

阅读申明

- 1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
- 2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
- 3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描述上的差异，建议读者做出适当判断。
- 4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.
2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader's learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.
3. All product information provided on the website refer to solutions from manufacturers' technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.
4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with "Datasheets" .

Panasonic

Panasonic Semiconductor Singapore
 A Division of Panasonic Semiconductor Asia Pte Ltd
 Company Registration No. 197803125E
 22, Ang Mo Kio Industrial Park 2, Singapore 569506.
 Tel: (65)64818811 Fax: (65)64816486

DOCUMENT COVER PAGE





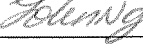
Note: This cover page establishes the Doc No., Title and current status of the attached document.

Doc No.	SDSC-PSE-AN7164	Issue Level	Rev	Eff Date
		1	4	27-FEB-06
Doc Title	Product Specifications for AN7164	Total no. of pages (excluding this page)		8

Revision History

Issue	Rev	Eff Date	S/N	Page	Change Details	Remarks
1	3	16-DEC-04	1	-	Added this cover page.	
			2	6	Removed this page.	
			3	6A	Added this page for leadfree specification.	
			4	6A	Amended Outer Lead Surface Process & Chip Mounting method.	
4	27-FEB-06		1	5	Removed physical product marking indication.	
			2	6A	Amended outer lead surface process.	

APPROVED
EXTERNAL ISSUE

Prepared		Product Specifications AN7164	Ref No.	A-1
Checked			Total Page	8
Approved			Page No.	1

Structure	Silicon Monolithic Bipolar IC
Appearance	FP12S Plastic Package (Power Type with Fin attached)
Application	Stereo Set • Karaoke • TV
Function	Low Frequency Power Amplifier

A Absolute Maximum Ratings					
No.	Item	Symbol	Ratings	Unit	Note
1	Storage Temperature	Tstg	-55 ~ +150	° C	1
2	Operating Ambient Temperature	Topr	-30 ~ +75	° C	1
3	Operating Ambient Pressure	Popr	1.013x10 ⁵ ±0.61x10 ⁵ (1.0±0.6)	Pa (atm)	
4	Operating Constant Acceleration	Gopr	9,810 (1000)	m/s ² (G)	
5	Operating Shock	Sopr	4,900 (500)	m/s ² (G)	
6	Supply Voltage	Vcc	30	V	2
7	Supply Current	Icc	5.0	A	
8	Power Dissipation	P _D	62.5	W	θ _{j-c} = 2.0 (°C/W)

Operating Supply Voltage Range	Vcc	8.3V ~ 24V
--------------------------------	-----	------------

Note 1) The temperature of all items shall be Ta=25°C except storage temperature and operating ambient temperature.
 2) No signal.

Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	

Prepared *[Signature]*
 Checked *[Signature]*
 Approved *[Signature]*

Product Specifications

AN7164

Ref No. B-1
 Total Page 8

Page No. 2

B Electrical Characteristics		(Unless otherwise specified, the ambient temperature is 25°C ± 2°C, Vcc=21V, RL=8Ω, freq=1kHz, BTL operation.)							
No	Item	Symbol	Test Circuit	Conditions	Limits			Unit	Note
					min	typ	max		
1	Quiescent Circuit Current	ICQ	1	Vin=0	-	55	100	mA	
2	Output Noise Voltage	Vno	1	Rg=10kΩ	-	0.85	1.3	mV	3
3	Output Offset Voltage	Voffset	1	Vin=0	-	0	300	mV	
4	Total Harmonic Distortion	THD	1	PO=1W	-	0.07	0.3	%	
5	Voltage Gain	Gv	1	PO=1W	49.5	51.5	53.5	dB	
6	Maximum Power Output	PO	1	THD=10%	24	30	-	W	
7	Ripple Rejection Ratio	R.R	1	Rg=0 Supply ripple	45	51	-	dB	3,4
8	Standby Current	ISTB	1	Pin 6 OPEN	-	-	3	μA	

Note 3) Measure with DIN/Audio filter.
 4) Ripple frequency = 120Hz, 1Vrms.

Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	

Prepared	
Checked	
Approved	

Product Specifications

AN7164

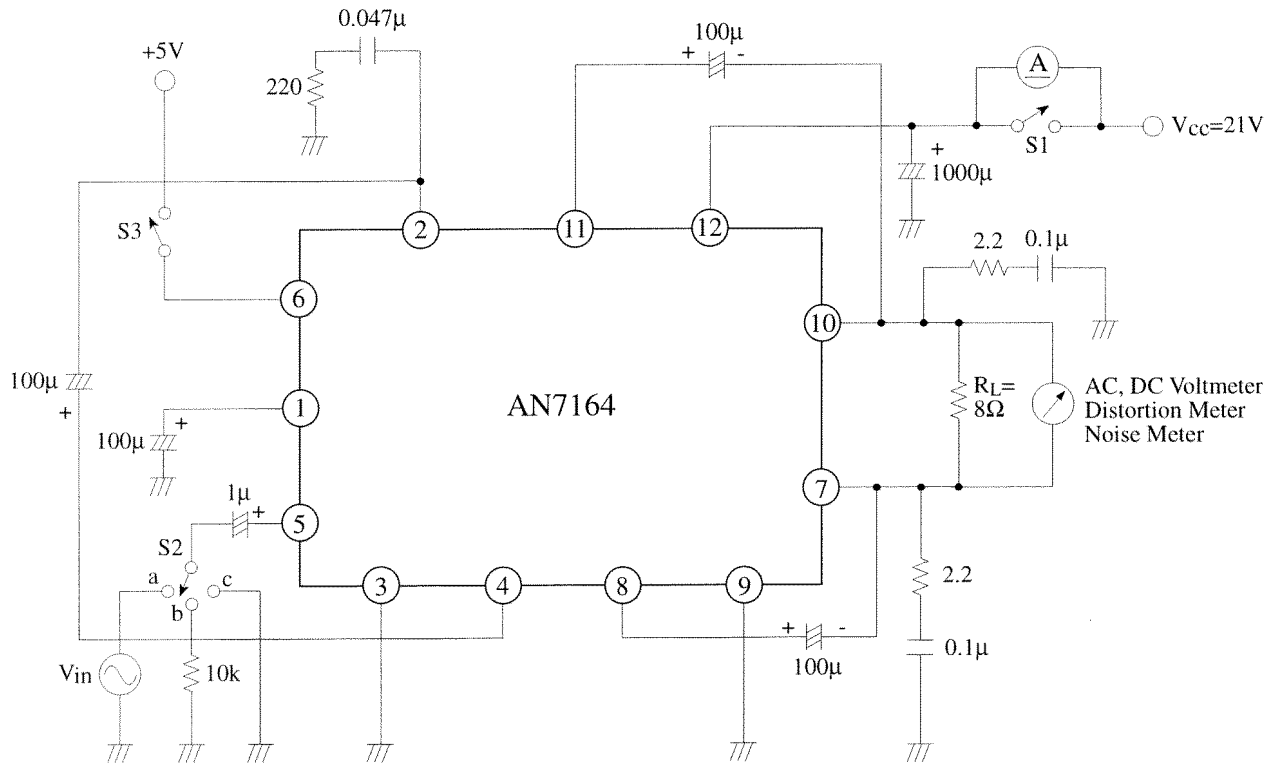
APPROVED
EXTERNAL ISSUE

Ref No. C-1
Total Page 8

Page No. 3

(Description of test circuit and test method)

Test Circuit 1



No.		S1	S2	S3
1	I _{cQ}	OFF	c	ON
2	V _{no}	ON	b	ON
3	V _{offset}	ON	c	ON
4	THD	ON	a	ON
5	G _v	ON	a	ON
6	P _o	ON	a	ON
7	R.R	ON	c	ON
8	I _{STB}	OFF	c	OFF

Note) Pin 6 is a stand-by pin.

Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	

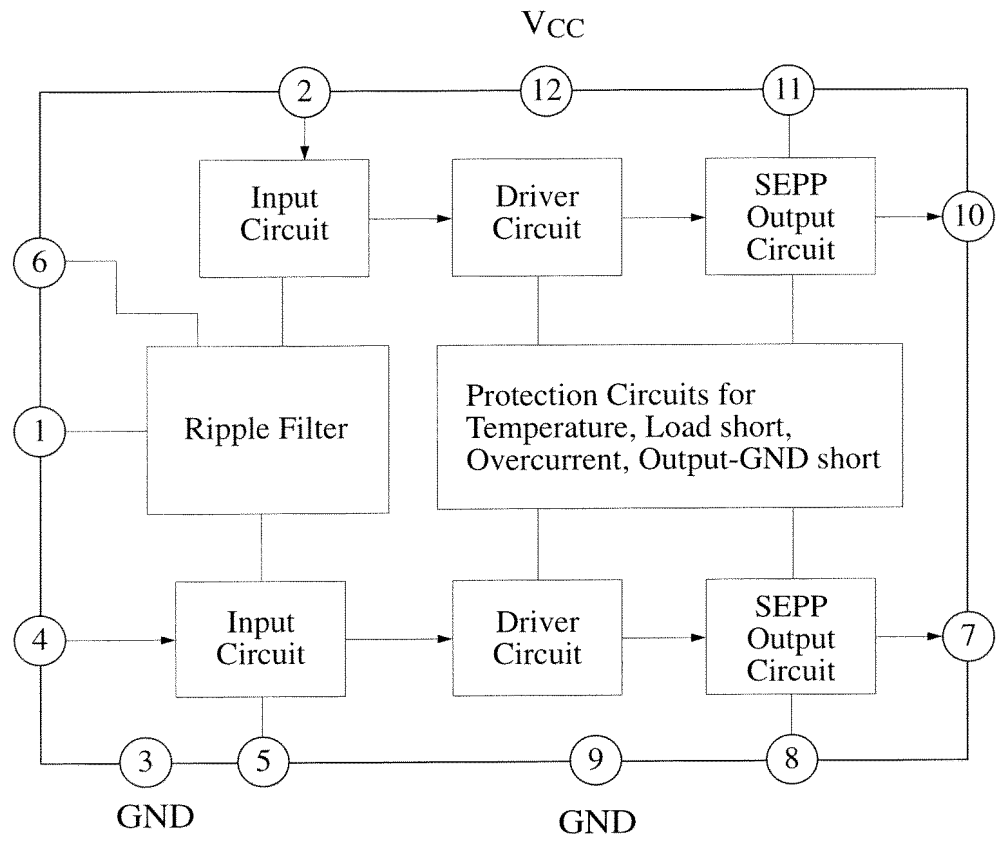
Prepared	<i>[Signature]</i>
Checked	<i>[Signature]</i>
Approved	<i>[Signature]</i>

Product Specifications

AN7164

Page No.	4
----------	---

Circuit Function Block Diagram



Pin Descriptions

Pin No.	Description	Pin No.	Description
1	Ripple Filter	7	Output (Ch1)
2	Negative Feedback (Ch2)	8	Bootstrap (Ch1)
3	GND (Input)	9	GND (Output)
4	Negative Feedback (Ch1)	10	Output (Ch2)
5	Input	11	Bootstrap (Ch2)
6	Standby / Mute	12	Vcc

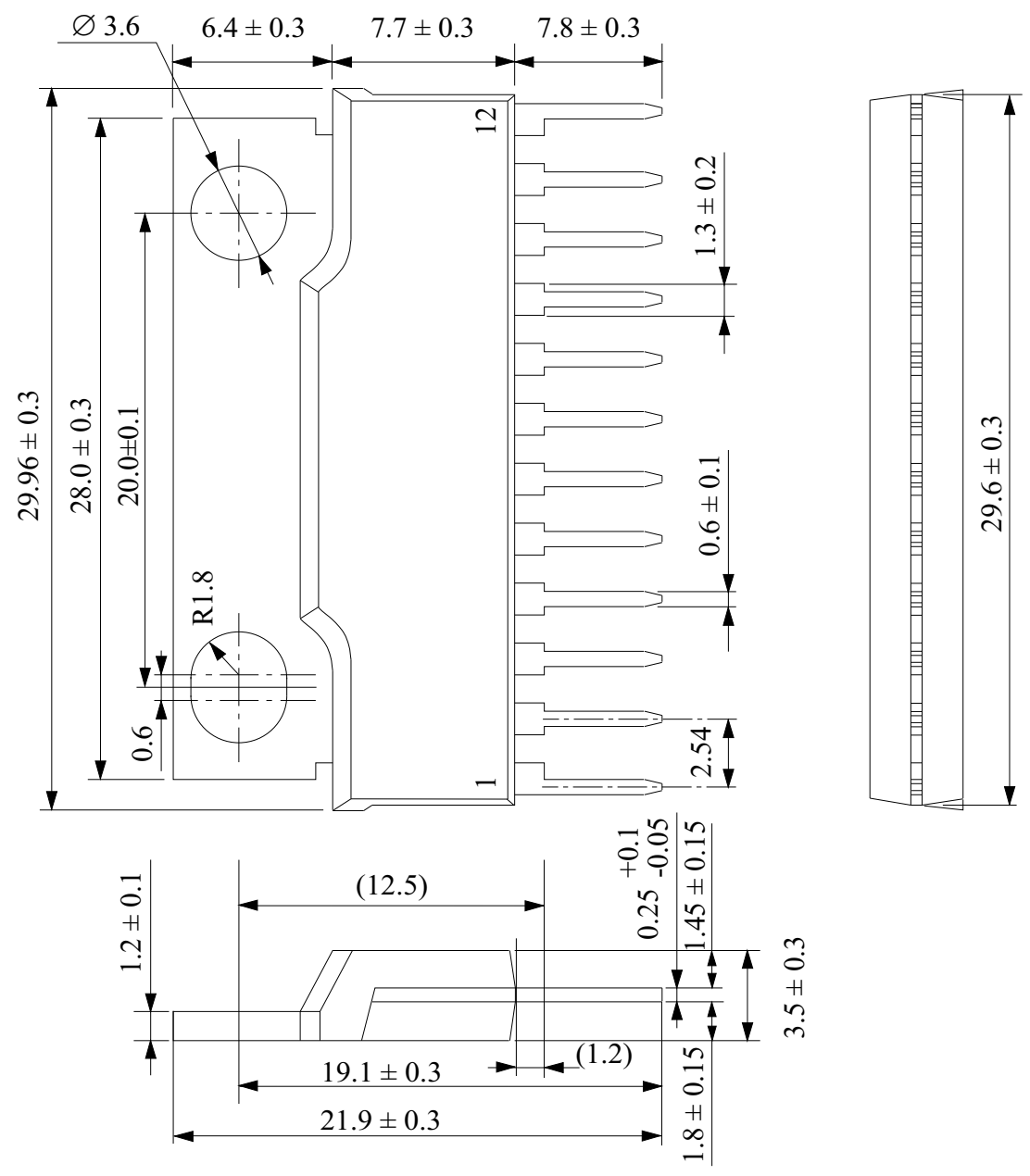
Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	

