

## TC2688 FSK RF Transmitter IC

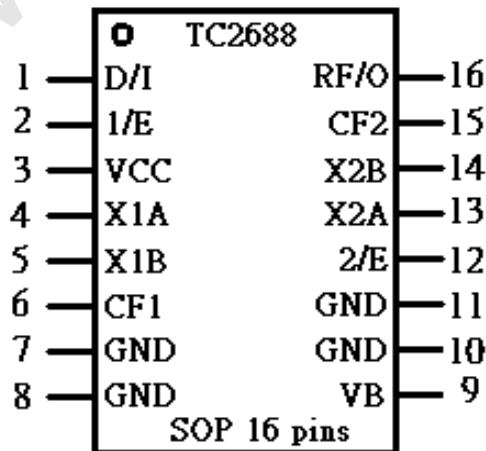
### General Descriptions :

TC2688 is a low VHF band (LVB) transmitter. This device provides two channels for FSK 27MHZ application. Typical applications for this device includes wireless mouse and keyboard, wireless game pad, RF remote controller and wireless data transmitter etc..

### Features :

- Operating voltage range : 2.3V ~ 3.6V
- Low deviation for each channel
- Low power consumption in operation
- Almost no power consumption in standby mode
- Quickly oscillated by triggering enable
- It has 2K~5K data rate

### Package Pin Description :





**Pin Description :**

Number	Name	Description
1	D/I	Data in
2	1/E	1st Channel enable
3	VCC	Supply voltage
4	X1A	1st channel X'tal connection
5	X1B	1st channel X'tal connection
6	CF1	Frequency adjustment
7,8,10,11	GND	Ground
9	VB	Bias stabilization
12	2/E	2nd Channel enable
13	X2A	2nd channel X'tal connection
14	X2B	2nd channel X'tal connection
15	CF2	Frequency adjustment
16	RFO	RF output

**Absolute Maximum Rating :**

Parameters	Min.	Max.	Unit	Notes
Storage Temperature	-40	+85		
Operating Temperature	-15	+60		
Lead Solder Temp.		250		
Supply Voltage (VCC)	2.3	3.6	V	
Input Voltage	-0.5	VCC+0.5	V	For all input pins
Output Voltage	-0.3	VCC+0.3	V	
ESD		2	KV	For all input pins

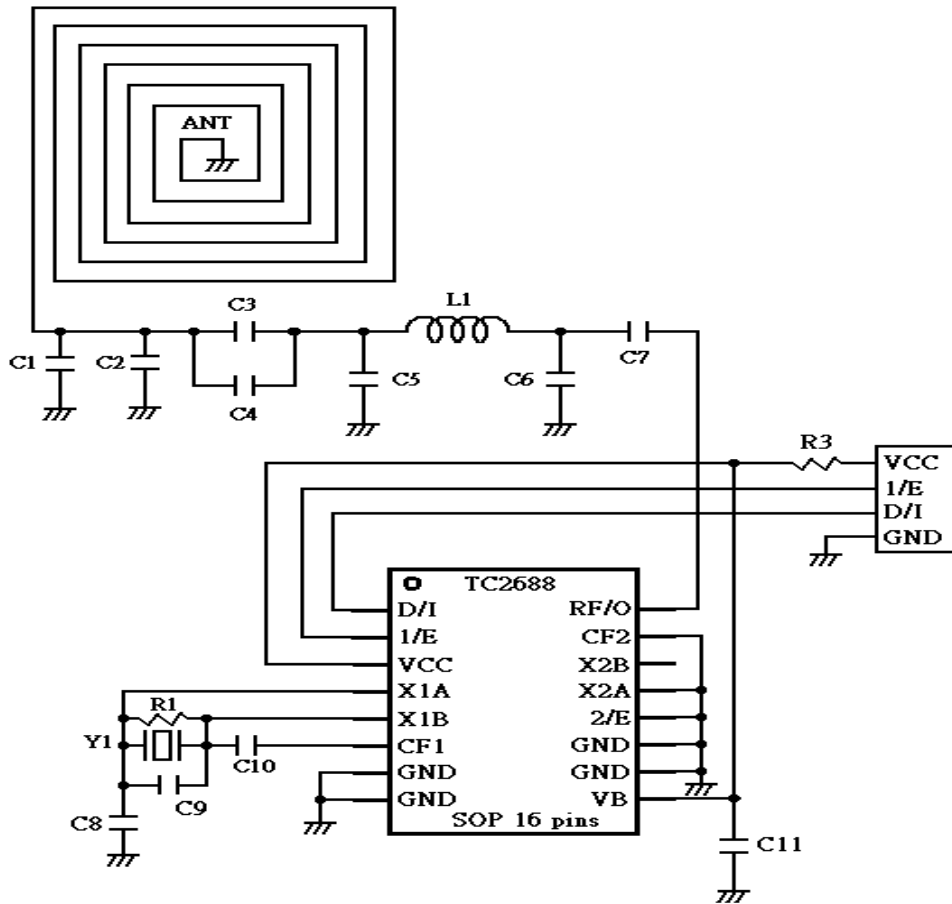
**Electrical Characteristics :** under the conditions T=25 VCC=3.0V

	Specifications			Unit	Condition
	Min.	Typ.	Max.		
RF Frequency	26	27	28	MHz	
Data Rate	0.02	2.4	5	Kbps	
Output Power	3	5		dBm	Loading=50 Ohms

