

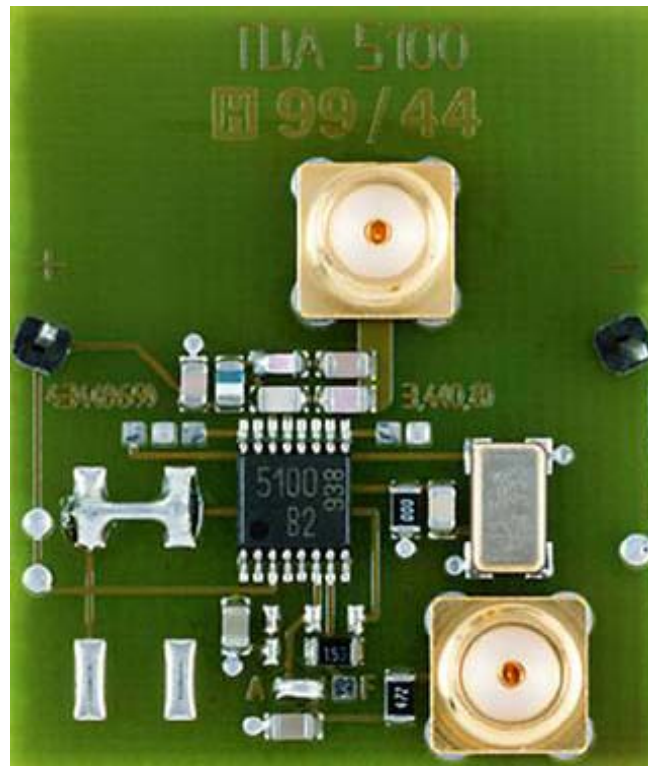
# Information Note

Converting Evaluation Boards from FSK to ASK



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# 1: Transmitter Evaluation Boards



# TDA71xx and TDK51xx Transmitter boards

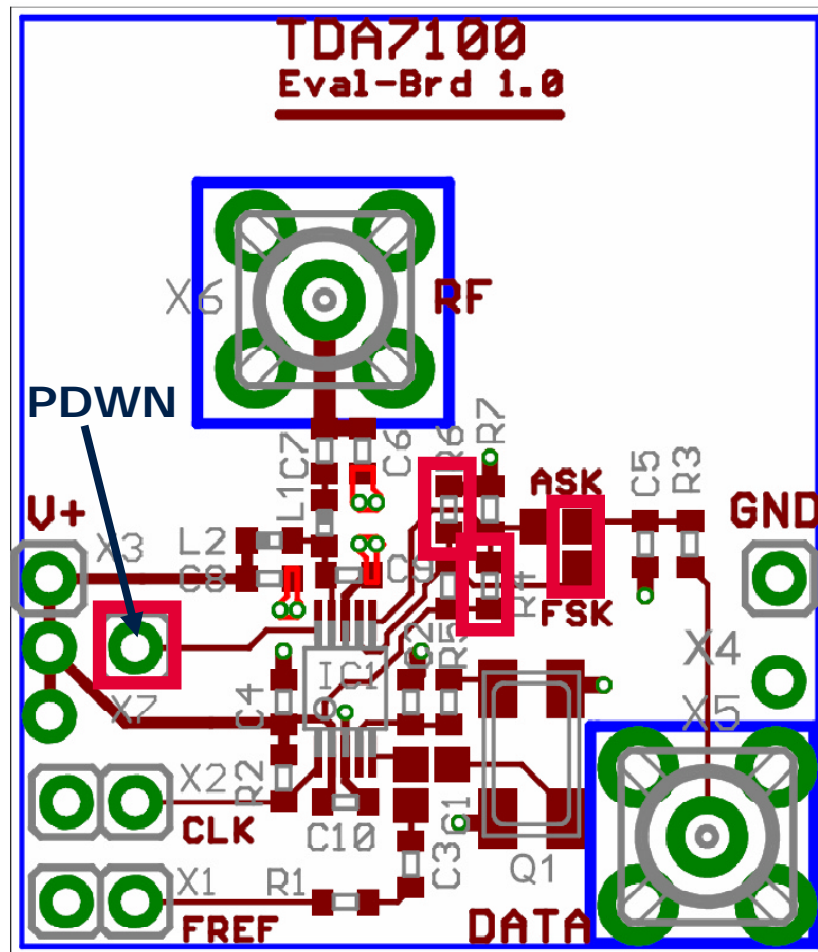
## Conversion from FSK to ASK



- The TDA71xx and TDA51xx Transmitter evaluation boards are configured for FSK operation as default.
- This document describes how to modify these boards to operate in ASK mode.
- Failure to follow this procedure could result in performance that does not meet the regulatory requirements (ETSI, FCC, etc).
- For further information please see the relevant product Data Sheet

