SONY CXA1643M/P

2-input Microphone Amplifier with AGC

Description

The CXA1643M/P is a 2-input microphone amplifier IC, covering various applications including karaoke sets.

Features

- AGC (automatic gain control) function maintains constant level of output, even during excessively high inputs
- Few external parts
- Wide operating voltage range (2.0 to 10V)

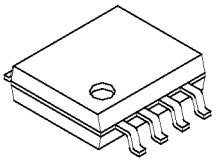
Applications

Ideally suited for duet microphone amplifiers of karaoke sets.

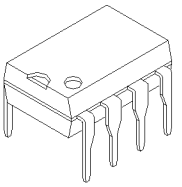
Structure

Bipolar silicon monolithic IC

CXA1643M
8-pin SOP (Plastic)



CXA1643P
8-pin DIP (Plastic)



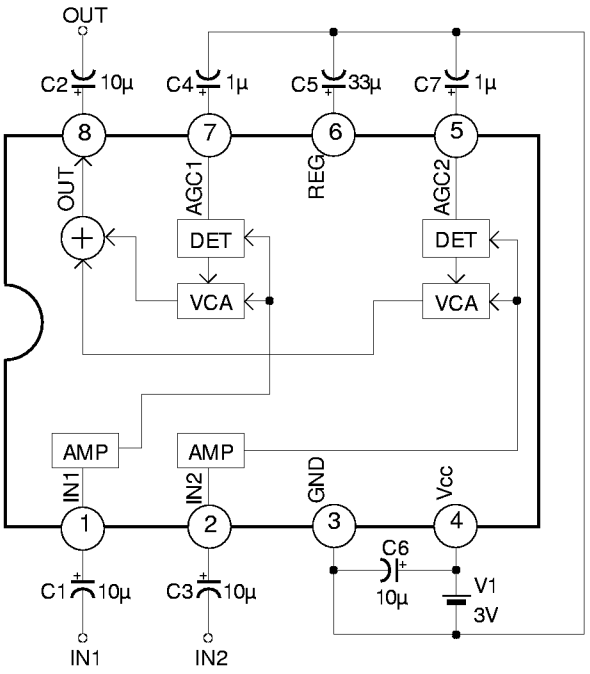
Absolute Maximum Ratings (Ta = +25°C)

• Supply voltage	Vcc	12	V
• Operating temperature	Topr	–20 to +75	°C
• Storage temperature	Tstg	–65 to +150	°C
• Allowable power dissipation	PD	250 (SOP)	mW
		500 (DIP)	mW

Operating Conditions

Supply voltage	Vcc	2.0 to 10.0	V

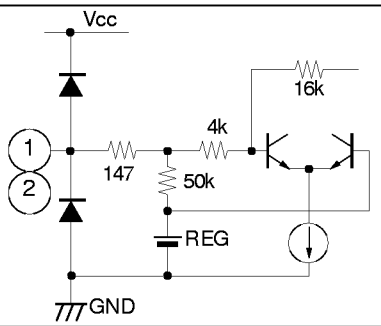
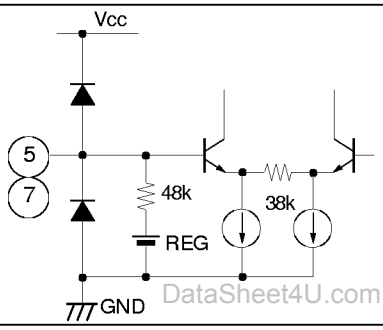
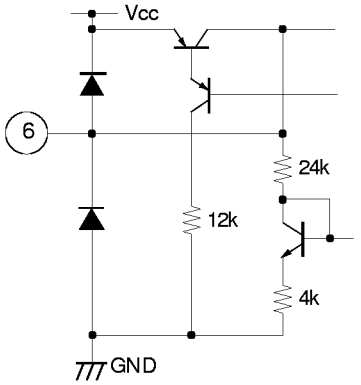
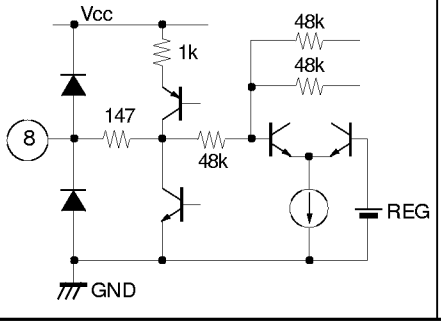
Block Diagram, Pin Configuration and Application Circuit



Application circuits shown are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits or for any infringement of third party and other right due to same.

