CC}=6V$, $T_a=25^\circ C$, by test circuit)

(unit:V)

TERMINAL NO.	1	2	3	4	5	6	7	8	9
DC Voltage	0	2.40	0.62	0.64	0	0	2.61	NC	6.0

KIA6278P/S/F

TEST CIRCUIT & BLOCK DIAGRAM



Note : The V_{CC} of KIA6278S is pin ⑨.
The V_{CC} of KIA6278P/F are pin ⑧.