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Structure	Silicon Monolithic Bipolar IC
Appearance	SSONF-16D DIL-16Pin Plastic Package (SO type)
Application	Low Frequency Amplifier
Function	Headphone amplifier IC with Center Amplifier

A	Absolute Maximum Ratings				
No.	Item	Symbol	Ratings	Unit	Note
1	Storage Temperature	Tstg	-55 ~ +150	° C	1
2	Operating Ambient Temperature	Topr	-25 ~ +75	° C	1
3	Operating Ambient Pressure	Popr	$1.013 \times 10^5 \pm 0.61 \times 10^5$ (1.0 ± 0.6)	Pa (atm)	
4	Operating Constant Gravity	Gopr	9,810 (1,000)	m / s^2 (G)	
5	Operating Shock	Sopr	4,900 (500)	m / s^2 (G)	
6	Power Supply Voltage	Vcc	4.6	V	2
7	Power Supply Current	Icc	200	mA	
8	Power Dissipation	P_D	437	mW	3

Operating Supply Voltage Range	Vcc	1.8 V ~ 4.5 V

Note : 1) Ta = 25°C except storage temperature and operating ambient temperature.

Note : 2) At no - signal

Note : 3) At Ta = 70°C on PCB of the standard, 50mmX 50mmX 0.8tmm glass - epoxy.

