

April, 2017

Audio & Voice Business Unit  
Silicon Solution Division  
Asahi Kasei Microdevices Corporation

Dear Customer,

AKM has discovered there is a noise problem under a specific supply voltage condition with the AK4621EF. When VREF voltage is lower than AVDD voltage, the SNR of the ADC will be deteriorated. Please confirm the report below if your system uses lower VREF voltage than AVDD voltage.

If VREF is the same as AVDD supplied voltage, the ADC and DAC of the AK4621EF will perform normally.

### **Noise Problem Report of the AK4621EF**

[Affected Product]

CODEC AK4621EF

[Problem]

When VREF Voltage is lower than AVDD voltage, it is found that the SNR of the ADC is deteriorated. It is recommended to have VREF voltage level the same as the AVDD is supplied. The ADC and DAC of the AK4621EF perform normally under this condition.

[Change of Datasheet]

AKM is changing the specification to reflect VREF connected with AVDD. This change is illustrated in the revised datasheet of the AK4621EF below.

#### Before Revision. AK4621EF Datasheet

<b>RECOMMENDED OPERATING CONDITIONS</b>						
(VSS1=VSS2=0V)						
Parameter		Symbol	min	typ	max	Units
Power Supplies	Analog	AVDD	4.75	5.0	5.25	V
	Digital	DVDD	3.0	3.3	3.6	V
	Digital I/O	TVDD	DVDD	5.0	5.25	V
Voltage Reference		VREF	3.0	-	AVDD	V

#### After Revision. AK4621EF Datasheet

<b>RECOMMENDED OPERATING CONDITIONS</b>						
(VSS1=VSS2=0V)						
Parameter		Symbol	min	typ	max	Units
Power Supplies	Analog	AVDD	4.75	5.0	5.25	V
	Digital	DVDD	3.0	3.3	3.6	V
	Digital I/O	TVDD	DVDD	5.0	5.25	V
Voltage Reference		VREF	-	AVDD	-	V

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