

I2S HDA Codec

I	
PCM	Pulse Code Modulation
I2S	Inter-IC Sound
HDA	High Definition Audio
Codec	COder-DECoder
TRS	Tip Ring Sleeve

1	.....	1
1.1	.....	1
1.1.1	.....	1
1.1.2	.....	1
1.1.3	.....	1
1.2	.....	2
2	.....	3
2.1 I2S	.....	4
2.1.1	.....	4
2.1.2	.....	4
2.2 HDA	.....	4
2.2.1	.....	4
2.2.2	.....	5
2.2.3 DMA	.....	5
2.2.4	.....	5
3	.....	6
3.1	.....	6
3.2	.....	6
3.3	.....	7
4	.....	8
4.1	.....	8
4.2	.....	9
4.3	.....	10
5	.....	10
5.1	.....	10
5.1.1	.....	10
5.1.2	RL	11
5.1.3	.....	12
6 FAQ	.....	12

1

1.1

PCM Pulse Code Modulation

1.1.1

		20Hz	20KHz	
	CD	44.1kHz		22.05kHz
20kHz				

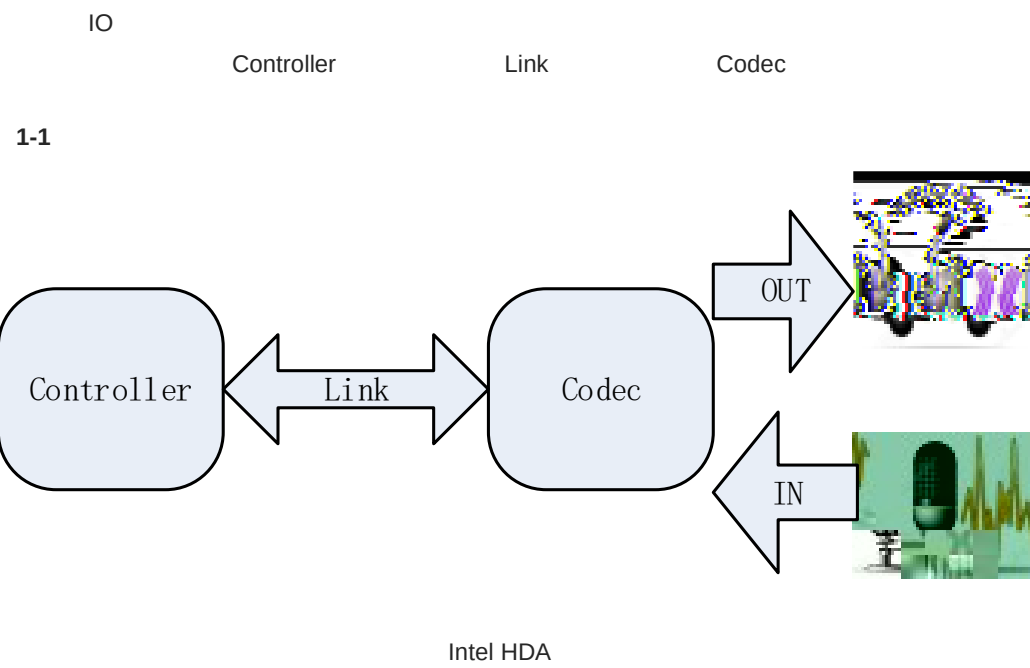
1.1.2

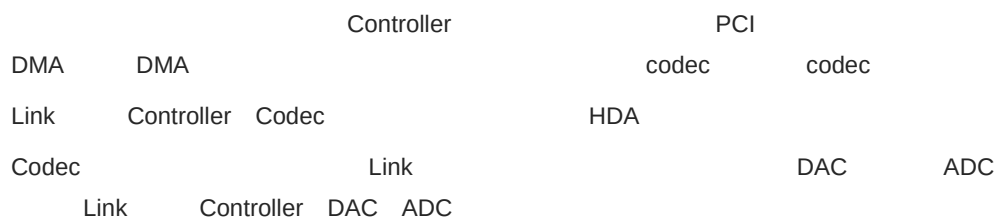


1.1.3

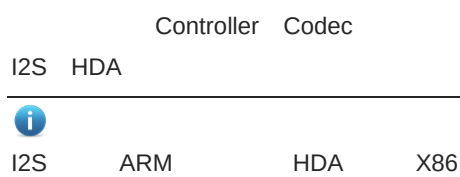
		0		0	
			PCM		
	44.1kHz	16		Windows	WAV
MB					$44.1 \times 16 \times 2 \times 60 / 8 / 1000 = 10.584$
				/	

