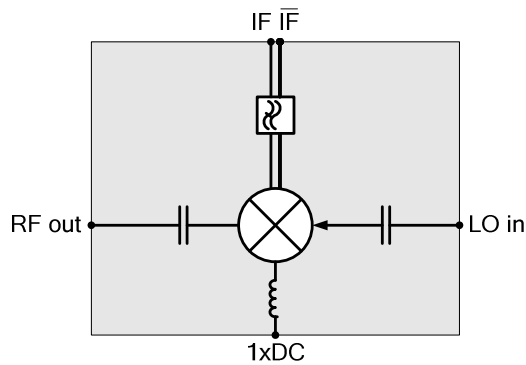


Description



The gMBR0011 is an up- and down-converting mixer with the main focus on the W band. It covers the full E- and W band. IF input is balanced and can range from DC up to and beyond 12 GHz. LO-RF isolation features 30 dB LO power is at modest + 7 dBm.

Applications

- E-band point to point communication links.
- 77 GHz automotive radar.
- 94 GHz imaging radar.

Performance, Ta = 25 C

Parameter	Typical
Conversion loss, E band	9-12 dB
IF Bandwidth	0 to 12 GHz
RF Bandwidth	70-100 GHz
LO suppression, E band	27 dB
LO input power	+ 7 dBm
IIP3, E band	+ 15 dBm
DC power	0 mW

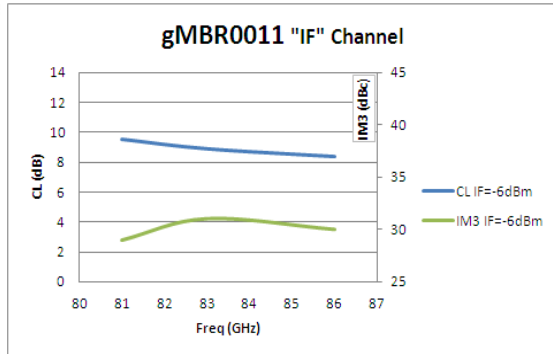
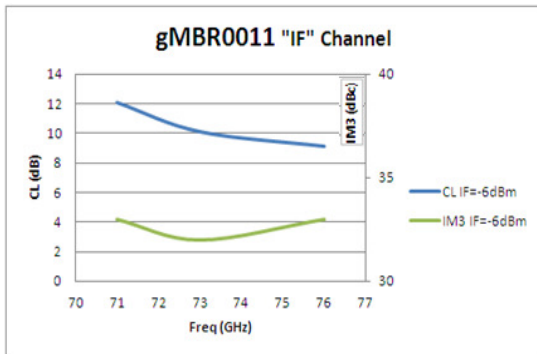
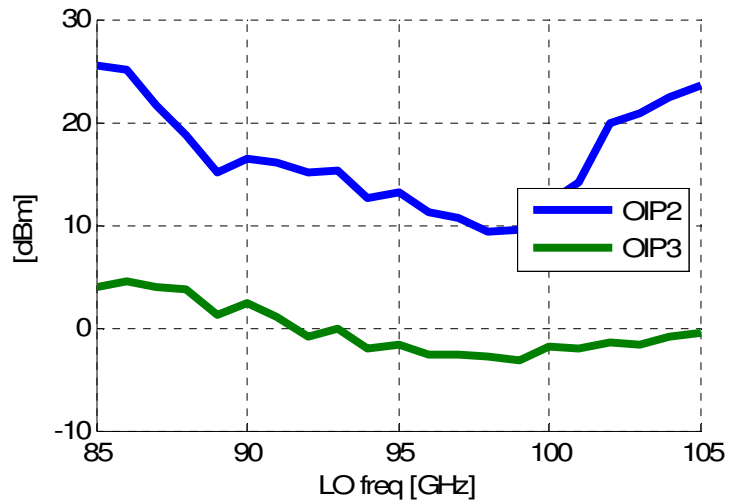
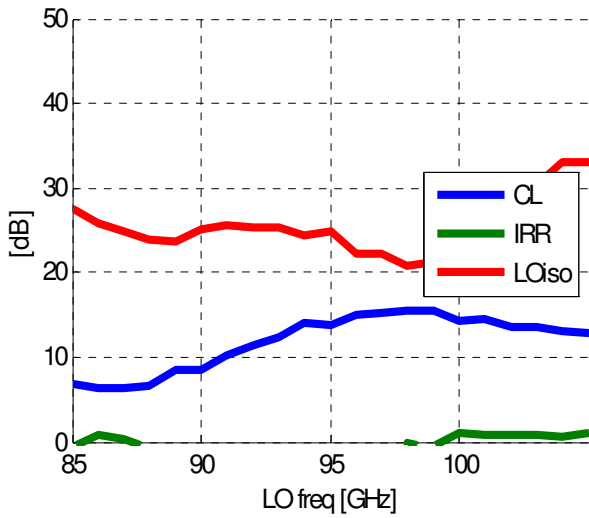


Göteborg Microwave Integrated Circuits
Rev. A01-12

gMBR0011
Up- and down converting mixer
W-band (+E)

Measured performance

IF = 1 GHz, - 5 dBm. LO = + 7 dBm



LO drive = + 4 dBm



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Rev. A01-12

gMBR0011
Up- and down converting mixer
W-band (+E)

Bias settings

Pad	Bias voltage		
	Min	Typ.	Max
Vg		-0.75 V	

Absolute Maximum Ratings

Gate bias voltage	-5 to + 0.7 V
IF/IF_ in	+ 7 dBm/ch.
LO drive	+ 15 dBm
Operating temperature	-40 to + 85 C
Storage temperature	-65 to +150 C

Outline drawing, to be defined

Distances are in mm. Drawing is also available in dwg format upon request. RF probe pitches from 100µm on the output and to 150µm at the input for easy on-chip testing and DC probe pitch 150 µm. Substrate thickness is 50 µm (GaAs)

