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RE: Certification for Toyota RKE Transmitter

### **Description of Circuit Operation**

The Microchip ASIC is used for the signal encoding and for operation control. The switch inputs on pins 3, 4, 12 and 13 wake up the micro on change and the micro takes appropriate action depending on the switches status. If a switch is determined pressed the Microchip device enables the TDA5150 via pin 5. When enabled the TDA5150 begins driving the 13.56MHz crystal which is used for the PLL division factor and baud rate generator for the external clock on the TDA5150. The external clock out on pin 8 of the TDA5150 runs into pin 2 of the Microchip ASIC. This signal is used to change data on the data line on pin 11 of the Microchip ASIC. By toggling this data line the TDA5150 pulls the frequency to the high side ( $F_c+30\text{KHz}$ ) if the data is high and the low side ( $F_c-30\text{KHz}$ ) if the data is low. After a transmission ends and no more switches are pressed then the device will go into a low power mode for 3 seconds before going into an even lower power mode.