**APPROVED
EXTERNAL ISSUE**

Prepared	Yiap Shi Hui	Product Specifications AN7164	Ref No.	E
Checked	John Ng		Total Page	8
Approved	T. Sugimura		Page No.	5

Package Name **FP12S**

Unit : mm



() : Reference value

*4

Eff. Date	Eff. Date	Eff. Date	Eff. Date
06-SEP-88	30-MAY-95	17-JUL-98	24-FEB-06

Prepared	Yiap Shi Hui
Checked	John Ng
Approved	T. Sugimura

Product Specifications
(Leadfree)
AN7164

Ref No.	F
Total Page	8
Page No.	6A

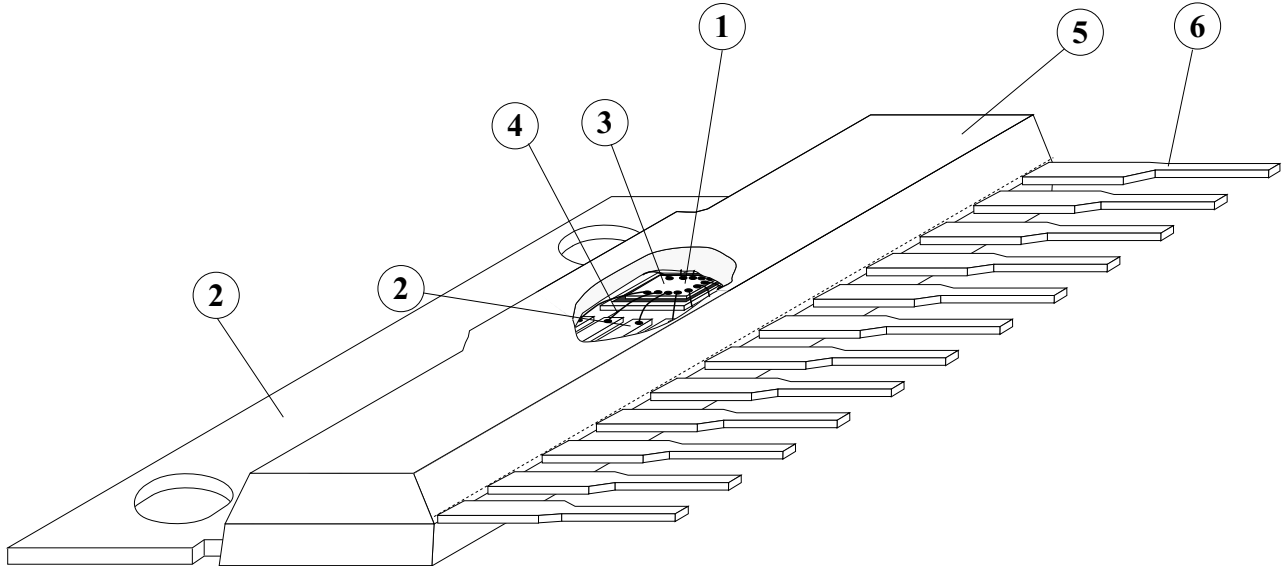
(Structure Description)

