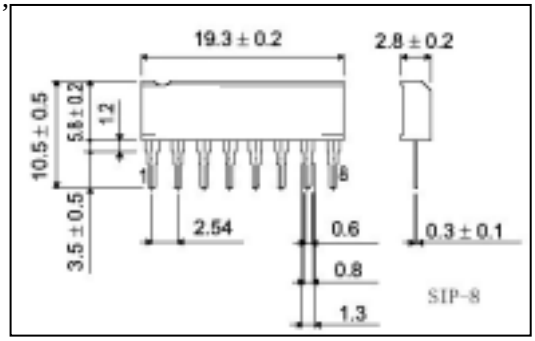
DUAL OPERATIONAL AMPLIFIER JRC4580

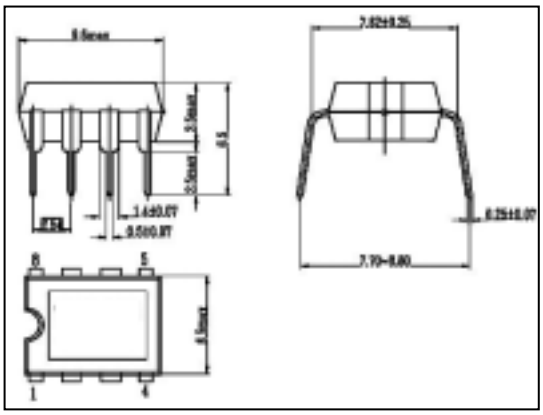
DESCRIPTION

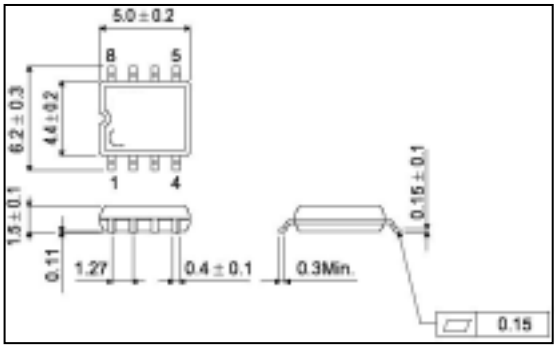
JRC4580 is the dual operational amplifier, specially designed for improving the tone control, which is most suitable for the audio application.

Featuring noiseless, higher gain bandwidth, high output current and low distortion ratio, and it is most suitable not only for acoustic electronic part of audio pre-amp and active filter, but also for the industrial measurement tools. It is also suitable for the head phone amp at higher output current. And further more, it can be applied for the handy type set operational amplifier of general purpose in application of low voltage single supply type which is properly biased of the input low voltage source.

