

Vocal Canceller for "Karaoke" Equipment

Description

The CXA1642P/M is a bipolar IC for use in "Karaoke" music entertainment systems that provides a built-in means of attenuating the vocal portions of recorded musical programs on CD, laser disks and other entertainment media.

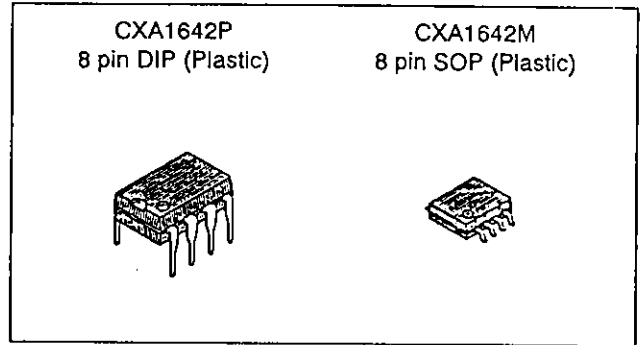
Features

- Vocal cancel feature
- Low-level sound correction
- Internal MIX input amplifier
- Few external components

Absolute Maximum Ratings

- Supply voltage V_{cc} 12 V
- Operating temperature T_{opr} -20 to +75 °C
- Storage temperature T_{stg} -65 to +150 °C
- Allowable power dissipation

P_D 500 mW (CXA1642P)
250 mW (CXA1642M)



Applications

Use in all types of "Karaoke" audio systems to implement functions needed to allow singer's voice to override the originally recorded vocal track without disrupting the music tracks.

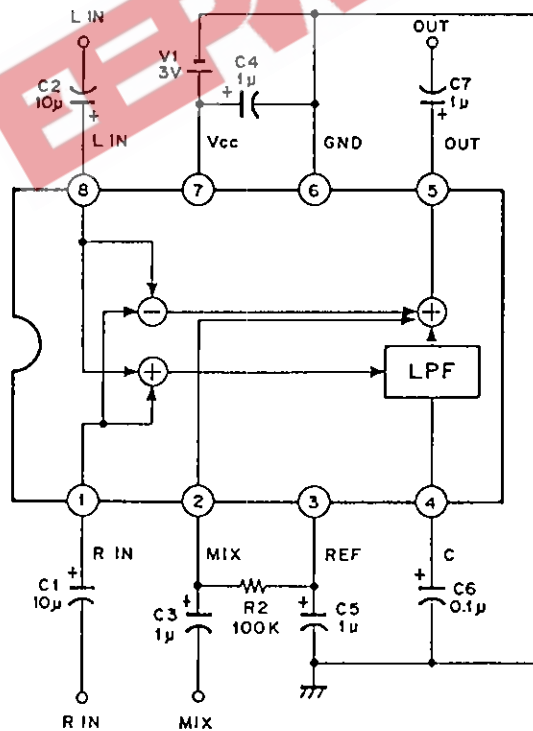
Structure

Bipolar silicon monolithic IC

Recommended Operating Conditions

Supply voltage 1.8 to 10.0 V



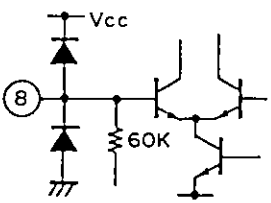
Block Diagram, Pin Configuration, and Application Circuit



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Pin Description

Pin No.	Symbol	Equivalent circuit	Pin voltage	Description
1	R_IN		5.0	R-channel input
2	MIX		5.0	Mixing input
3	REF		5.0	Reference pin
4	C		5.0	LPF time constant pin
5	OUT		5.0	Output

Pin No.	Symbol	Equivalent circuit	Pin voltage	Description
6	GND		0	GND
7	Vcc		10.0	Power supply
8	L_IN		5.0	L-channel input

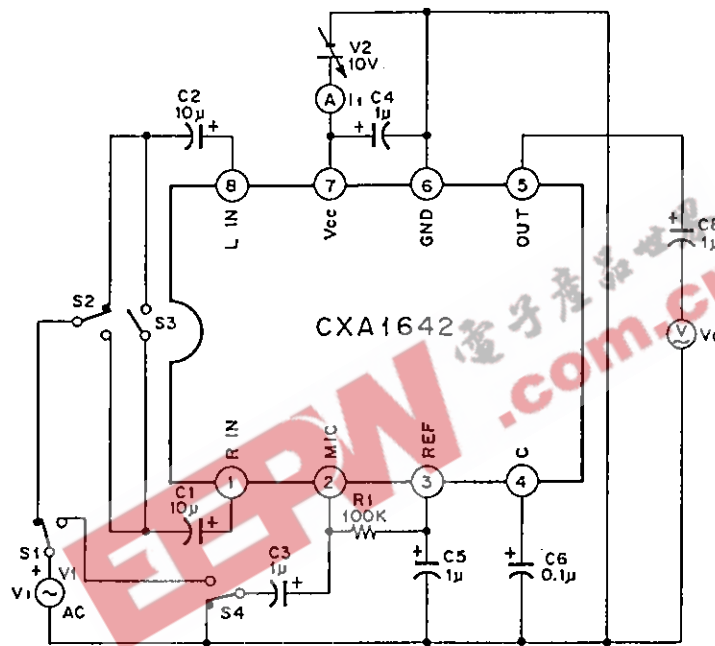
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Electrical Characteristics