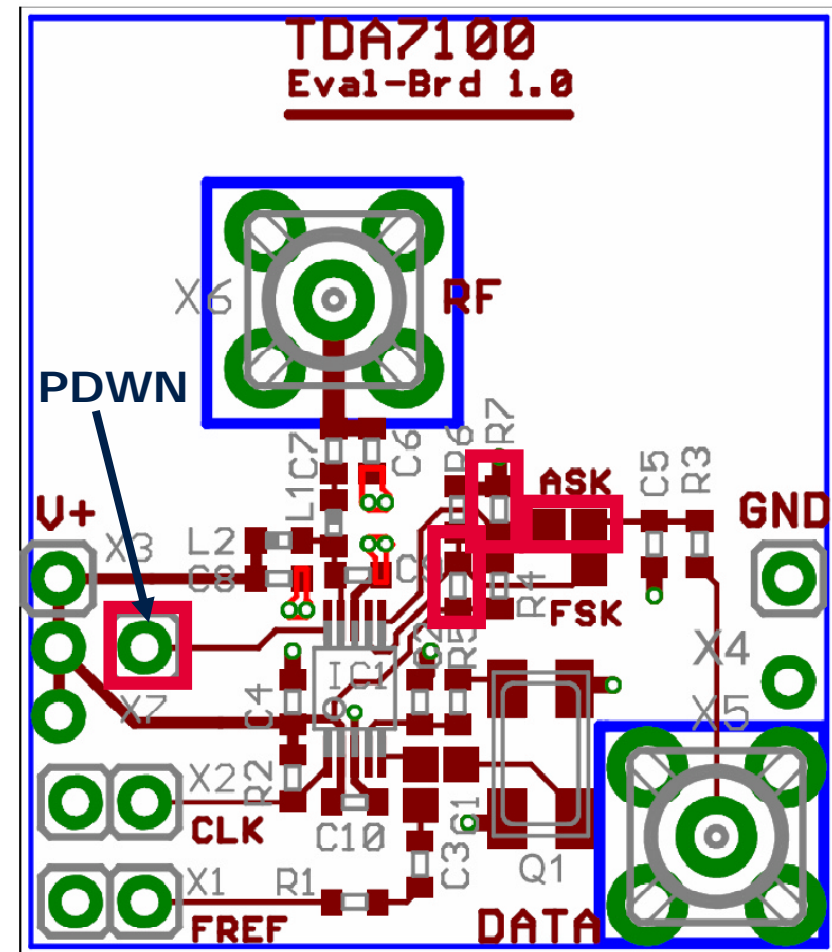
# TDA71xx(F) and TDK51xx(F) Transmitter boards