Outline Drawing



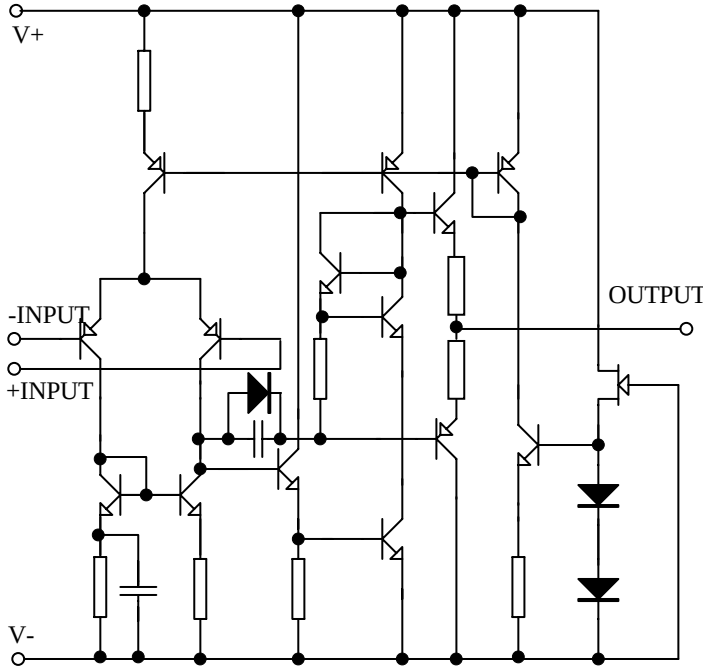




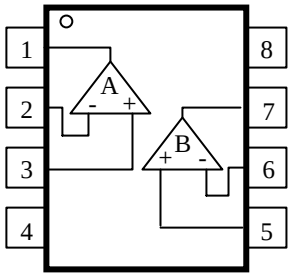
FEATURE

- Operating Voltage (±2V~±16V)
- Low Input Noise Voltage (0.8μVrms Typ.)
- Wide Gain Bandwidth Product (15mhz Typ.)
- Low Distortion (0.0005% Typ.)
- Slew Rate (5V/μA Typ.)
- Package Outline DIP8、SIP8、SOP8
- Bipolar Technology

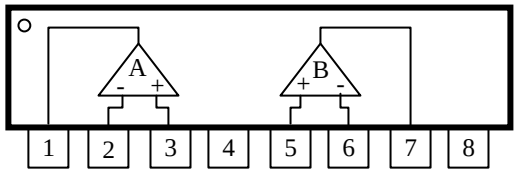
EQUIVALENT CIRCUIT



PIN CONFIGURATION



PIN FUNCTION
1 A OUTPUT
2 A -INPUT
3 A +INPUT
4 V-
5 B +INPUT
6 B -INPUT
7 B OUTPUT
8 V+



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Value	Unit
Supply Voltage	V+/V-	±16	V
Input Voltage	V_{IC}	±15	V
Differential Input Voltage	V_{ID}	±30	V
Output Current	Ic	±50	mA
Power Dissipation	P_D	800	mW
Operating Temperature Range	Tamb	-40~85	°C
Storage Temperature Range	Tstg	-40~125	°C

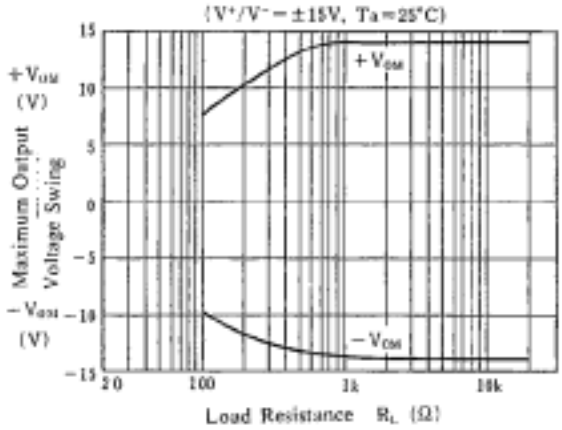
ELECTRICAL CHARACTERISTICS

(Unless otherwise specified: Ta=25°C, V+/V-=±15V)