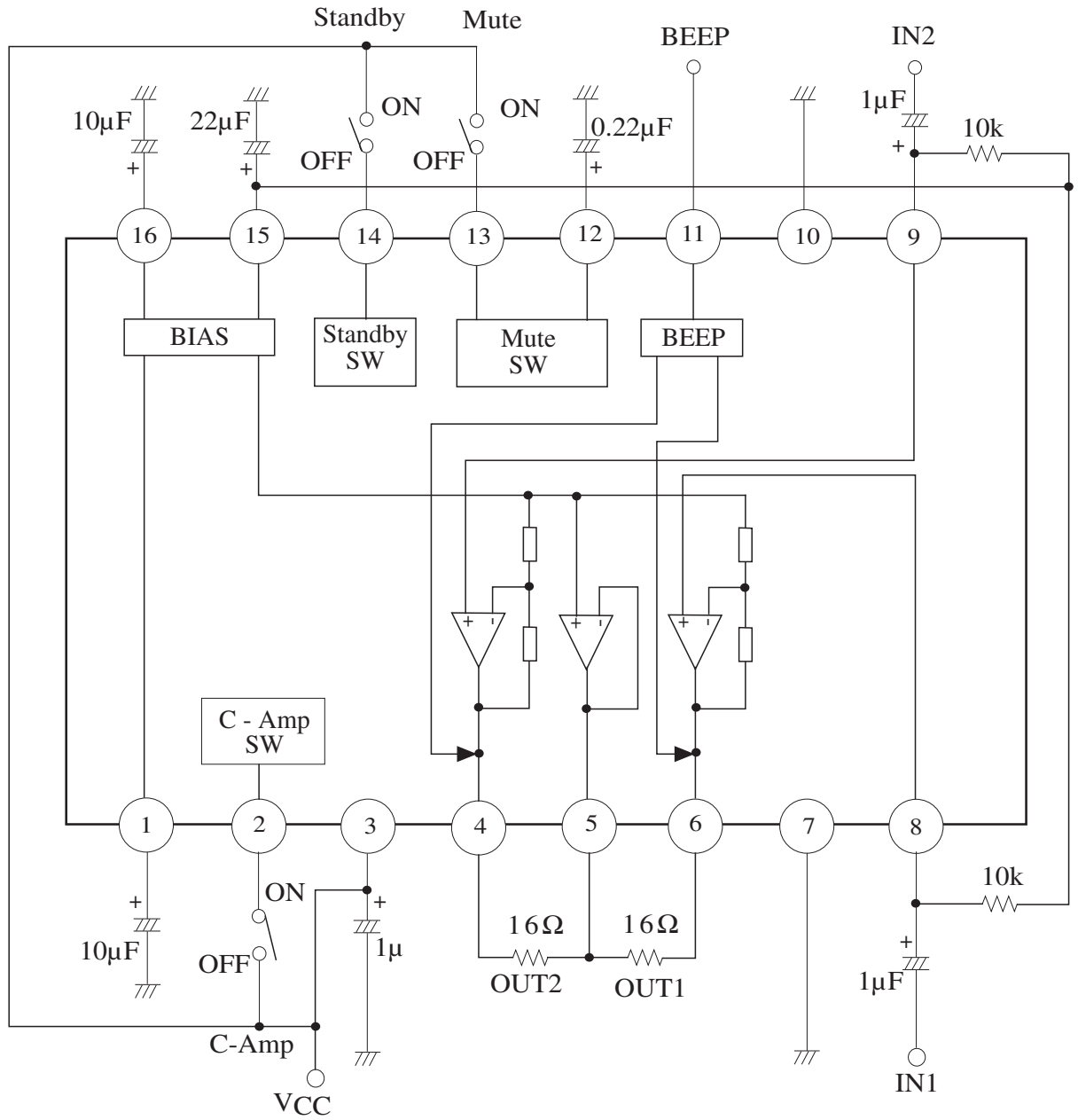
B	Electrical Characteristics (Ambient temperature is 25°C±2°C unless otherwise specified)								
No.	Item	Symbol	Test Cct.	Condition	Limit			Unit	Note
					Min	Typ	Max		
1	Stand-by current	Istb	1	Vin = 0mV STB: ON	-	0.1	5.0	uA	
2	Quiescent Current 1	Icq 1	1	Vin = 0mV C-Amp: OFF	-	1.3	2.6	mA	
3	Quiescent Current 2	Icq 2	1	Vin = 0mV C-Amp: ON	-	1.6	3.2	mA	
4	Voltage Gain 1	Gv 1	1	Vout = -22dBv	5.5	8.3	10.5	dB	
5	Channel Balance	CB	1	Vout = -22dBv	-1.0	0	1.0	dB	
6	Maximum Power Output	Po	1	THD = 10% Vcc = 2V	5.0	9.0	-	mW	
7	Total Harmonic Distortion	THD	1	Vout = -12.2dBv	-	0.1	0.5	%	
8	Output Noise Voltage	Vno	1	Rg = 600Ω	-	-94.5	-88	dBv	1
9	Channel Crosstalk	CT	1	Vout = -12.2dBv	30	50	-	dB	2
10	Ripple Rejection Ratio	RR	1	Vcc = 1.8V, fr = 100Hz Vr = -20dBv	64	72	-	dB	1
11	Muting Effect	MT	1	Vout = -12.2dBv	68	78	-	dB	2
12	Beep Output Voltage	Vbeep	1	Vbeep - in = 0dBv	-56	-51	-46	dBv	