*4

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	General Customer: Solder Plating (98Sn-2Bi) SC Buyback: Solder Dip (95.5Sn-2Ag-2Bi-0.5Cu)	⑥
Chip mounting method	Ag paste, Au-Si alloy, Solder (95.5Pb-2.5Ag-2Sn)** ,	③
Wire bonding method	Thermalsonic bonding , Others ()	④
Wire material	Au , Diameter 38 μm, Others ()	④
Mold material	Epoxy , Others ()	⑤
Molding method	Transfer mold , Multiplunger mold, Others ()	⑤
Fin material	Cu group , Others ()	⑦

** Under RoHS exemption clause, Lead (Pb) in high melting temperature type solder (ie. tin-lead solder alloy containing more than 85% of lead), is exempted until 2010.

Package FP12S



*4

Eff. Date	Eff. Date	Eff. Date	Eff. Date
16-DEC-04	24-FEB-06		

Prepared	<i>(Signature)</i>
Checked	<i>(Signature)</i>
Approved	<i>(Signature)</i>

Product Specifications

(Technical Data)

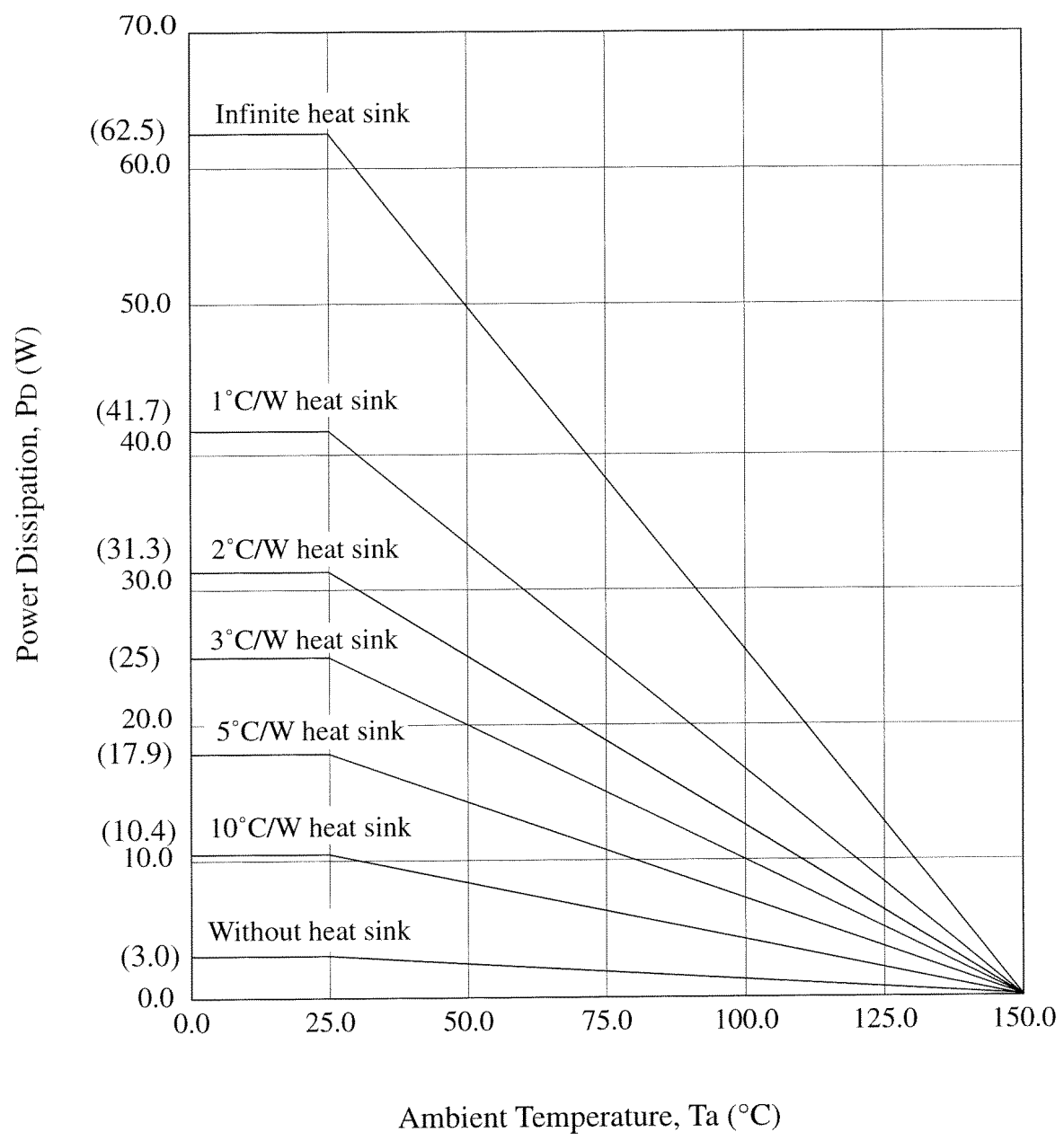
AN7164

Ref No.	G-1
Total Page	8
