GSG 勁力 半導体

Gunter Semiconductor GmbH

TFF2207T

EDITION 09/00

2 GHz RF Mixer

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2GHz RF Mixer

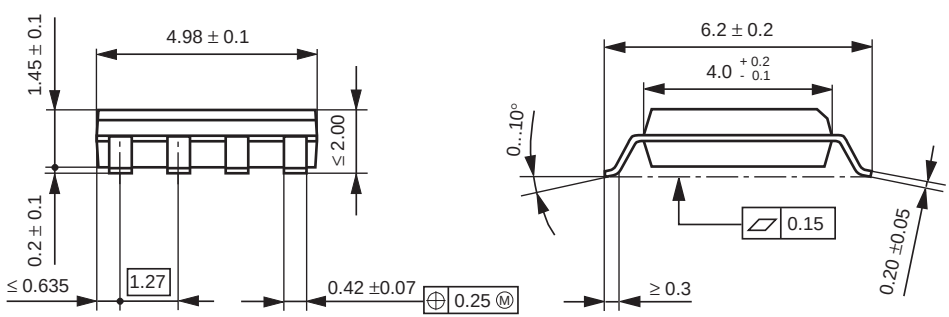
Short Description

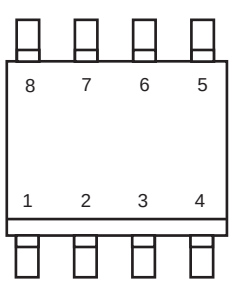
The bipolar intergrated circuit TFF 2207 T is a active unbalanced Mixer for applications up to 2 GHz like DECT, PCN and 902-MHz ISM-Band. This mixer is impletented in the high-performance bipolar ASSET technology.

Features

- Single ended input for RF and Lo
- Single ended output
- Input and output impedance are 50 Ω
- High mixer gain: 18 dB for 800 MHz,
  17 dB for 2 GHz
- Supply voltage: 3 V
- Stand-by (Pin 5)

Package



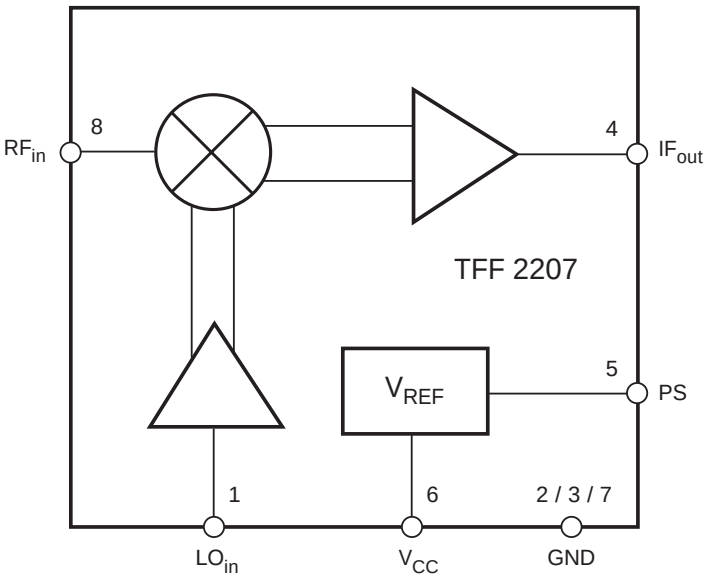


- SOP 8

Pin Description

Pin	Symbol	Function
1	LO_{in}	Oscillator input
2	GND	Ground
3	GND	Ground
4	IF_{out}	IF output
5	PS	Input stand-by
6	V_{CC}	Supply voltage
7	GND	Ground
8	RF_{in}	RF input

Block Diagram



Absolute maximum ratings

Pos.	Parameter	Symbol	Min.	Max.	Unit
1	Supply voltage	V_{CC}	0	5.5	V
2	Stand-by voltage	V_{PS}	0	5.5	V
3	Junction temperature	T_j	-	150	°C
4	Ambient temperature	T_a	-40	+85	°C
5	Storage temperature	T_s	-55	+150	°C

Operating Range

Pos.	Parameter	Symbol	Min.	Typ.	Max.	Unit
1	Supply voltage	V_{CC}	2.7	3	5	V

Electrical Characterstics

$V_{CC} = V_{PS} = 3V$, $T_a = 25°C$, $P_{RF} = -40$ dBm, $P_{LO} = -10$ dBm

Pos.	Parameter	Symbol	Min.	Typ.	Max.	Unit
1	Supply current	I_{CC}	8	11	15	mA
2	Mixer gain f_{LO} = 1.75 GHz f_{RF} = 2 GHz	G_C		17		dB
3	Output power P_{RF} = -10 dBm f_{RF} = 2 GHz, f_{LO} = 1.75 GHz	P_{out}		-4		dBm
4	Noise figure f_{RF} = 2 GHz, f_{LO} = 1.75 GHz	F		16		dB
5	Thirt order output intercept point f = 1.1 GHz	IP3_out		5		dBm

Test Circuit