## Conversion from FSK to ASK (TSSOP-10 devices)



**FSK Configuration (default)**

Link (JP2) = FSK  
R4=12K, R5=open,  
R6=15K, R7=open



**ASK Configuration**

Link (JP2) = ASK  
R4=open, R5=12K,  
R6=open, R7=15K

# TDA71xx(F) and TDK51xx(F) Transmitter boards Conversion from FSK to ASK (TSSOP-10 devices)

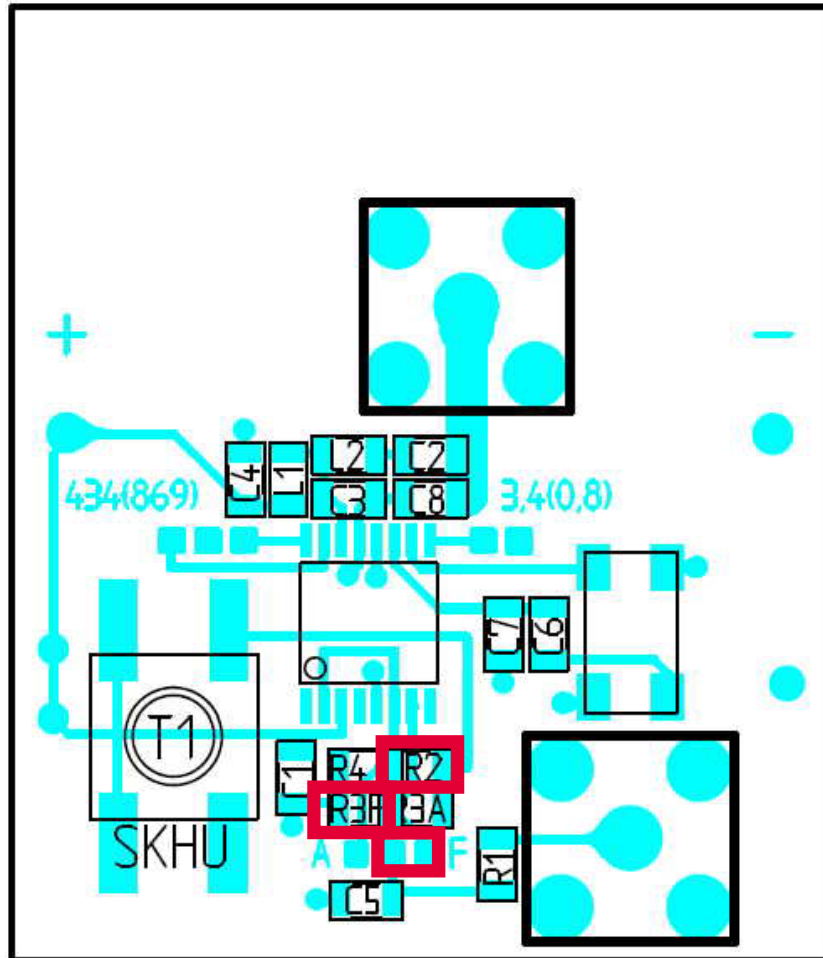


- Once converted for ASK operation the centre frequency will be at the original FSK+ Frequency (FSK high = FSK Switch Open).
- If this is not acceptable change the Crystal load capacitor values as shown in the table below :-

|    | ASK    |            | FSK    |        |        |
|----|--------|------------|--------|--------|--------|
|    | 315MHz | 434/868MHz | 315MHz | 434MHz | 868MHz |
| C1 | 8.2pF  | 6.8pF      | 15pF   | 10pF   | 8.2pF  |
| C2 | 0 ohm  | 0 ohm      | 6.8pF  | 6.8pF  | 15pF   |

# TDA71xx and TDK51xx Transmitter boards

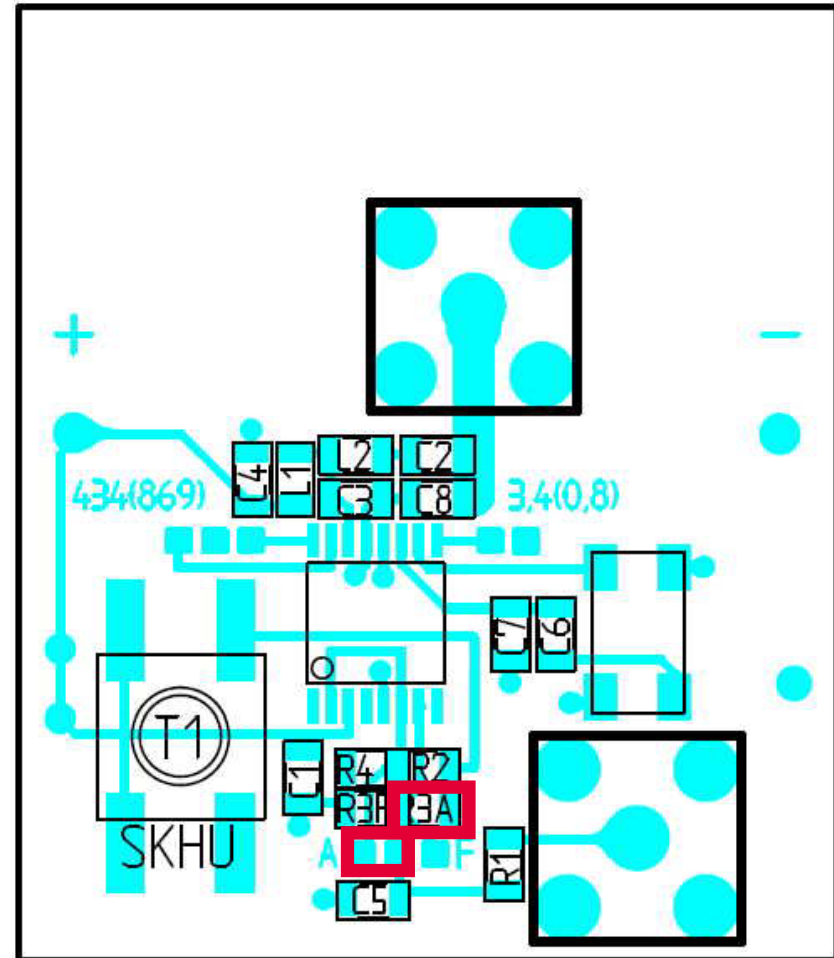
## Conversion from FSK to ASK (TSSOP-16 devices)



