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| **Sr. No.** | **Query** | **Remarks** |
|  | Minimum signal detectable by the CODEC device (considering CODEC gain = 0). | * Calculation method provided in PDF is correct.
* Revised value of minimum detectable signal by ADC is:
* $\frac{2}{2^{14.8239}-1}=68.96 μV$
* Kindly confirm this value.
 |
|  | Does the value calculated in Sr. No. 1 imply that my microphone shall produce analog audio signal > 68.96 µV for it to get detected by the CODEC device if I’m keeping PGA = 0 dB? | * TI comment required.
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|  | Minimum signal detectable by the CODEC device (considering CODEC gain = ***x dB***). | * How to determine this value? Shall it be simply 68.96 x (10^(x/20))
* TI comment required.
 |
|  | As suggested by Aaron, considering 2 Vpp as the full scale voltage and 59.5 dB (944V) of gain, the max level ADC would be able to see is 168 mVpp.  | * Why additional amplification is required between mic and ADC for this case?
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|  | It is specified in the data sheet that for speaker, maximum drive level by the CODEC device is 400 mW. For speaker with sensitivity of 88 dBA (0.1W/0.1m), I assume maximum volume I’m going to get is 88 + 3 dB + 3 dB = 94 dBA. | * Is the calculation correct? TI comment required.
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