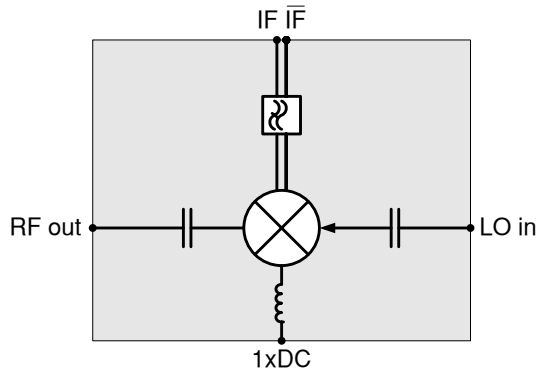


Rev. A01-24

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



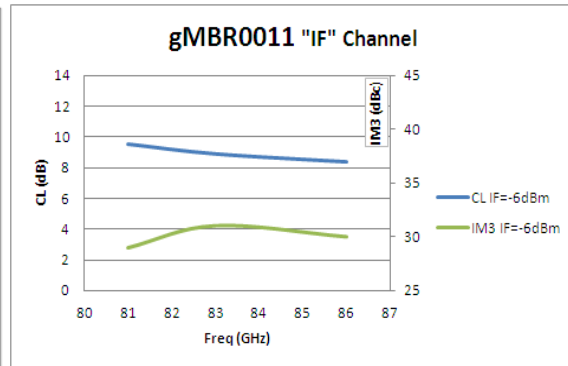
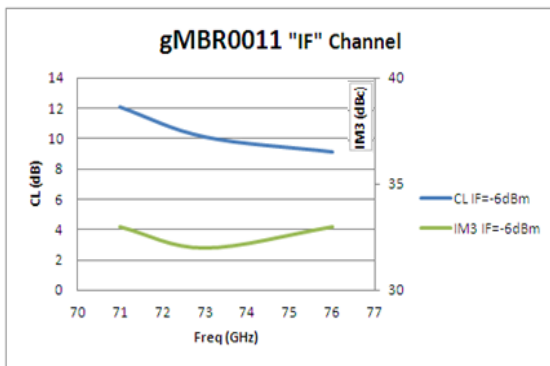
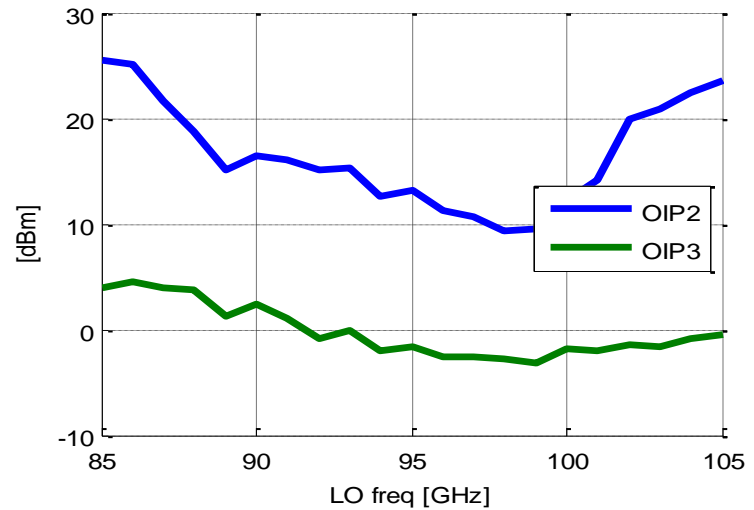
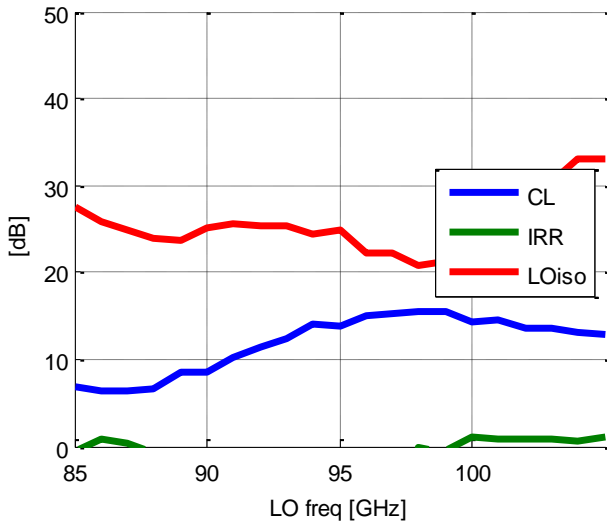
Göteborg Microwave Integrated Circuits

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

Rev. A01-24

Measured performance

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



LO drive = + 4 dBm



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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

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Outline drawing

Measures are in μm . Drawing is also available in dwg format upon request. RF probe pitches from $100\mu\text{m}$ on the output and to $150\mu\text{m}$ at the input for easy on-chip testing and DC probe pitch $150\mu\text{m}$. Substrate thickness is $50\mu\text{m}$ (GaAs)