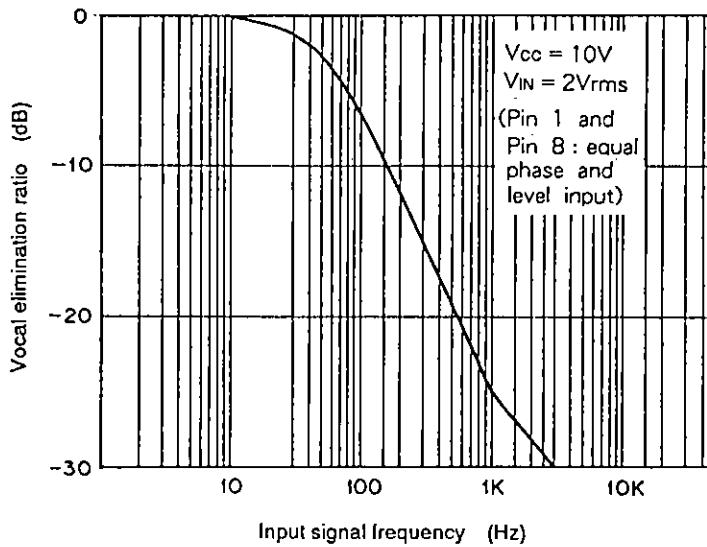
(Ta=25°C, Vcc=10)

Test No.	Test item	SW conditions				Test point	Output waveform and test method	Min.	Typ.	Max.	Unit
		S1	S2	S3	S4						
1	Circuit current	OFF	OFF	OFF	OFF	I ₁	—	1.6	3.0	mA	
2	Mixer gain	ON			ON	V ₀	V _I =1kHz, 2Vrms	-1	0	1	dB
3	Noise level	OFF			OFF	V ₀	Noise level with no signal	—	-86	-70	dBm
4	Vocal suppression			ON		V ₀	V _I =1kHz, 2Vrms	20	24	—	dB
5	Low frequency gain					V ₀	V _I =10Hz, 2Vrms	-1	0	1	dB

Electrical Characteristics Test Circuit

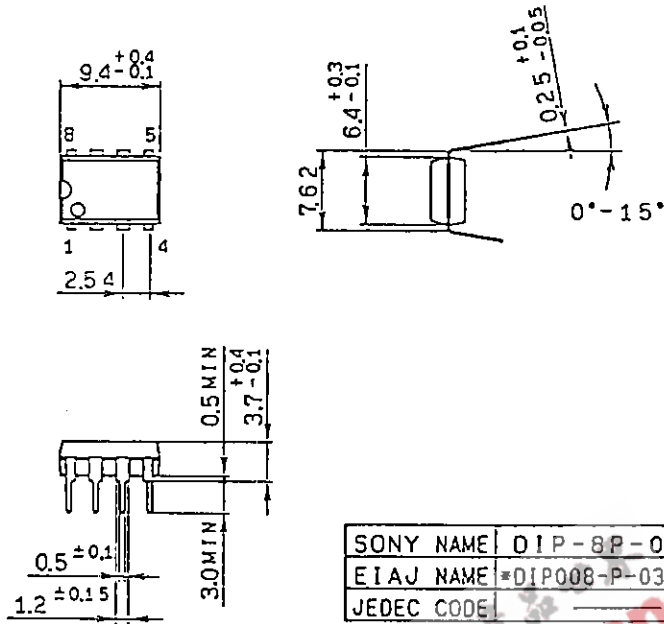


CXA1642 Vocal Elimination Ratio

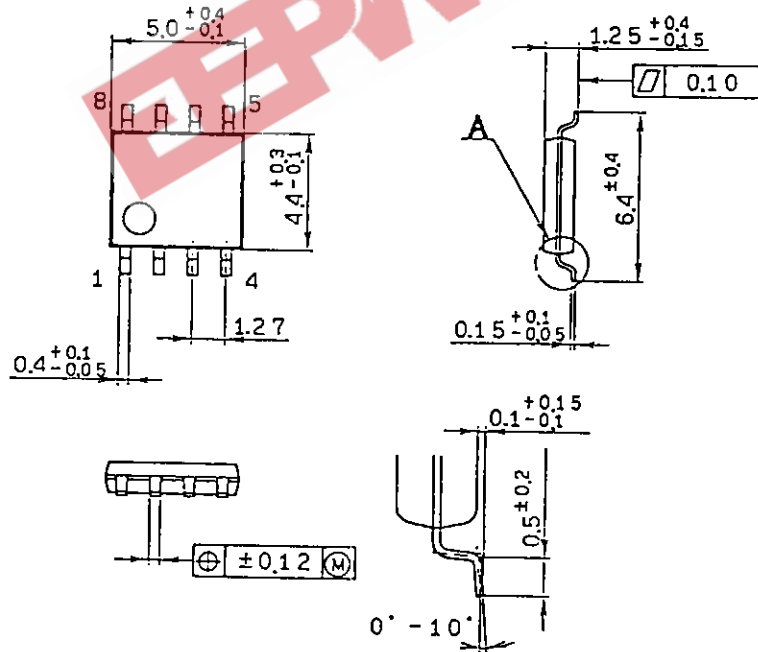


Package Outline Unit : mm

CXA1642P 8pin DIP (Plastic) 300mil 0.5g



CXA1642M 8pin SOP (Plastic) 225mil



Detailed diagram of A

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