

AN5733

Dual Attenuator

■ Outline

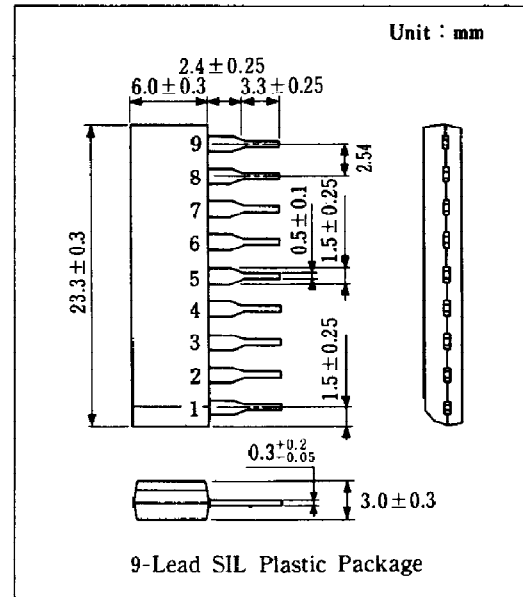
The AN5733 is an integrated circuit designed for dual attenuator and is in SIL package. With this, sets can be made compact.

■ Features

- Output DC control
- Linear Output response
- Two attenuators controlled by one volume control
- Large attenuation
- Small crosstalk and level difference between the two channels

■ Use

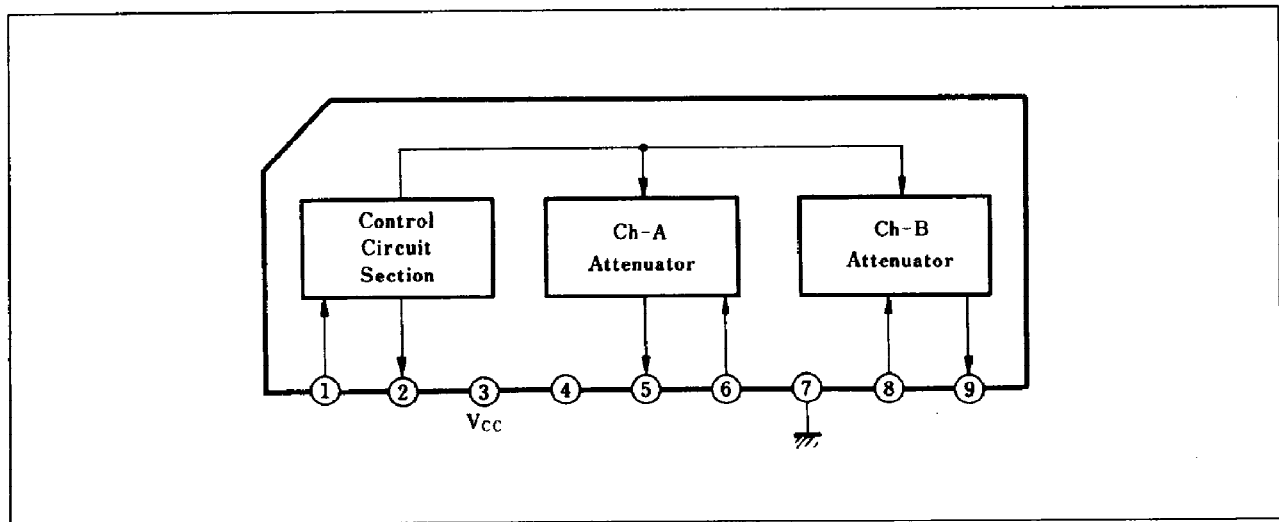
- Volume control, etc.



■ Pin

Pin No.	Pin Name
1	Control Voltage
2	Ref. Voltage
3	V _{CC}
4	Decoupling
5	Ch.A Output
6	Ch.A Input
7	GND
8	Ch.B Input
9	Ch.B Output

