

Features

- RF Frequency Range: 8.0~12GHz
- LO Frequency Range: 10.8~14.8GHz
- IF Frequency Range: 2.8GHz
- Convert Loss: 8.5dB
- Input P_{-1dB}: 18dBm
- LO Power: -3dBm
- Supply Voltage: 70mA@5V

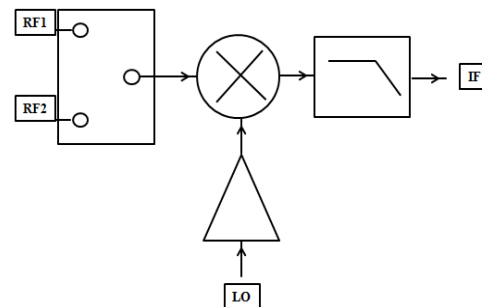
Typical Applications

- EW
- Military Radar and Weather Radar
- SATCOM
- Beamforming
- Phase Shift

General Description

SAC3606 is a multifunctional chip which integrates switch, mixer, low pass filter function. RF can vary from 8GHz to 12GHz, and LO varies from 10.8GHz to 14.8GHz. Biased at 5V, it delivers 8.5dB conversion loss and better than 18dBm Input P_{-1dB}. With typical -3dBm of LO input power, it has less than 70mA DC current consumption.

Functional Diagram



Electrical Performance

(T_A=+25°C, LO=-3dBm, IF= 2.8GHz, V_D=+5V, V_S=-5V)

Parameter	Min.	Typ.	Max.	Units
RF Frequency Range		8.0~12		GHz
LO Frequency Range		10.8~14.8		GHz
IF Frequency Range		2.8		GHz
Conversion Insertion Loss	—	-8.5	—	dB
Input P _{-1dB}	—	18	—	dBm
RF Return Loss	—	-17	—	dB
IF Return Loss	—	-7	—	dB
LO to RF Isolation	-17	—	—	dB
LO to IF Isolation	-35	—	—	dB
RF to IF Isolation	-37	—	—	dB
RF to LO Isolation	-55	—	—	dB
RF1-RF2 Isolation	—	-43	—	dB
LO Return Loss	-13	—	—	dB
Supply Current(I _D)	—	70	—	mA

Absolute Maximum Ratings

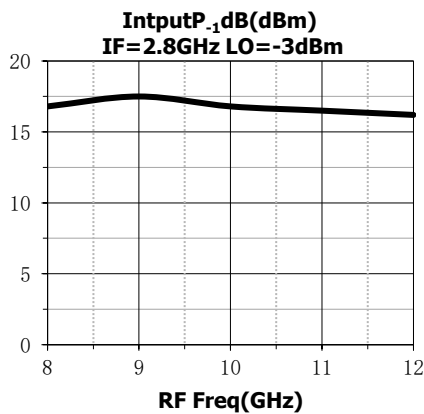
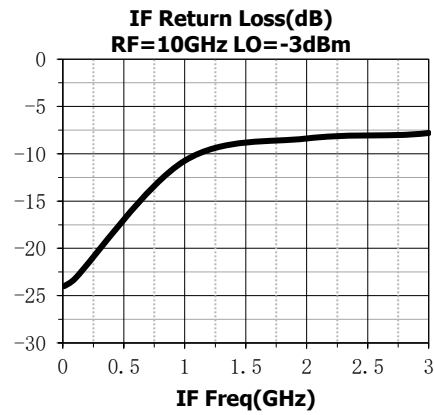
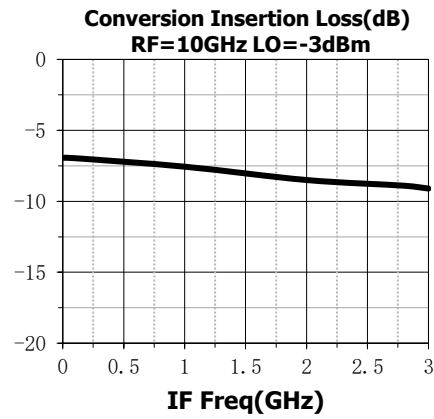
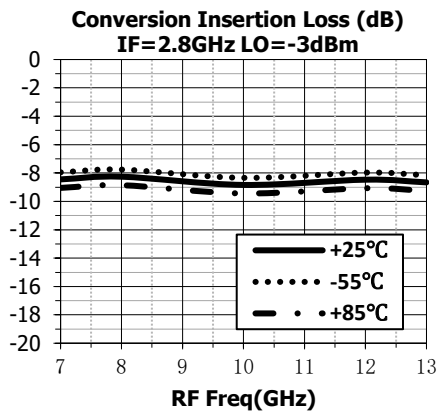
Maximum RF Input power	+10dBm	Operating Temperature	-55°C~+85°C
Maximum LO Input	+10dBm	Storage Temperature	-65°C~+150°C
LO Input	-4~-2dBm	Maximum Input Voltage	+8V

SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA
Tel: 1-847-505-8319, 1-847-573-9866
E-mail: sales@superapexco.com
Website: www.superapexco.com

Typical Performance Curve

($T_A=+25^{\circ}\text{C}$, $LO=-3\text{dBm}$, $IF=2.8\text{GHz}$, $V_D=+5\text{V}$, $V_S=-5\text{V}$)

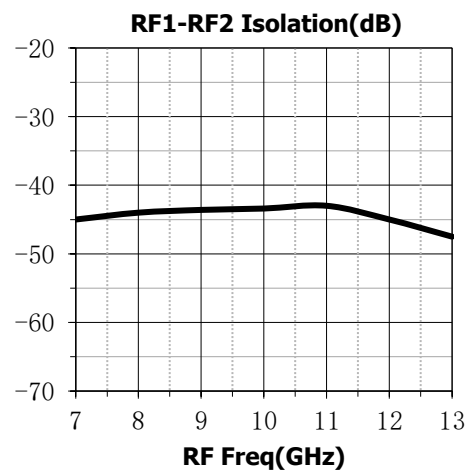
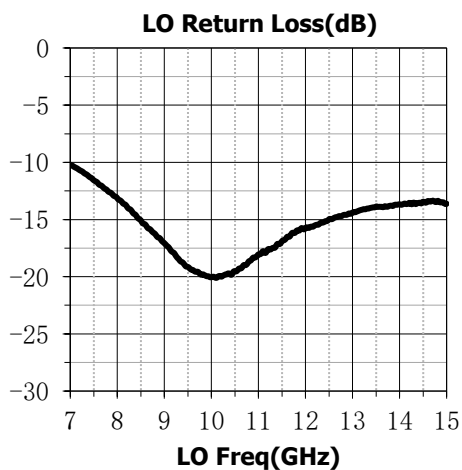
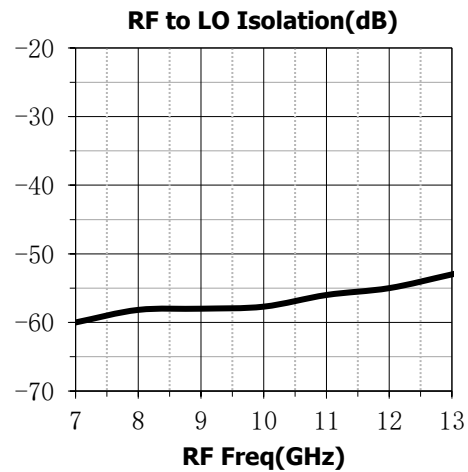
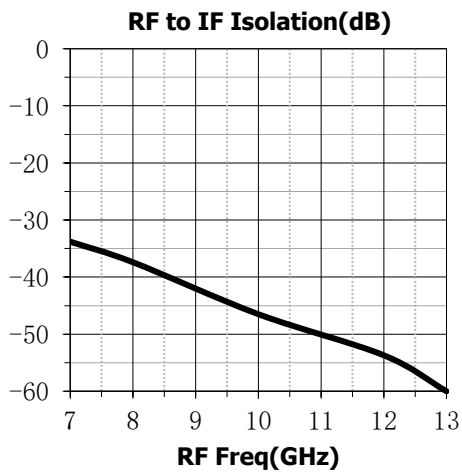
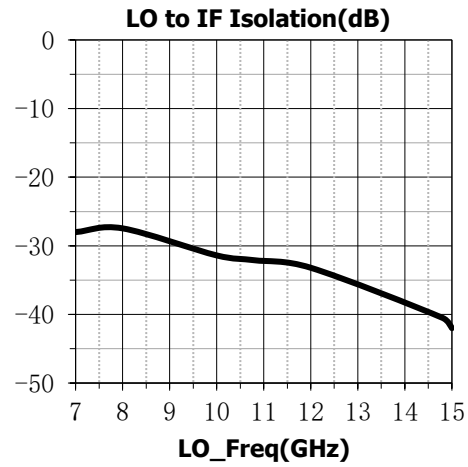
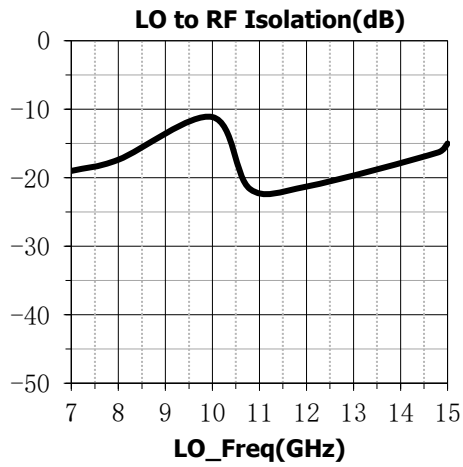


