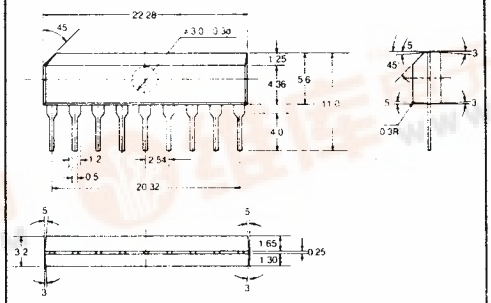
DBL 1010/2

DUAL PREAMPLIFIER

9SIP Unit: mm



☐ FEATURES

- ○ High voltage gain : G_{VO} = 100dB (Typ.) at f = 1kHz
- ○ Excellent channel separation and high ripple rejection : $CH_{SEP.}$ = 70dB(Typ.)
  R.R. = 50dB(Typ.)
- ○ Low noise : V_{NI} = 1.0μVrms (Typ.)
  at Rg = 2.2kΩ, BW = 15Hz~30kHz
- ○ Muting circuit built-in : 2V≧V_9≧0.9V
- ○ Wide operating supply voltage range : V_{CC} = 7~18V.

☐ APPLICATIONS

- ○ Car or home stereo use.

* DBL 1010 is 8 SIP, Pin9(function : Muting) cut.

☐ MAXIMUM RATINGS (Ta=25°C)

Characteristic	Symbol	Rating	Unit
Supply Voltage	V_{CC}	18	V
Power Dissipation(*)	P_D	700	mW
Operating Temperature	T_{opr}	−25~+75	°C
Storage Temperature	T_{stg}	−55~+150	°C

* Derated above Ta = 25°C in the proportion of 5.6mW/°C

☐ ELECTRICAL CHARACTERISTICS

(Unless otherwise specified, V_{CC} = 10V, f = 1KHz, R_g = 600Ω, R_L = 10KΩ, Ta = 25°C)

Characteristic	Symbol	Test Circuit	Test Condition	Min.	Typ.	Max.	Unit
Quiescent Current	I_{CCQ}	1	—	—	5.5	8.5	mA
Open Loop Voltage Gain	G_{VO}	1	C_f = 100μF, R_f = 0	—	100	—	dB
Maximum Output Voltage	V_{OM}	2	THD = 0.5%, NAB EQ	2	2.8	—	Vrms
Equivalent Input Noise Voltage	V_{NI}	2	Rg = 2.2kΩ BPF = 15Hz~30kHz	—	1	2.5	μVrms
Input Resistance	R_{IN}	2	V_O = 1 Vrms	—	100	—	kΩ
Channel Separation	CH_{SEP}	2	f = 10kHz, Rg = 2.2kΩ V_O = 1Vrms	—	70	—	dB
Ripple Rejection	R.R.	2	f = 100Hz, V_{IN} = 1Vrms CB = NO connection	—	50	—	dB
Muting Ratio	M.R.	2	V_g = 1V, OdB = 1 Vrms		80	—	dB

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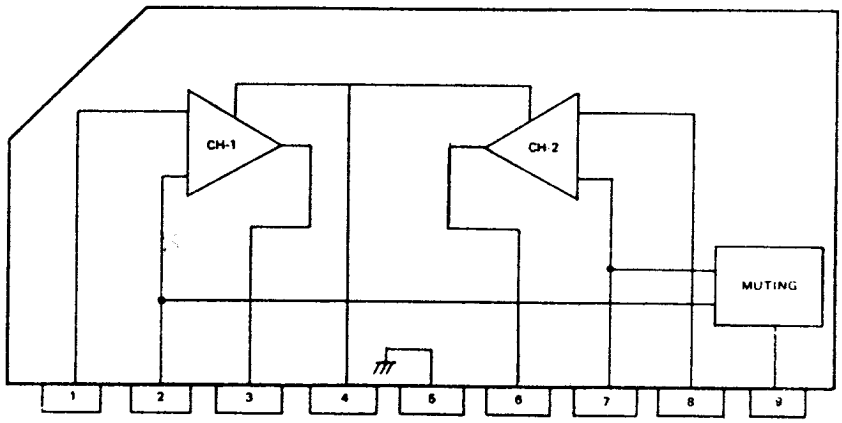
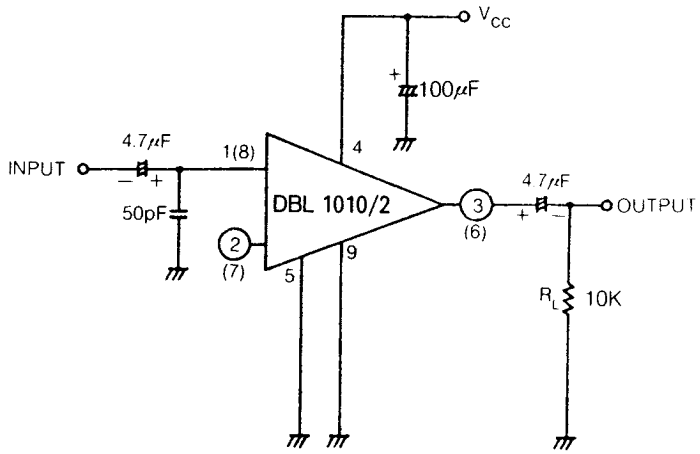
☐ BLOCK DIAGRAM