<b>Deviation</b>		<b>±5</b>	<b>±6</b>	<b>KHz</b>	
<b>Active current</b>		<b>6</b>	<b>7</b>	<b>mA</b>	
<b>Standby Current</b>		<b>5</b>	<b>10</b>	<b>uA</b>	
<b>Power Supply Voltage</b>	<b>2.3</b>	<b>3</b>	<b>3.6</b>	<b>V</b>	
<b>RF Oscillator Start Time</b>		<b>200</b>	<b>500</b>	<b>us</b>	

## Application Circuit :

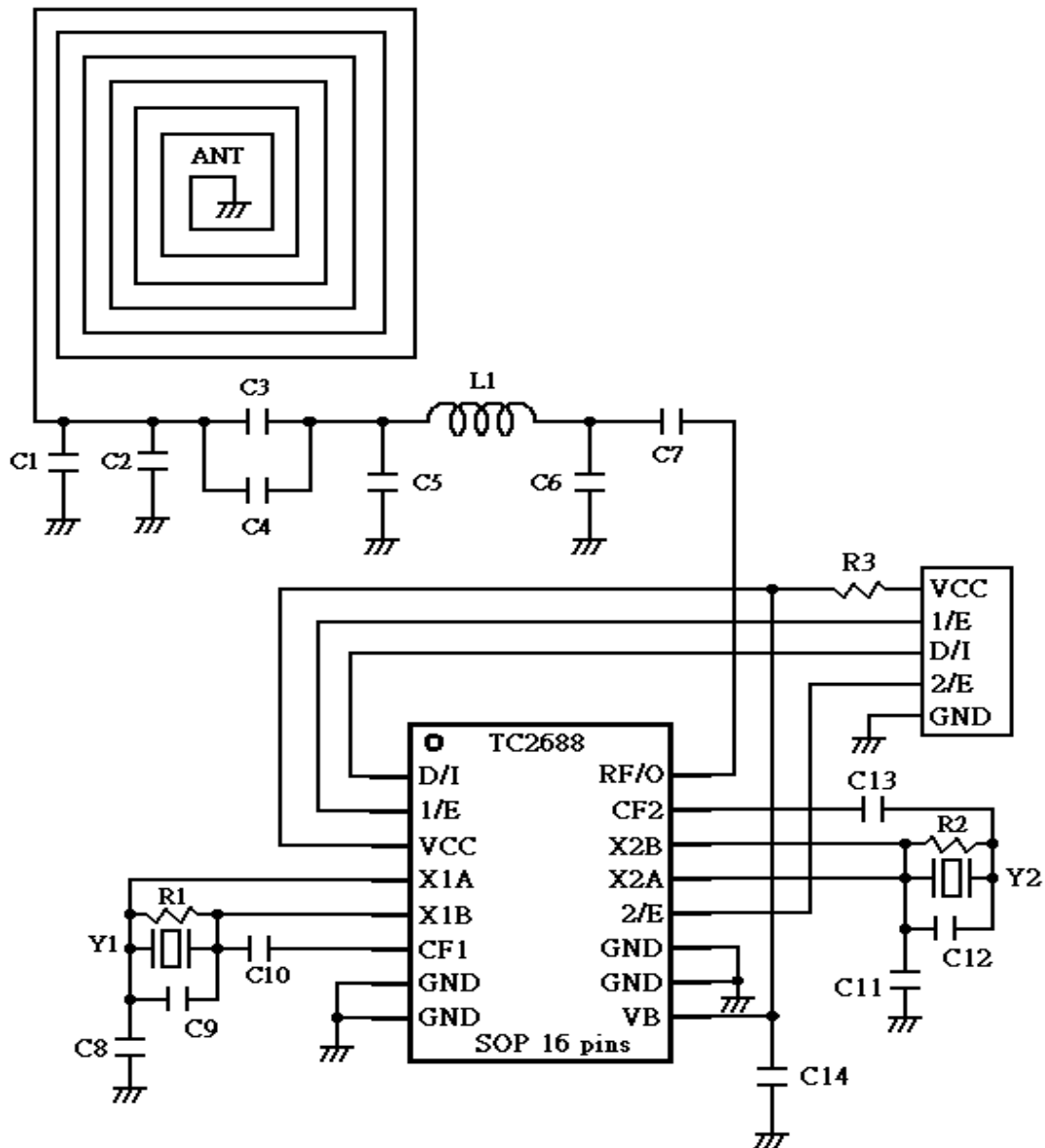
### Single Channel



### Part list :

Parts	Value	Notes	Parts	Value	Notes	Parts	Value	Notes
C1	TBD	Adjust ANT	C7	1000P	Ceramic Cap	R2	100K	
C2	TBD	Adjust ANT	C8	68P	Ceramic Cap	R3	33	
C3	TBD	Adjust ANT	C9	1.5P	Ceramic Cap	L1	560n	
C4	TBD	Adjust ANT	C10	68P	Ceramic Cap	Y1	27MHZ	27.045MHZ
C5	150P	Ceramic Cap	C11	0.1u	Ceramic Cap			
C6	82P	Ceramic Cap	R1	100K				

## Two channels



### Part list :

Parts	Value	Notes	Parts	Value	Notes	Parts	Value	Notes
C1	TBD	Adjust ANT	C8	68P	Ceramic Cap	R1	100K	
C2	TBD	Adjust ANT	C9	1.5P	Ceramic Cap	R2	100K	
C3	TBD	Adjust ANT	C10	68P	Ceramic Cap	R3	33	
C4	TBD	Adjust ANT	C11	68P	Ceramic Cap	L1	560n	
C5	150P	Ceramic Cap	C12	1.5P	Ceramic Cap	Y1	27MHZ	27.045MHZ
C6	82P	Ceramic Cap	C13	68P	Ceramic Cap	Y2	27MHZ	27.095MHZ
C7	1000P	Ceramic Cap	C14	0.1u	Ceramic Cap			