1.2





2



2.1 I2S

2.1.1

I2S Inter-IC Sound

I2S 3

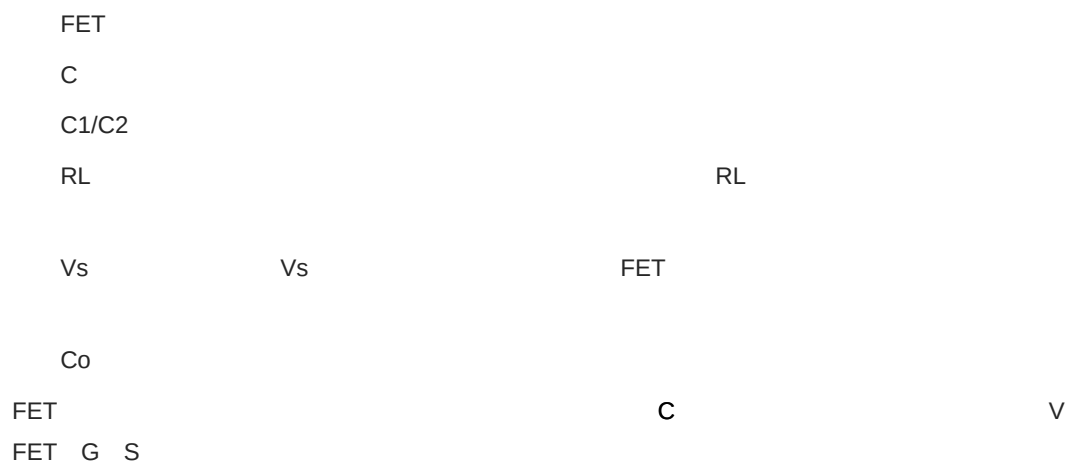
3

3.1

3-1 LINE2

C1/2	Codec		
20Hz	248uF	$F_c=1/(2 \times R \times C)$	32

3-3



Codec

z

A 3.6mm
 Tip B 11.5mm
 Ring C 7.3mm
 H L H=6.5mm L=3.5mm

4.3

SJ/T 10495-94 IEC 61602-1996



5000

0.1

5

5.1

5.1.1

FET gm gm I_{DSS} I_{DSS} gm
 I_{DSS} FET

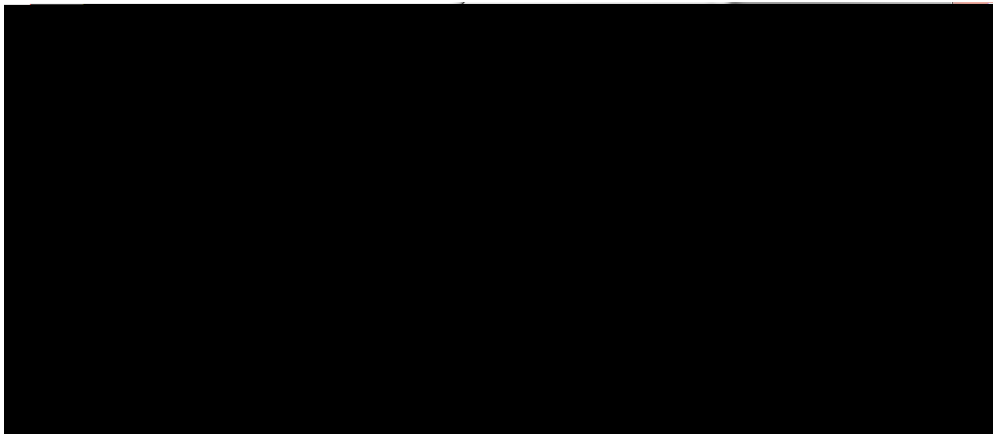
5-1

Vs	Vpp
1V	240mV
1.5V	512mV
2.5V	618mV
5V	628mV
10V	657mV

2.5V FET

5-1

1V



5-2

2.5V



5.1.2

RL

$$=RL*gm$$

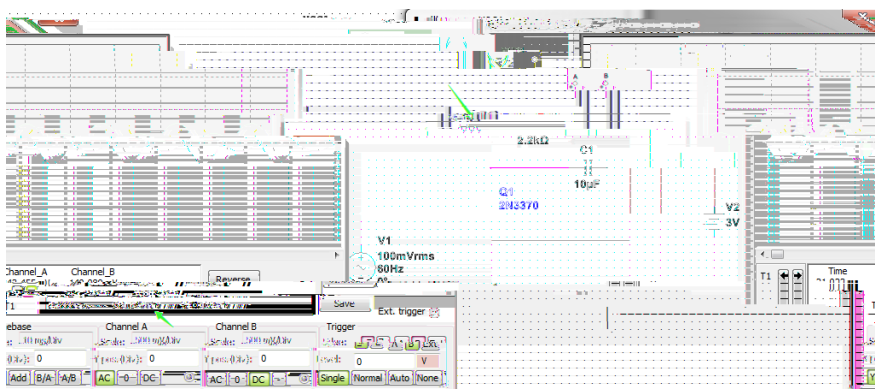
RL

RL 2.2k

4.7k

Vpp 621mV 1.3V

5-3 RL 2.2kΩ



5-4 RL 4.7kΩ

5.1.3

0.5V

RL

6 FAQ

Q VDI

A EST

OPUS