**FSK Configuration (default)**

Link = FSK (to RHS)

R2=12K, R4=open,  
R3F=12K, R3A=open



**ASK Configuration**

Link = ASK (to LHS)

R2=open, R4=open,  
R3F=open, R3A=15K

# TDA71xx and TDK51xx Transmitter boards

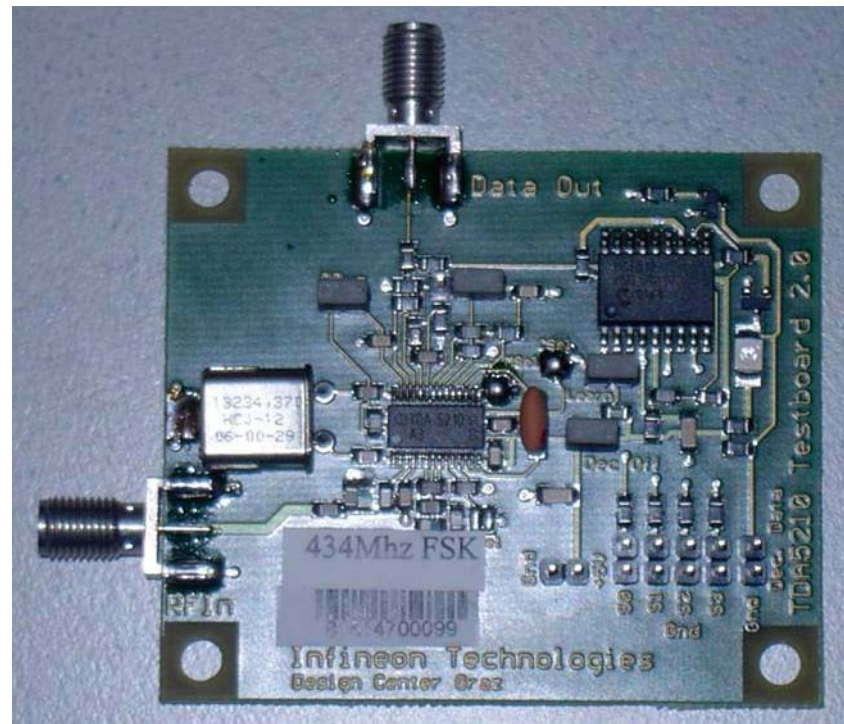
## Conversion from FSK to ASK (TSSOP-16 devices)



- Once converted for ASK operation the centre frequency will be at the original FSK+ Frequency (FSK high = FSK Switch Open).
- If this is not acceptable change the Crystal load capacitor values as shown in the table below :-

