

Prepared		Product Specifications AN17880A	Ref No.	A-1
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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	PD	437	mW	3

Operating Supply Voltage Range	Vcc	1.8 V ~ 4.5 V
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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.

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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	V _{in} = 0mV STB: ON	-	0.1	5.0	uA	
2	Quiescent Current 1	Icq 1	1	V _{in} = 0mV C-Amp: OFF	-	1.3	2.6	mA	
3	Quiescent Current 2	Icq 2	1	V _{in} = 0mV C-Amp: ON	-	1.6	3.2	mA	
4	Voltage Gain 1	Gv 1	1	V _{out} = -22dBv	5.5	8.3	10.5	dB	
5	Channel Balance	CB	1	V _{out} = -22dBv	-1.0	0	1.0	dB	
6	Maximum Power Output	Po	1	THD = 10% V _{cc} = 2V	5.0	9.0	-	mW	
7	Total Harmonic Distortion	THD	1	V _{out} = -12.2dBv	-	0.1	0.5	%	
8	Output Noise Voltage	Vno	1	Rg = 600Ω	-	-94.5	-88	dBv	1
9	Channel Crosstalk	CT	1	V _{out} = -12.2dBv	30	50	-	dB	2
10	Ripple Rejection Ratio	RR	1	V _{cc} = 1.8V, fr = 100Hz Vr = -20dBv	64	72	-	dB	1
11	Muting Effect	MT	1	V _{out} = -12.2dBv	68	78	-	dB	2
12	Beep Output Voltage	Vbeep	1	Vbeep - in = 0dBv	-56	-51	-46	dBv	

V_{cc} = 2.4V, R_L = 16Ω, Frequency = 1KHz, R_g = 10KΩ, Vbeep = 0V (GND), STB: OFF, MUTE: OFF, unless otherwise specified.

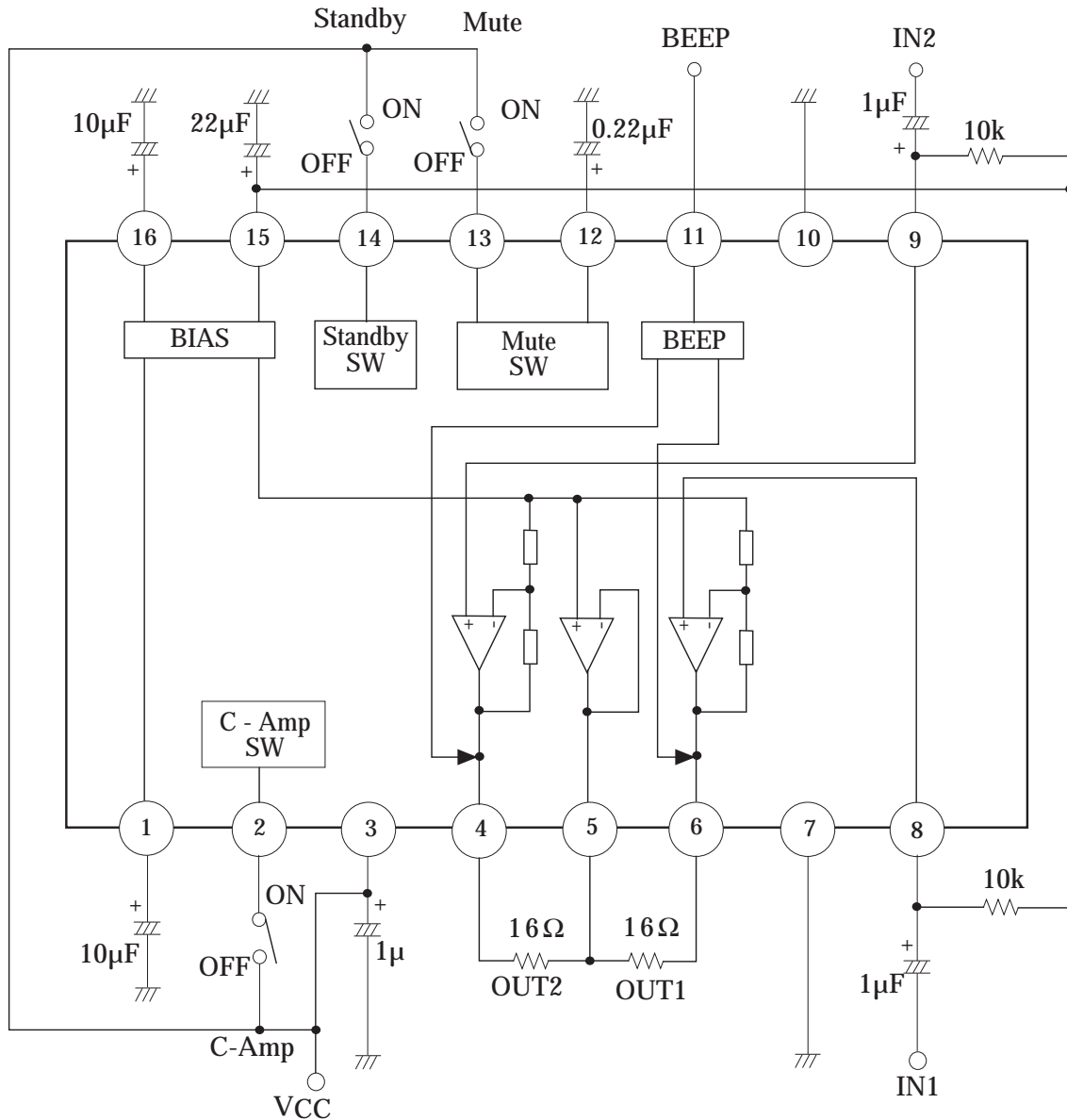
Note : 1) For this measurement, use the filter [A-Curve].
2) For this measurement, use the filter [30KHz LPF].

