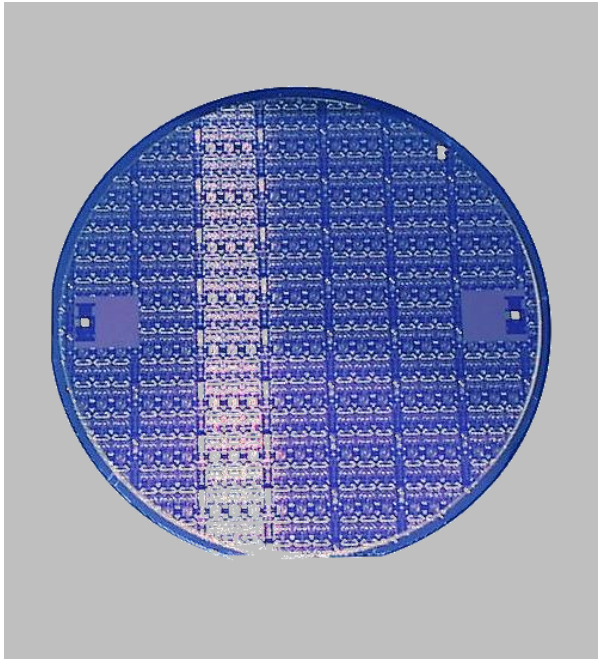


ULRC-20

Passive process



Description

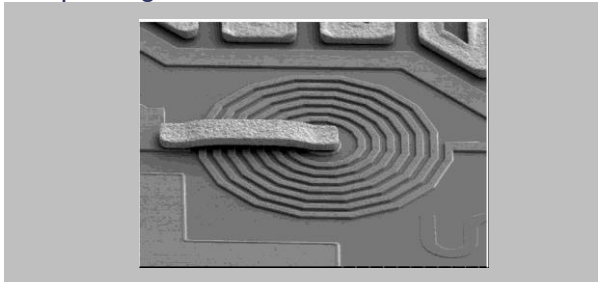
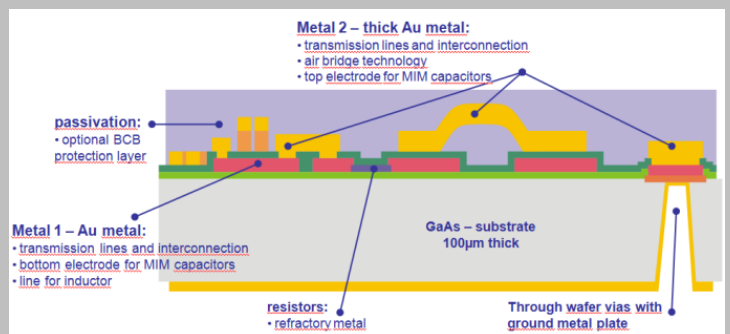
ULRC-20 is a GaAs passive process gathering GaAs properties: high resistivity, good isolation and high dielectric constant. These advantages are associated with high voltage MIM capacitors and high current density metal lines. This process is optimized for reproducibility, power handling, low losses, up to high frequency and for high volume / high yield production.

ULRC-20 allows very diverse passive circuit design including accurate microwave filters, RF power combiners, microwave baluns, matching elements, low losses lines; power bar input and output matching circuits.

ULRC-20 is widely recommended to design hybrid microwave circuits for amplifier modules used into antenna transmitters and receivers such as Radars, Telecom and Space Communication systems.

Main Features

- Fully optical process
- M.I.M. capacitors
- Inductors
- Metallic resistors
- TaN and TiWSi resistors
- Via holes through the GaAs substrate
- Thick Au lines
- Wafer thickness: 100µm
- Wafer diameter: 4"
- Optional coating compatible with plastic package



Design Kit Characteristics

- Available for ADS from Keysight,
- Schematic entry with autolayout generation
- Scalable models
- Data for spread analysis

Electrical Characteristics

ELEMENT / Parameters	Min	Typ	Max	Units	Conditions
----------------------	-----	-----	-----	-------	------------

INDUCTOR

Inductance	0.1		12.7	nH	
Via hole diameter		30x30		um	
Substrate thickness		100		um	

TaN RESISTOR /

sheet resistance	26	30	34	Ω/square	
------------------	----	----	----	----------	--

TiWSi RESISTOR /

sheet resistance	800	1000	1200	Ω/square	
------------------	-----	------	------	----------	--

MIM CAPACITOR /

Density	160	175	190	pF/mm2	@1MHz
Voltage	150			V	

Ordering Information

Visit our Website for more info: <https://www.ums-rf.com>

Please contact our Sales at: marketing.sales@ums-rf.com & Tel: +33 1 69 86 32 00

Information furnished is believed to be accurate and reliable. However **United Monolithic Semiconductors S.A.S.** assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of **United Monolithic Semiconductors S.A.S.**. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. **United Monolithic Semiconductors S.A.S.** products are not authorised for use as critical components in life support devices or systems without express written approval from **United Monolithic Semiconductors S.A.S.**