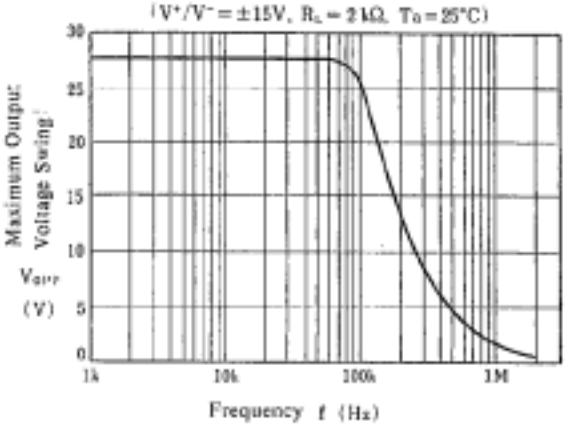
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Input Offset Voltage	V_{IO}	Rs ≤ 10kΩ		0.5	3	mV
Input Offset Current	I_{IO}			5	200	nA
Input Bias Current	I_B			100	500	nA
Large Signal Voltage Gain	Av	R_L ≥ 2kΩ, Vo=±10V	90	110		dB
Output Voltage Swing	V_{OM}	R_L ≥ 2kΩ	±12	±13.5		V
Input Common Mode Voltage Range	V_{ICM}		±12	±13.5		V
Common Mode Rejection Ratio	CMR	Rs ≤ 10kΩ	80	110		dB
Supply Voltage Rejection Ratio	SVR	Rs ≤ 10kΩ	80	110		dB
Operating Current	Icc			6	9	mA
Slew Rate	SR	R_L ≥ 2kΩ		5		V/μA
Gain Bandwidth Product	GB	f=10kHz		15		MHz
Total Harmonic Distortion	THD	Av=20dB, Vo=5V, f=1kHz, R_L =2kΩ		0.0005		%
Input Noise Voltage	V_{NI}	RIAA Rs=2.2kΩ, 30kHzLPF		0.8		μVrms

CHARACTERISTICS CURVES

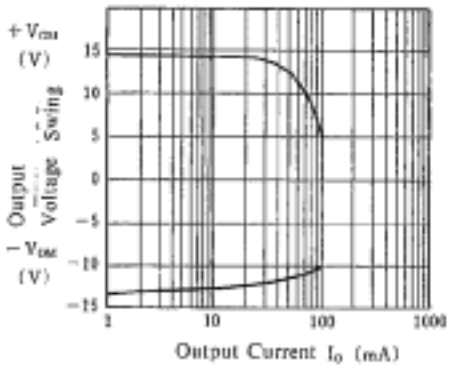
Maximum Output Voltage Swing vs. Load Resistance



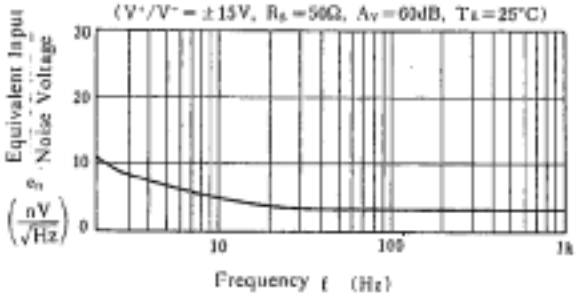
Maximum Output Voltage Swing vs. Frquency



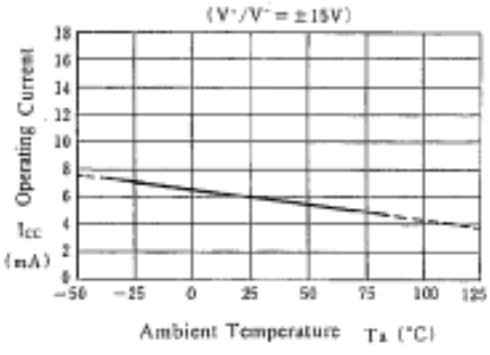
Output Voltage Swing vs. Output Current



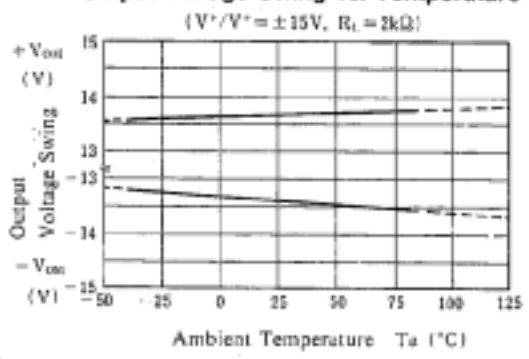
Equivalent Input Noise Voltage vs. Frequency