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Description of Test Circuits 1

Test Circuit :

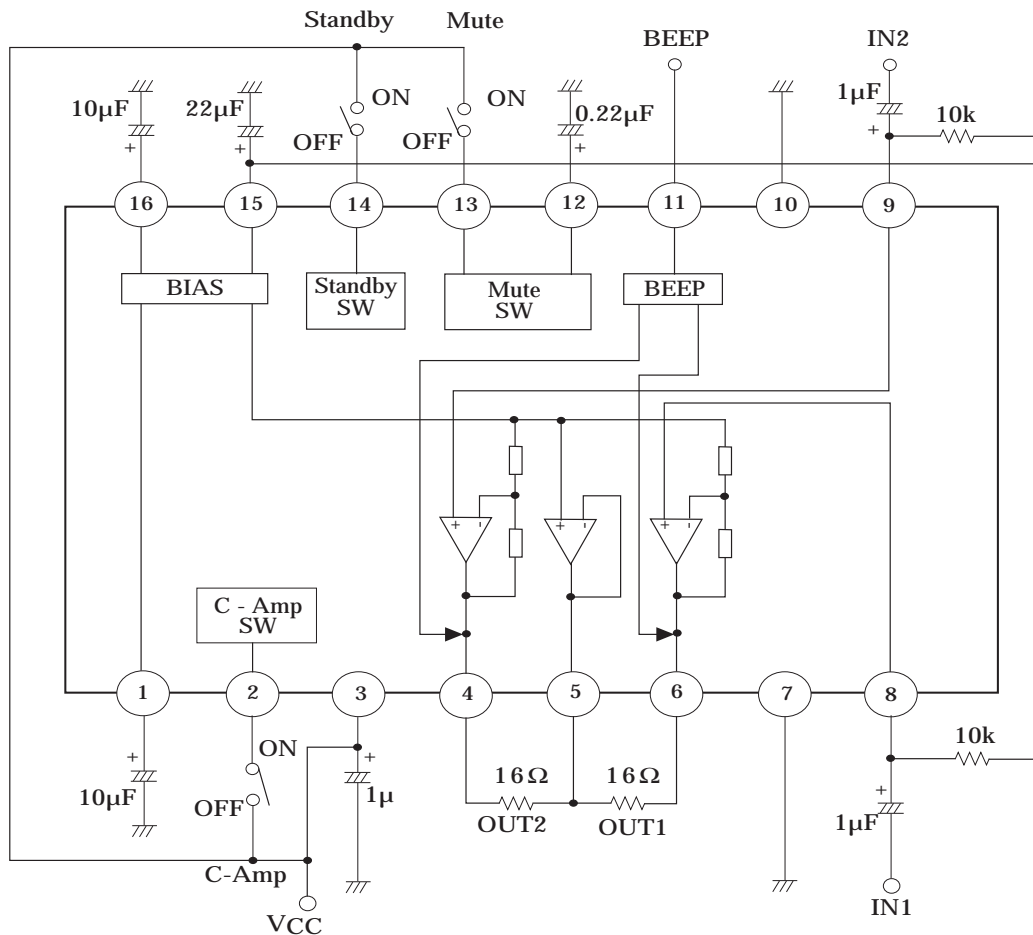


Note: The above circuit is used for Latchup testing.