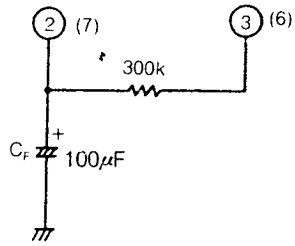


1. Input (+)
2. Input (−)
3. Output
4. Power Supply
5. Ground
6. Output
7. Input (−)
8. Input (+)
9. Muting

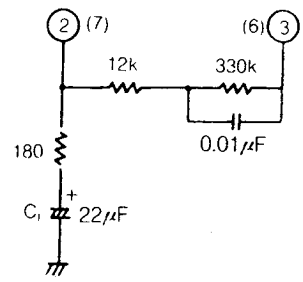
☐ TEST CIRCUIT



1. G_{VO}, I_{CC}



2. V_{OM}, V_{NI}, R_{IN}, R.R



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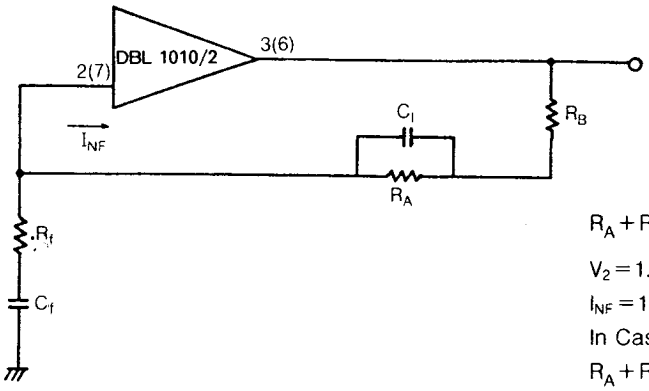
□ APPLICATION