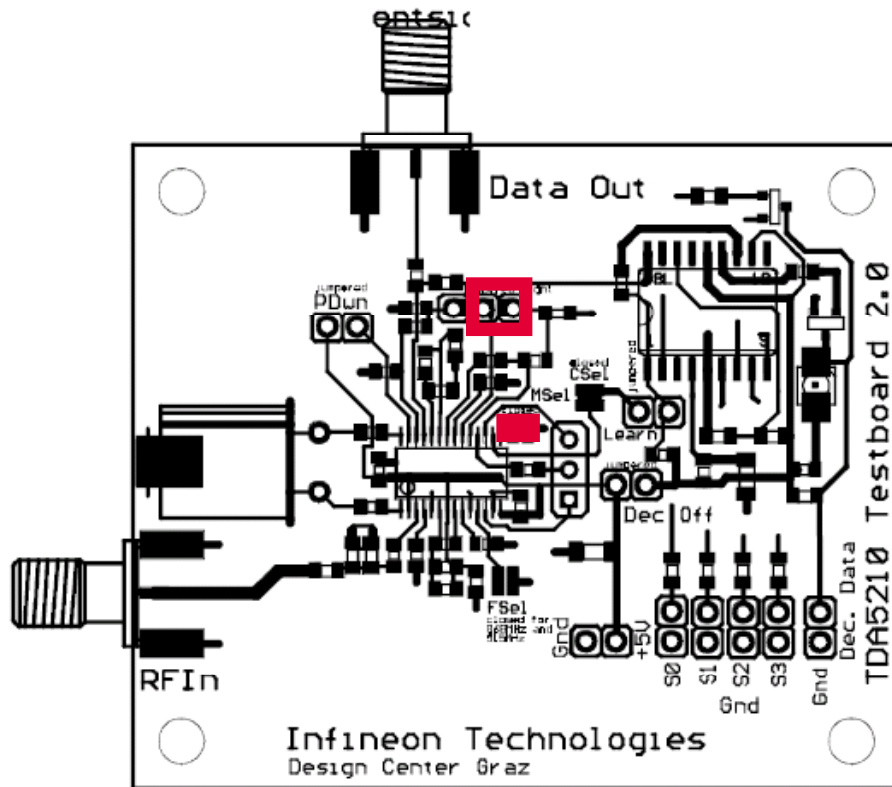
|    | ASK    |            | FSK    |        |        |
|----|--------|------------|--------|--------|--------|
|    | 315MHz | 434/868MHz | 315MHz | 434MHz | 868MHz |
| C6 | 8.2pF  | 6.8pF      | 15pF   | 10pF   | 8.2pF  |
| C7 | 0 ohm  | 0 ohm      | 6.8pF  | 6.8pF  | 15pF   |