SAC3606



GaAs MMIC Multifunction Down-converter Chip
8.0~12GHz/10.8~14.8GHz

Rev 2.1



SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA
 Tel: 1-847-505-8319, 1-847-573-9866
 E-mail: sales@superapexco.com
 Website: www.superapexco.com

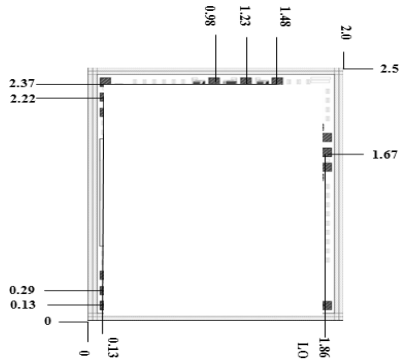
SAC3606



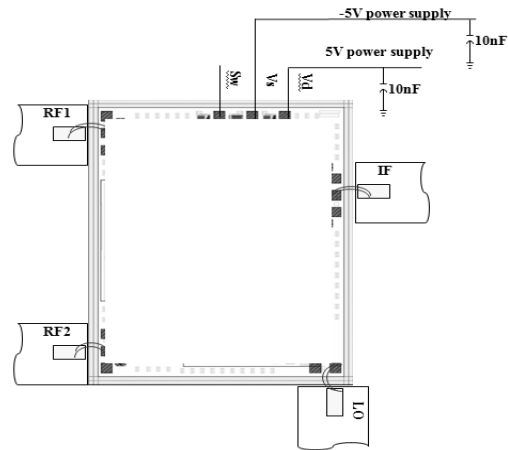
GaAs MMIC Multifunction Down-converter Chip
8.0~12GHz/10.8~14.8GHz

Rev 2.1

Die Outline
(All dimensions in mm)



Assembly Diagram



Attention:

GaAs MMIC devices are susceptible to damage from Electrostatic Discharge. Proper precautions should be observed during handling, assembly and test.

SuperApex, LLC

1580 S. Milwaukee Ave. Suite 405, Libertyville, IL 60048, USA
Tel: 1-847-505-8319, 1-847-573-9866
E-mail: sales@superapexco.com
Website: www.superapexco.com