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Circuit Function Block Diagram



Pin Descriptions

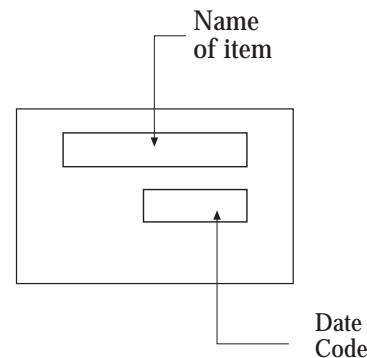
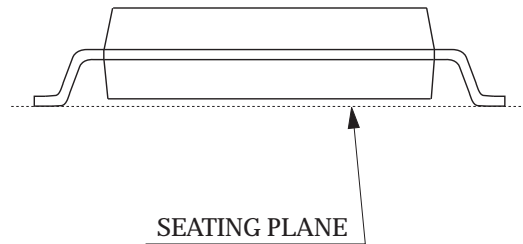
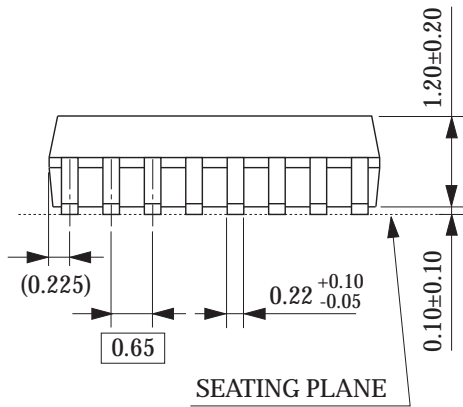
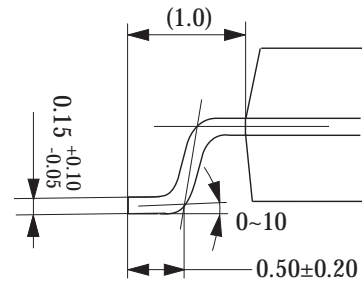
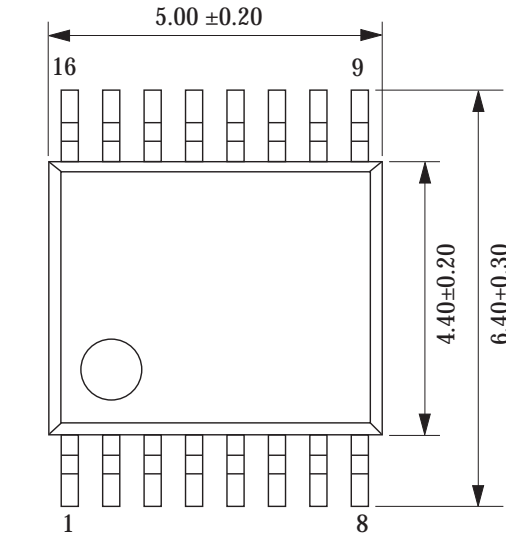
Pin No.	Pin Descriptions	Pin No.	Pin Descriptions
1	Ripple Filter	9	Ch.2 Input
2	Centre Amplifier Control	10	Input Gnd
3	Supply Voltage	11	Beep Input
4	Ch.2 Output	12	Mute time Control
5	Centre Amplifier Output	13	Mute Control
6	Ch.1 Output	14	Standby Control
7	Output Gnd	15	Bias Output
8	Ch.1 Input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

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Package Name SSONF-16D

Unit : mm



() : Reference Value

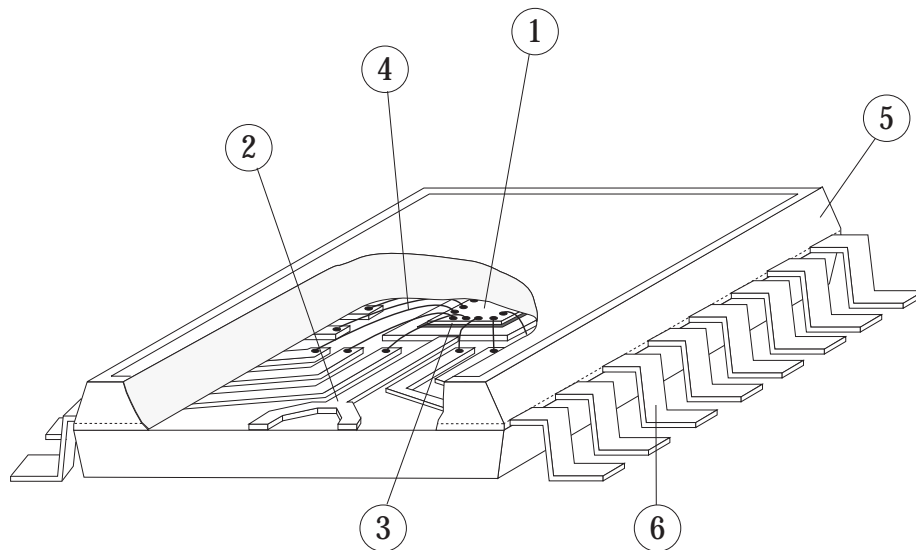
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(Structure Description)