Page No.	7

FP-12S Package Power Dissipation

P_D - T_a

$$\left(\begin{array}{l} R_{th(j-c)} = 2^{\circ}C/W \\ R_{th(j-a)} = 42^{\circ}C/W \end{array} \right)$$



Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	

Prepared	<i>[Signature]</i>
Checked	<i>[Signature]</i>
Approved	<i>[Signature]</i>

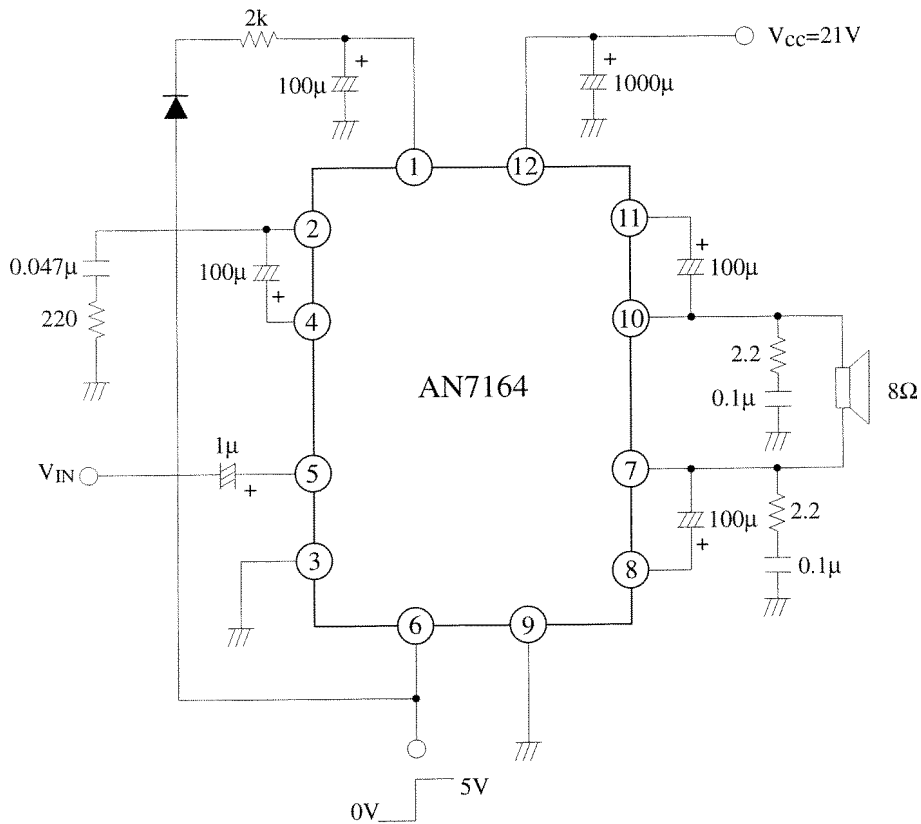
Product Specifications

AN7164

Ref No.	G-2
Total Page	8
Page No.	8

(Precaution)

When standby is OFF (apply 5V at pin 6) at high temperature, the output disappears because ripple filter fast discharge circuit misoperates. It is necessary to force about 1mA of current into pin 1 when standby is OFF.
Below is one of the example for the application circuit.



Note) Please take note if the external circuit used is by following the test circuit, the standby function may misoperate and IC cannot function.

Eff. Date	Eff. Date	Eff. Date	Eff. Date
6-SEP-88	30-MAY-95	17-JUL-98	