■ Block Diagram



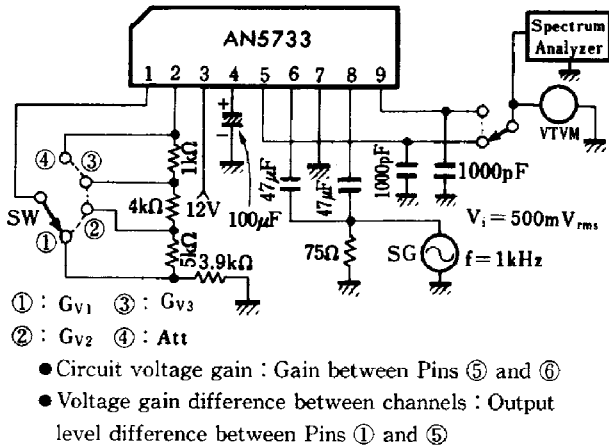
■ Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Rating	Unit
Supply Voltage		V _{CC}	14.4	V
Power Dissipation		P _D	197	mW
Temperature	Operating Ambient Temperature	T _{opr}	-20 ~ +70	°C
	Storage Temperature	T _{stg}	-40 ~ +150	°C

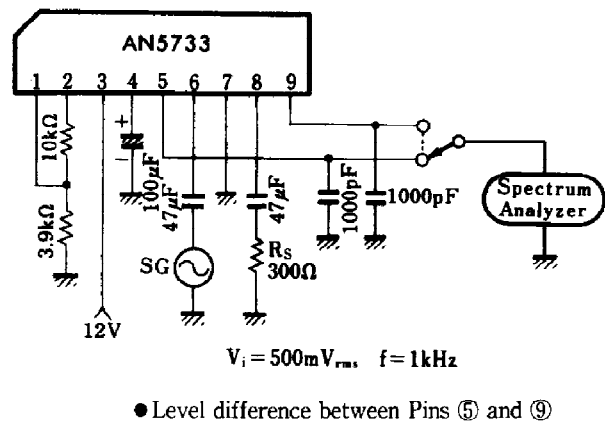
■ Electrical Characteristics (V_{CC}=12V, Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Total Circuit Current	I _{tot}			9.5	11.3	13.5	mA
Voltage Gain (1)	G _{V1} v ₁	1	f = 1kHz, V _i = 500mV _{rms} At VR max.	4	6	7.6	dB
Voltage Gain Difference Between Channels (1)	ΔG _{V(1)}	1		-1.5		1.5	dB
Voltage Gain (2)	G _{V(2)}	1		-2	0	2.2	dB
Voltage Gain Difference Between Channels (2)	ΔG _{V(2)}	1		-2		2	dB
Voltage Gain (3)	G _{V(3)}	1		-20	-16	-12	dB
Voltage Gain Difference Between Channels (3)	ΔG _{V(3)}	1		-2.5		2.5	dB
Attenuation (max.)	A ₁₁	1		75		dB	
Separation	Sep	2		70		dB	
Input Resistance	R _i	3	f = 1kHz		25		kΩ
Output Resistance	R _O	4			1.7		kΩ
Ripple Rejection Ratio	RR			34			dB

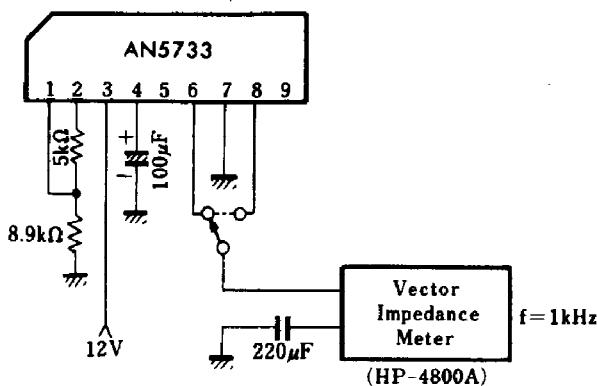
Test Circuit 1 (G_{V(1-3)}, ΔG_{V(1-3)}, Att)



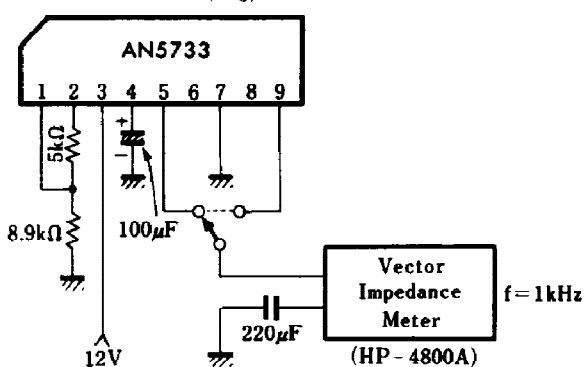
Test Circuit 2 (Sep)