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 : <u>24</u> μm Others ()	④
Mold material	Epoxy Others ()	⑤
Molding method	Transfer mold, Multiplunger mold, Others ()	⑤

Package SSONF-16D

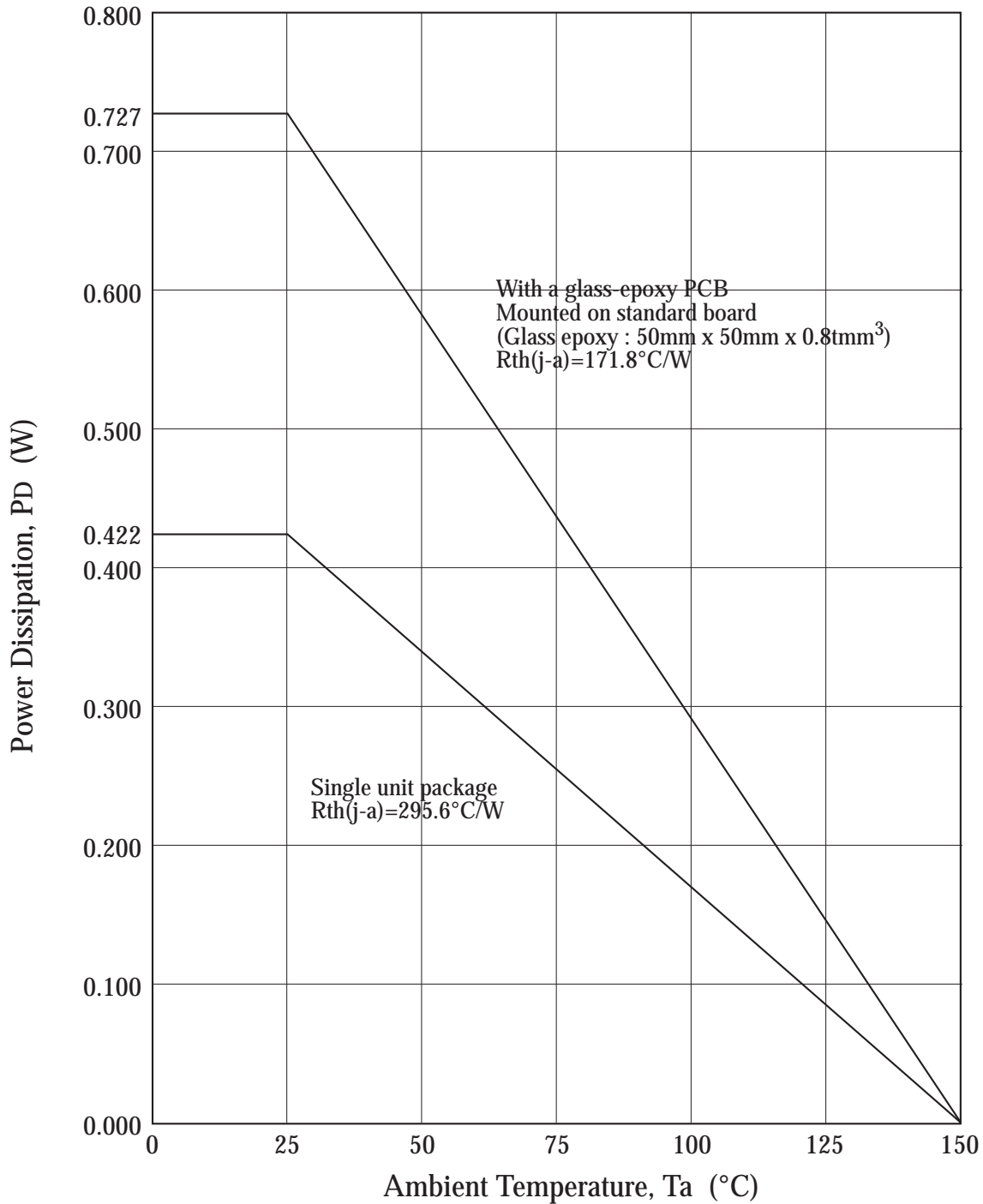


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SSONF-16D Package Power Dissipation

$P_D - T_a$



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