E92820B45-TE

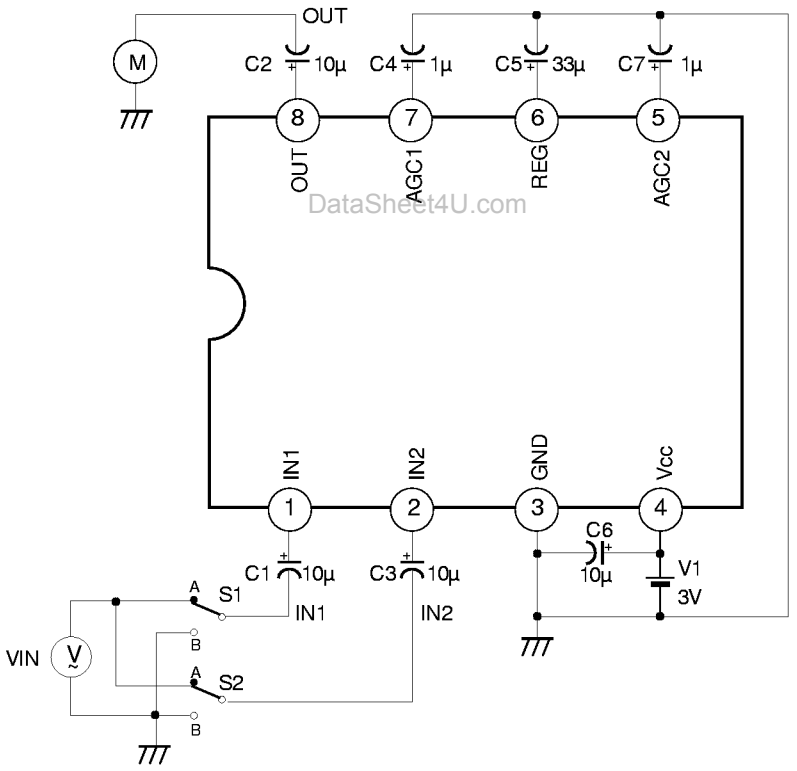
Pin Description (Vcc=3V, Ta = +25°C)

No.	Symbol	Pin Voltage	Equivalent Circuit	Description
1 2	IN1 IN2	1.3V 1.3V		Input pin
3	GND	0V		GND pin
4	Vcc	3V		Power supply
5 7	AGC1 AGC2	1.3V 1.3V		AGC pin
6	REG	1.3V		Regulator pin
8	OUT	1.3V		Output pin

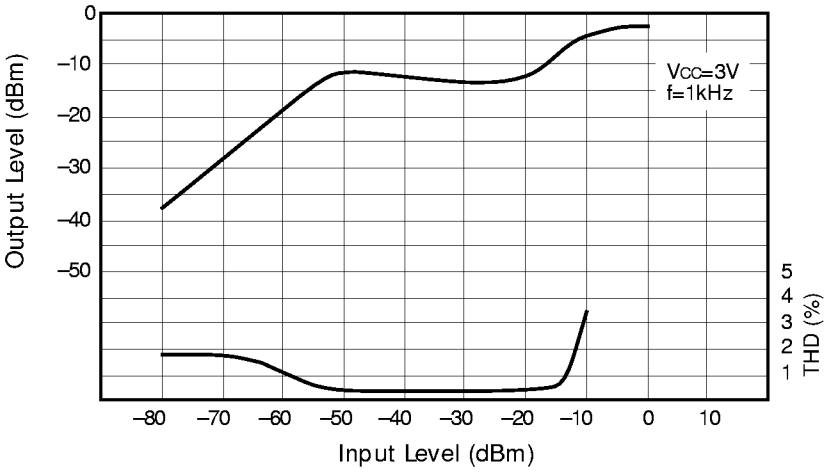
Electrical Characteristics (Vcc = 3V, Ta = +25°C)

Item	Condition	Min.	Typ.	Max.	Unit
No signal Current	No signal	—	1.6	2.8	mA
Voltage Gain	Vin=–70dBm, f=1kHz	39	41	43	dB
Output Level	Vin=–20dBm, f=1kHz	–16	–13	–10	dBm
Channel Ballance	Vin=–45dBm, f=1kHz IN1 voltage Gain–IN2 voltage Gain	–3	0	3	dB
Total Harmonic Distortion Factor	Vin=–45dBm, f=1kHz	—	0.4	1.0	%
Output Noise Level	No signal, "A" Weighting filter	—	–48	—	dBm