Vcc = 2.4V, RL = 16Ω, Frequency = 1KHz, Rg = 10KΩ, Vbeep = 0V (GND), STB: OFF, MUTE: OFF, unless otherwise specified.

Note : 1) For this measurement, use the filter [A-Curve].
2) For this measurement, use the filter [30KHz LPF].

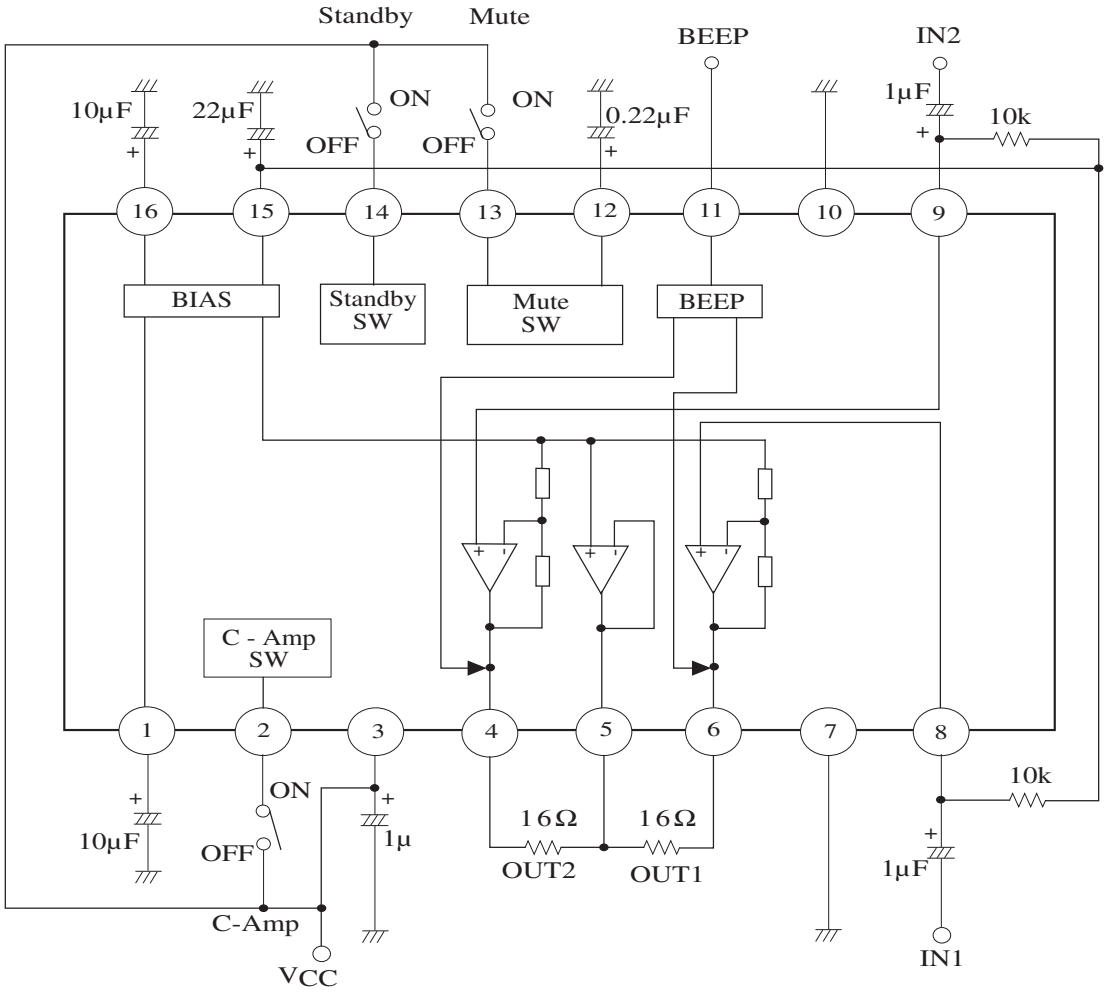
Description of Test Circuits 1

Test Circuit :



Note: The above circuit is used for Latchup testing.

Circuit Function Block Diagram

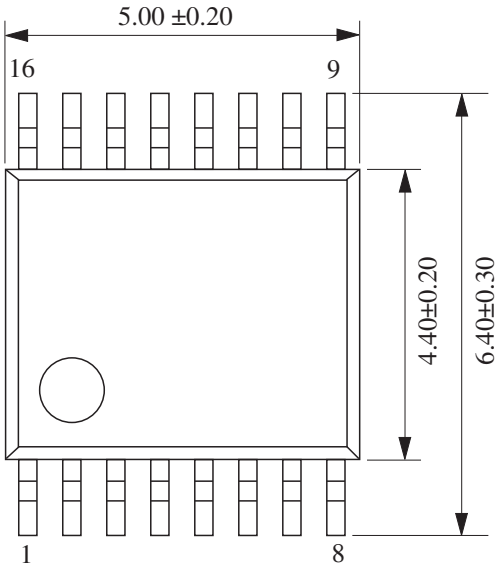


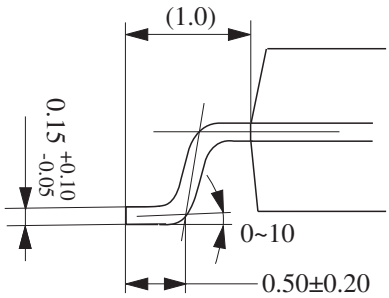
Pin Descriptions

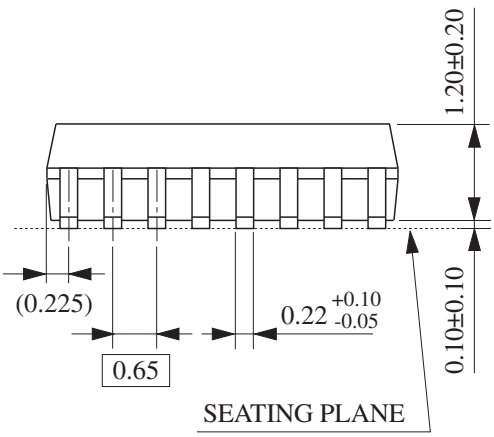
Pin No.	Pin Descriptions	Pin No.	Pin Descriptions
1	Ripple Filter	9	Ch.2 Input
2	Centre Amplifier Control	10	Input Gnd
3	Supply Voltage	11	Beep Input
4	Ch.2 Output	12	Mute time Control
5	Centre Amplifier Output	13	Mute Control
6	Ch.1 Output	14	Standby Control
7	Output Gnd	15	Bias Output
8	Ch.1 Input	16	Bias input