## 2: Receiver Evaluation Boards

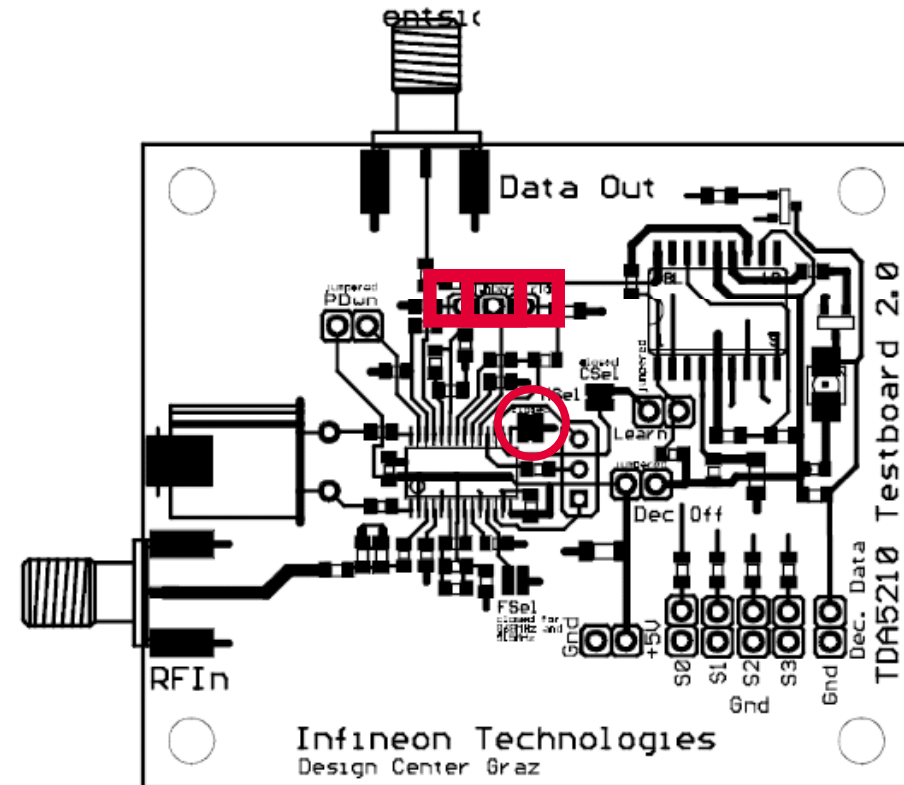


# TDA5210 and TDA7210 Receiver boards

## Conversion from FSK to ASK



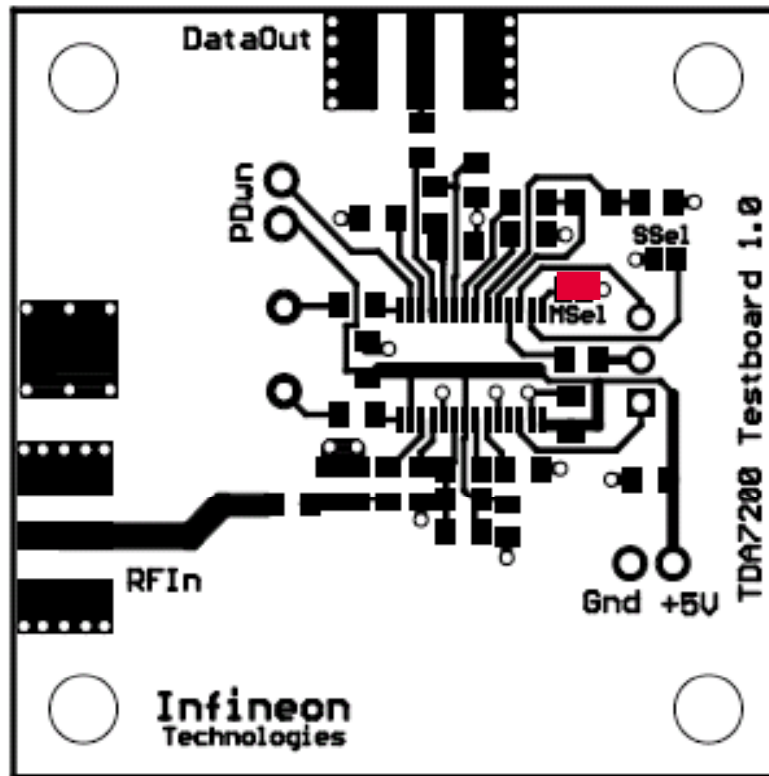
**FSK Configuration (default)**  
**MSEL link SHORT (Gnd)**  
**Data Slicer link = RC Integrator**  
**(Mandatory for FSK)**



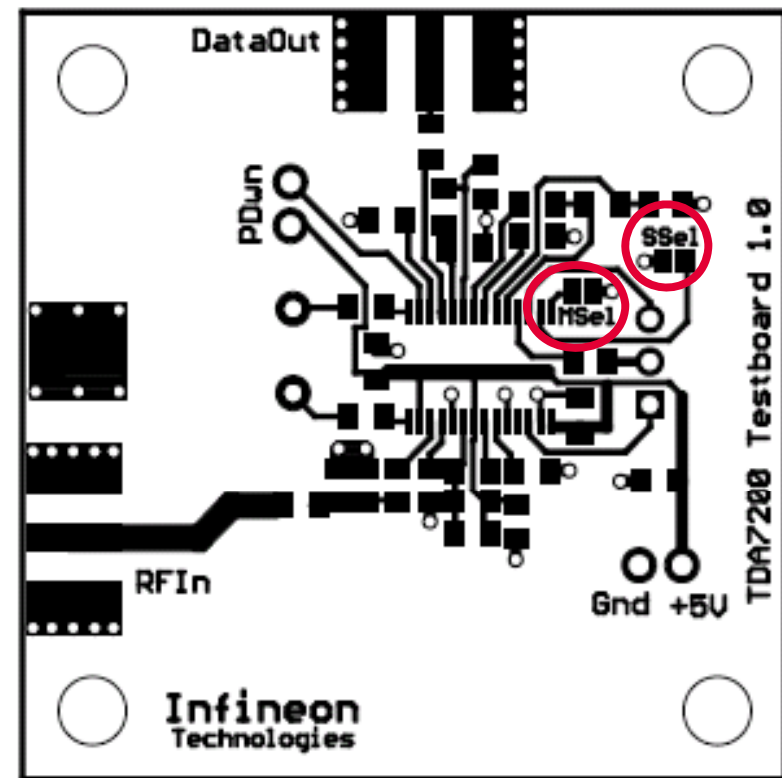
**ASK Configuration**  
**MSEL link OPEN**  
**Data Slicer link = Peak or RC Int**  
**(both options possible for ASK)**

# TDA5220 and TDA7200 Receiver boards

## Conversion from FSK to ASK



**FSK Configuration (default)**  
**MSEL link SHORT (Gnd)**  
**SSEL link = n/a**  
**(Fixed to Ext RC Int in FSK)**



**ASK Configuration**  
**MSEL link= OPEN**  
**SSEL link = Open for Ext RC Int**  
**SHORT for Peak Det**

## Receiver boards (General)

- For details on data slicer operation see "Data Slicer Threshold Generation" section in data sheet.
- Data filter is set for cut off frequency of 5KHz as default. Refer to Data Sheet or Applications notes on details of how to change this value.



**We commit.**  
**We innovate.**  
**We partner.**  
**We create value.**



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