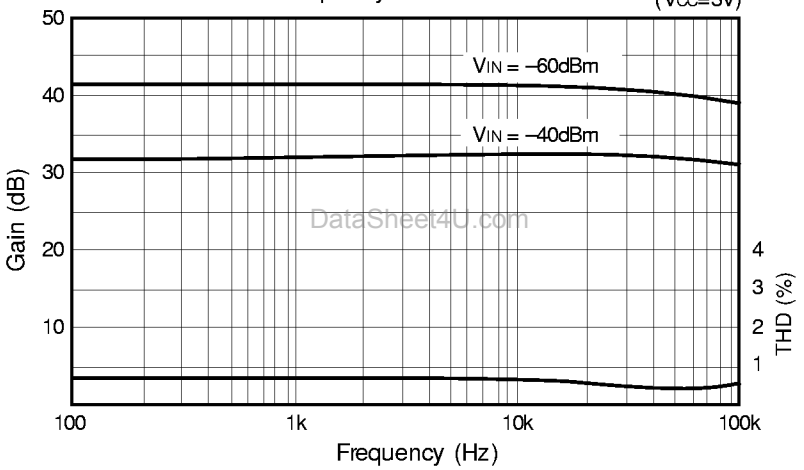
Electrical Characteristics Test Circuit



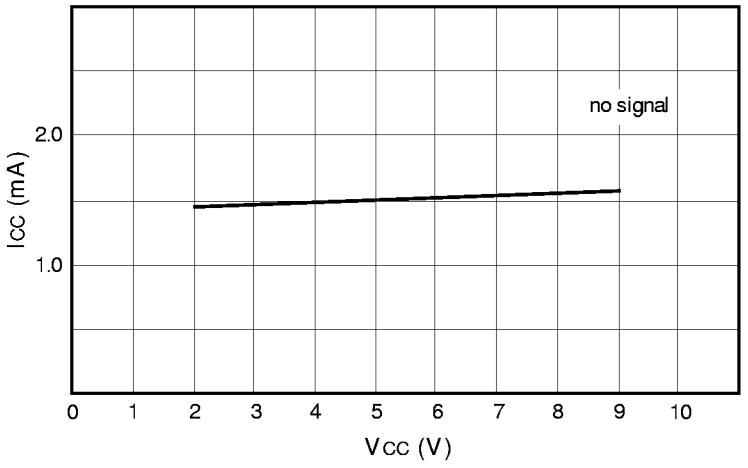
Input-Output Level Characteristics



Frequency Characteristics (VCC=3V)



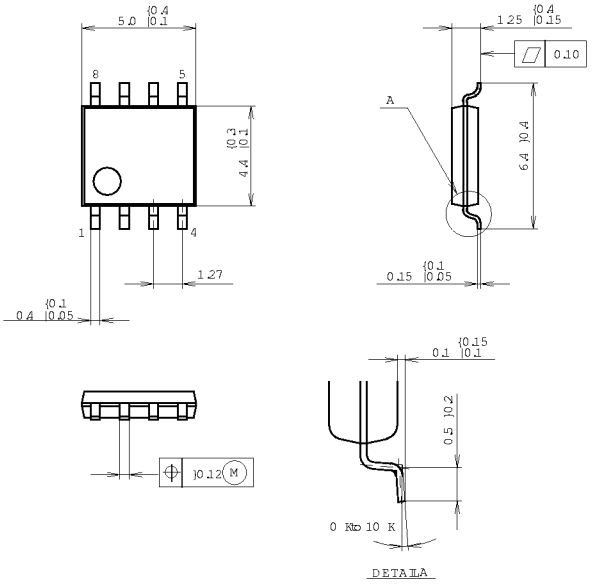
Vcc vs. Icc Characteristics



Package Outline Unit : mm

CXA1643M

8PIN SOP (PLASTIC)



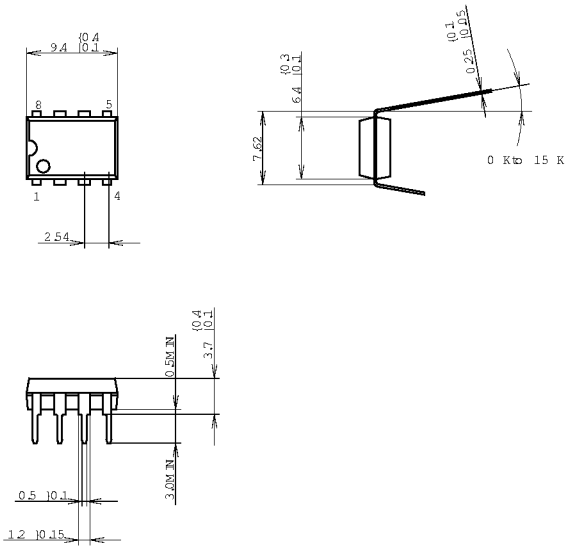
PACKAGE STRUCTURE

SONY CODE	SOP-8P-L03
EIAJ CODE	*SOP008-P-0225-A
JEDEC CODE	————

PACKAGE MATERIAL	EPOXY RESIN
LEAD TREATMENT	SOLDER PLATING
LEAD MATERIAL	42 ALLOY
PACKAGE WEIGHT	0.1g

CXA1643P

8PIN DIP (PLASTIC) 300mil



PACKAGE STRUCTURE

SONY CODE	DIP-8P-01
EIAJ CODE	DIP008-P-0300-A
JEDEC CODE	————

PACKAGE MATERIAL	EPOXY RESIN
LEAD TREATMENT	SOLDER PLATING
LEAD MATERIAL	COPPER ALLOY
PACKAGE WEIGHT	0.5g