1. Decision of Feedback Resistance



$$R_A + R_B = \frac{V_3(\frac{1}{2}V_{CC}) - V_2}{I_{NF}}$$

$V_2 = 1.4V$

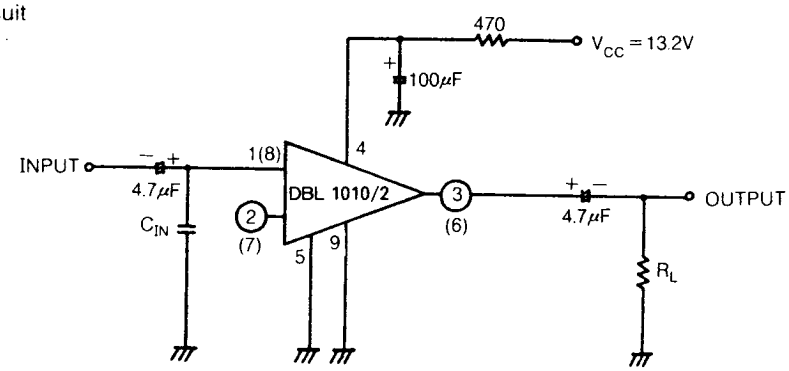
$I_{NF} = 10\mu A$

In Case of $V_{CC} = 10V$

$R_A + R_B = 360(k\Omega)$

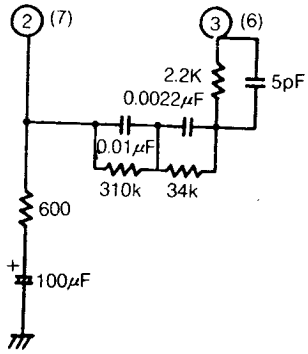
2. EQ Amplifier

○ Main Circuit

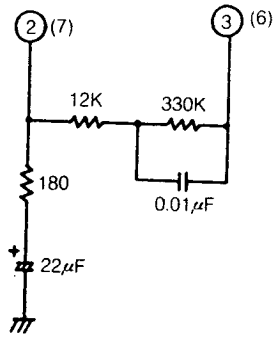


○ Feedback Circuits

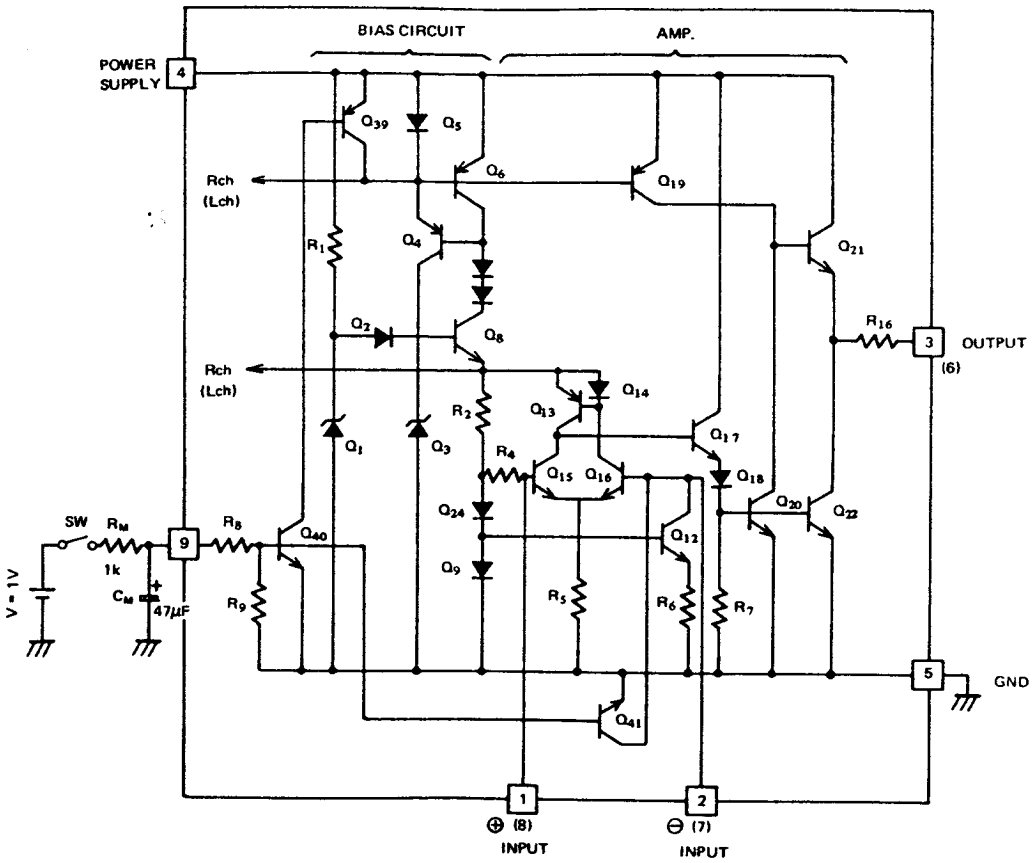
1) RIAA EQ



2) NAB EQ



3. MUTING CIRCUIT APPLICATION



○ The Q40 is turned ON when the voltage above 0.9V feed into PIN 9, Q41 and Q39 'turned ON' consequently and the muting operating obtained.

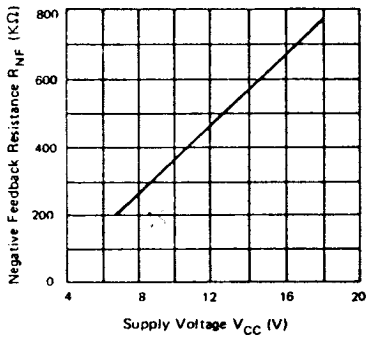
4. NOTE

○ Care should be taken not to decrease a closed loop gain less 20dB cause parasitic oscillation.

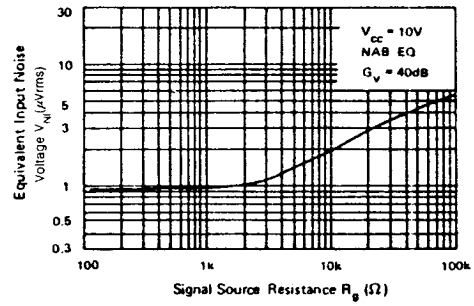
○ The maximum allowable input voltage is 300 mVrms not to increase the input voltage above this value for stable operation.

☐ TYPICAL PERFORMANCE CHARACTERISTICS

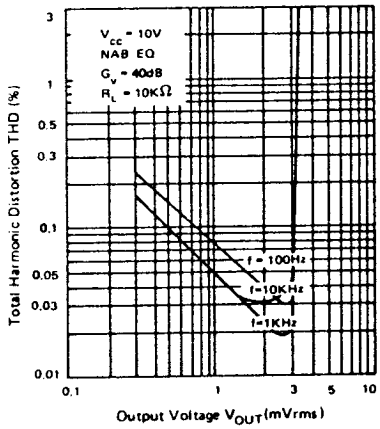
$V_{CC} - R_{NF}$



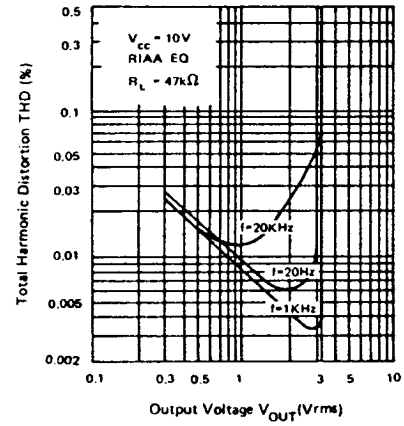
$R_g - V_{NI}$



V_{OUT} - THD



V_{OUT} — THD



$V_{IN} - V_{OUT}$