Operating Current vs. Temperature

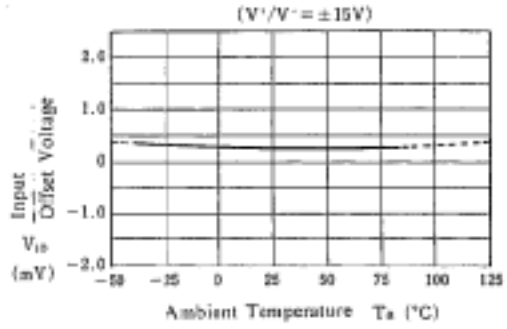


Output Voltage Swing vs. Temperature

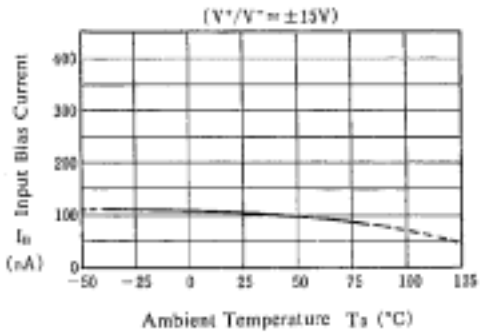


■ TYPICAL CHARACTERISTICS

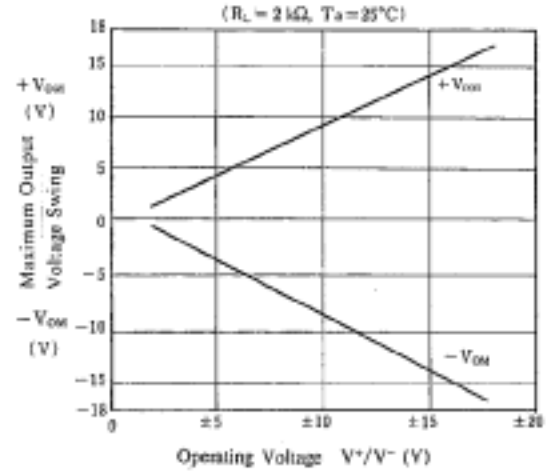
Input Offset Voltage vs. Temperature



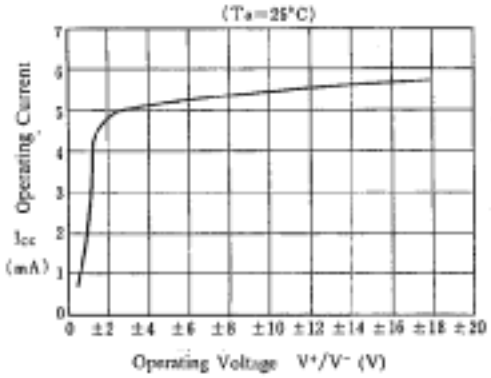
Input Bias Current vs. Temperature



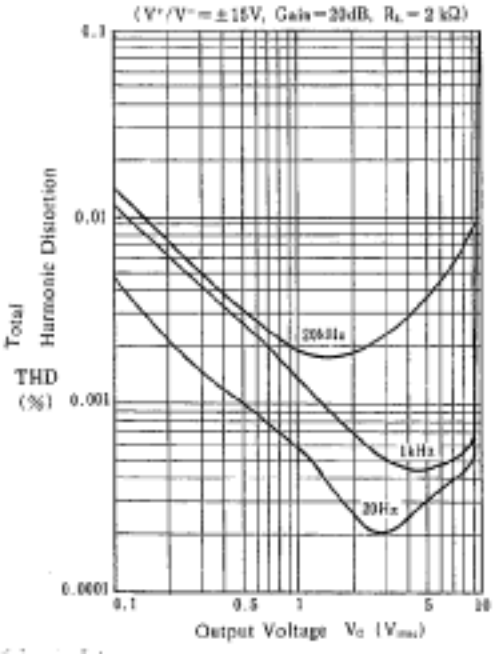
Maximum Output Voltage Swing vs. Operating Voltage



Operating Current vs. Operating Voltage



Total Harmonic Distortion vs. Output Voltage



Voltage Gain, Phase vs. Frequency