

Application Note

Migrating CMX602A Designs to Use the CMX602B Device

The new CMX602B device is suitable for use in new Type 2 caller ID designs and it is virtually 'socket compatible' with the CMX602A, its predecessor. This note describes differences between the CMX602B and the CMX602A to help ensure smooth design migration to use the CMX602B.

1 RXD output (FSK demodulator data output) state when not in use

RXD is a digital output on both the CMX602A and CMX602B devices that presents received FSK data. Accordingly, in both those devices, its state is not meaningful unless both (1) a valid FSK input signal is applied and (2) the FSK demodulator is enabled by placing the device into FSK Receive mode. In 'non-use' situations, the RXD output of the CMX602A and CMX602B devices differs according to the following table:

Condition	RXD Output State	
	CMX602B	CMX602A
Not in FSK Receive mode (including Zero Power Mode)	0 (low)	1 (high)
In FSK Receive mode but without valid FSK signal applied	indeterminate	indeterminate

This difference in the two devices' functions can be seen in their data bulletin System Signals figures.

In general, end product designs should not rely upon the static output state of an FSK demodulator unless it is enabled and a valid signal is applied. Accordingly, it is expected that few CMX602A-based designs, if any, will be affected by this difference.

2 Operating Characteristics Changes

Four specifications and one related note were slightly revised. The revisions, described below, are minor and so not expected to affect most designs.

Operating Characteristics

	CMX602A				CMX602B			
	Min.	Typ.	Max.	Units	Min.	Typ.	Max.	Units
Tone Alert Detector								
To ensure detection:								
'Low' tone frequency deviation from nominal			±20	Hz			±0.5	%
'High' tone frequency deviation from nominal			±30	Hz			±0.5	%
2750Hz tone level with respect to 2130Hz tone level	-7.0		7.0	dB	-6.0		+6.0	dB
FSK Receiver								
Acceptable twist (mark level with respect to space level)								
V23	-7.0		7.0	dB	-6.0		-6.0	dB

Operating Characteristics Note 4

CMX602A: "For $V_{DD} = 5.0V$ with equal tones..."

CMX602B: "For $V_{DD} = 3.3V$ with equal tones..."