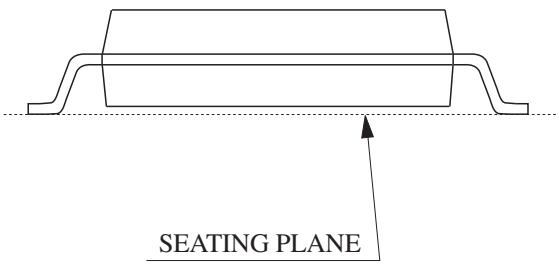
Package Name	SSONF-16D

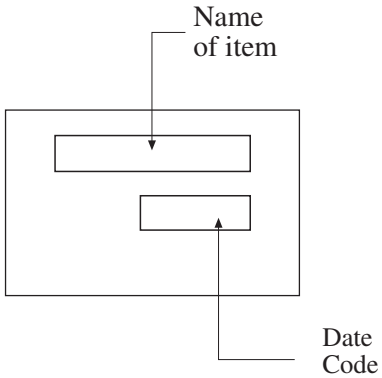
Unit : mm









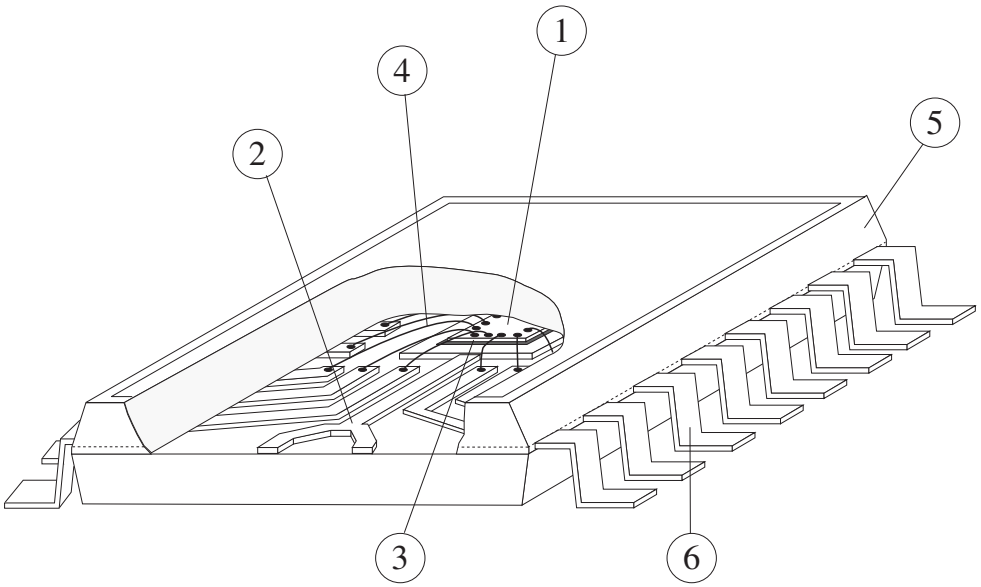


( ) : Reference Value

(Structure Description)

Chip surface passivation	[SiN,] PSG, Others ( )	(1)
Lead frame material	Fe group, [Cu group,] Others ( )	(2), (6)
Inner lead surface process	[Ag plating,] Au plating, Others ( )	(2)
Outer lead surface process	[Solder plating,] Solder dip, Others ( )	(6)
Chip mounting method	[Ag paste,] Au-Si alloy, Solder, Others ( )	(3)
Wire bonding method	[Thermalsonic bonding,] Others ( )	(4)
Wire material	[Au,] Diameter : 24 µm Others ( )	(4)
Mold material	[Epoxy] Others ( )	(5)
Molding method	Transfer mold, [Multiplunger mold,] Others ( )	(5)

Package SSONF-16D



SSONF-16D Package Power Dissipation

P_D - Ta