

### 1.1.1 Microphone Signals (MICIP, MICIN)

MICP and MICN are balanced differential microphone input pins. These inputs are compatible with an electret microphone. The microphone contains a FET buffer with an open drain output, which is supplied with at  $2.4V \pm 10\%$  relative to ground by the wireless modem as shown below.

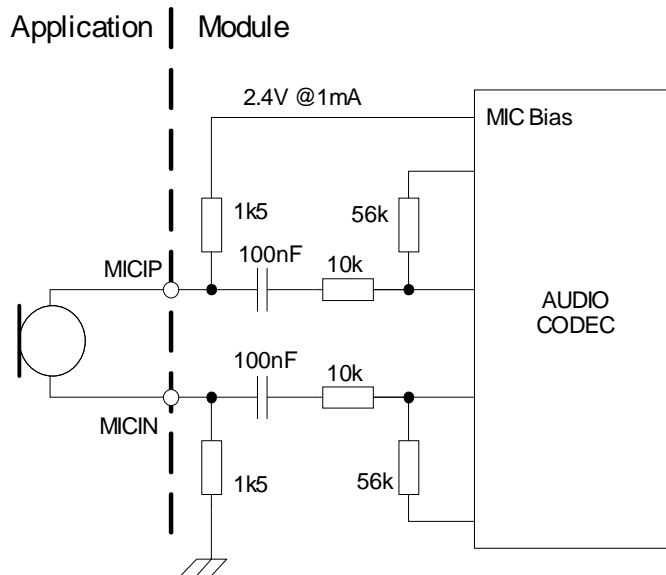


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Microphone connections to the wireless modem

The input low-noise amplifier stage is constructed out of standard low-noise op amps. External resistors set the gain of this stage.

The input gain is scaled by the input resistors to be around 18, which provides optimal performance for many standard types of electret microphones. The module provides a microphone bias at 2.4V, and can supply at least 1mA of current.

Parameter	Conditions	Min	Typ	Max	Unit
Input voltage full scale	max input gain	14	16	18	mVrms
	min input gain	45	50	56	mVrms
Frequency response	-3dB cut-off	300		3400	Hz
Output dc bias level		2.16	2.4	2.64	V