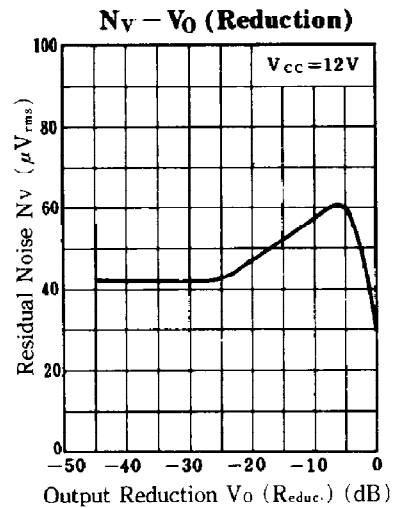
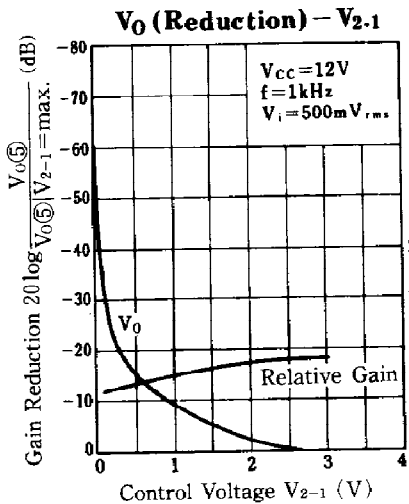
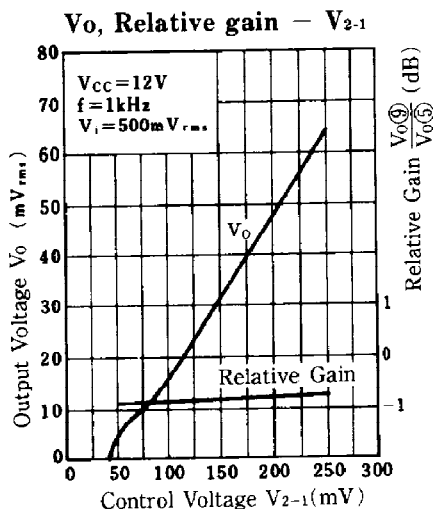
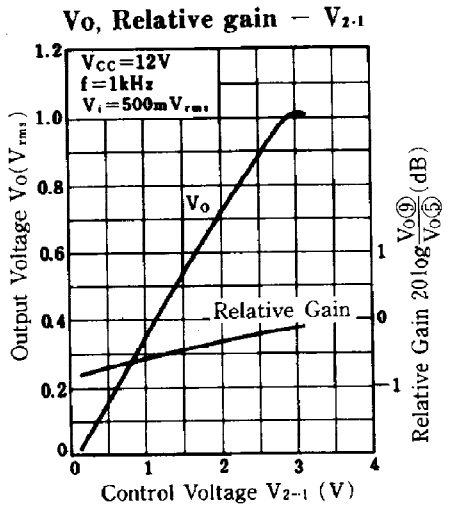
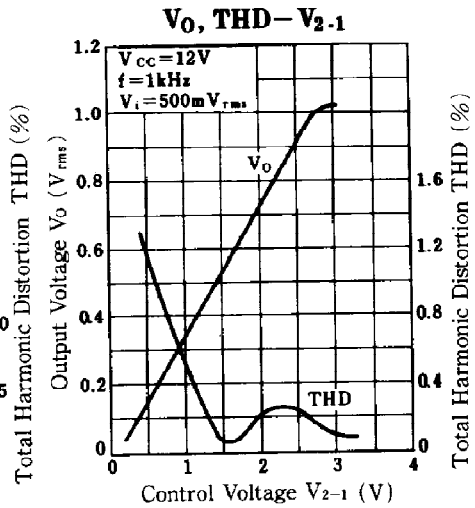
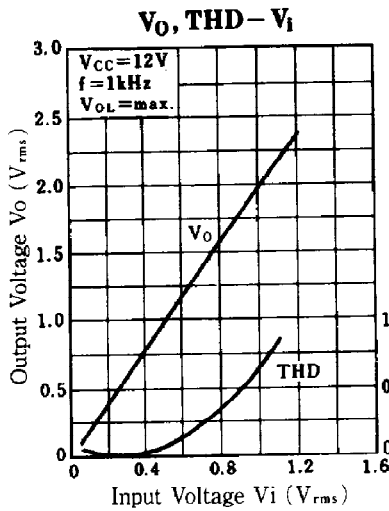


Test Circuit 3 (R_i)



Test Circuit 4 (R_O)





■ Application Circuit

