target

DC-40GHz Attenuator

GaAs Monolithic Microwave IC in SMD leadless package

Description

The monolithic microwave IC (MMIC) in the package is a variable DC-40GHz attenuator. It is designed for a wide range of applications, from military to commercial communication systems.

The circuit is manufactured with a MESFET process, 0.7µm gate length, via holes through the substrate and air bridges.

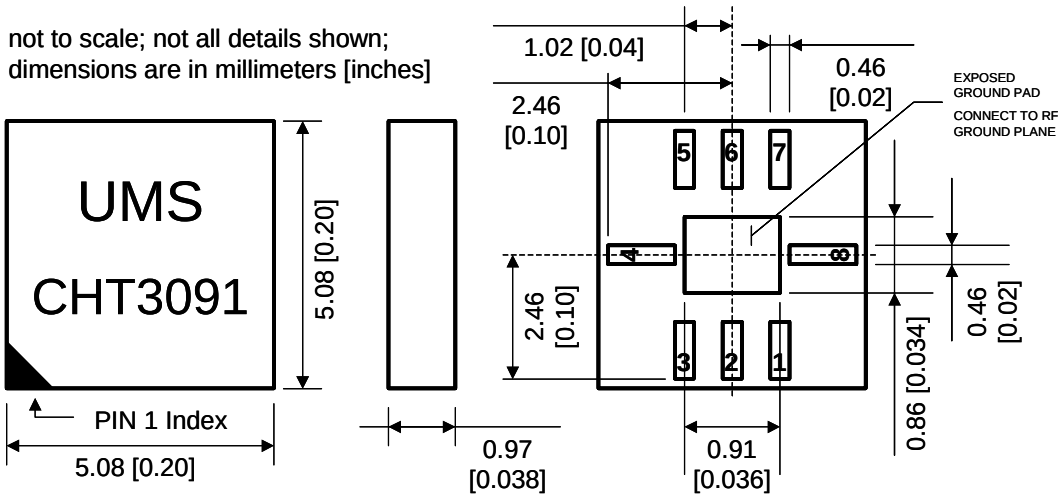
It is supplied in a new SMD leadless chip carrier.

Main Features

- Broad band performance: DC-40GHz
- Minimum attenuation [S21] : 4dB (VS = 0V; VP = -5V)
- Maximum attenuation [S21] : 20dB (VS = -5V; VP = 0V)
- Minimum input 1dB compression point (P_{-1dB}) : 14dBm
- SMD leadless package
- Dimensions: 5.08 x 5.08 x 0.97 mm^3

SMD Package Dimensions

not to scale; not all details shown;
dimensions are in millimeters [inches]



PIN	Function	PIN	Function
1	Vs	5	NC
2	NC	6	NC
3	Vp	7	NC
4	RF out	8	RF in

"Please note that PIN 1 is located in the lower left corner of the package (front-side view) for all SMD-type packages from United Monolithic Semiconductors. It is indicated by a triangle on the package lid. Starting with PIN 1 the other pads are numbered counter-clockwise (front-side view). ATTENTION: The dot on the backside of the package (i.e. side with metallic pads) is just for fabrication purposes and does NOT indicate the location of PIN

United Monolithic Semiconductors S.A.S.
Route Départementale 128 - B.P.46 - 91401 Orsay Cedex France
Tel. : +33 (0)1 69 33 03 08 - Fax : +33 (0)1 69 33 03 09

Typical Bias Conditions

for an ambient Temperature of +25°C

Symbol	Pin No.	Parameter	Values	Unit
Vs	1	VS control voltage	-5 to 0	V
Vp	3	VP control voltage	0 to –5	V

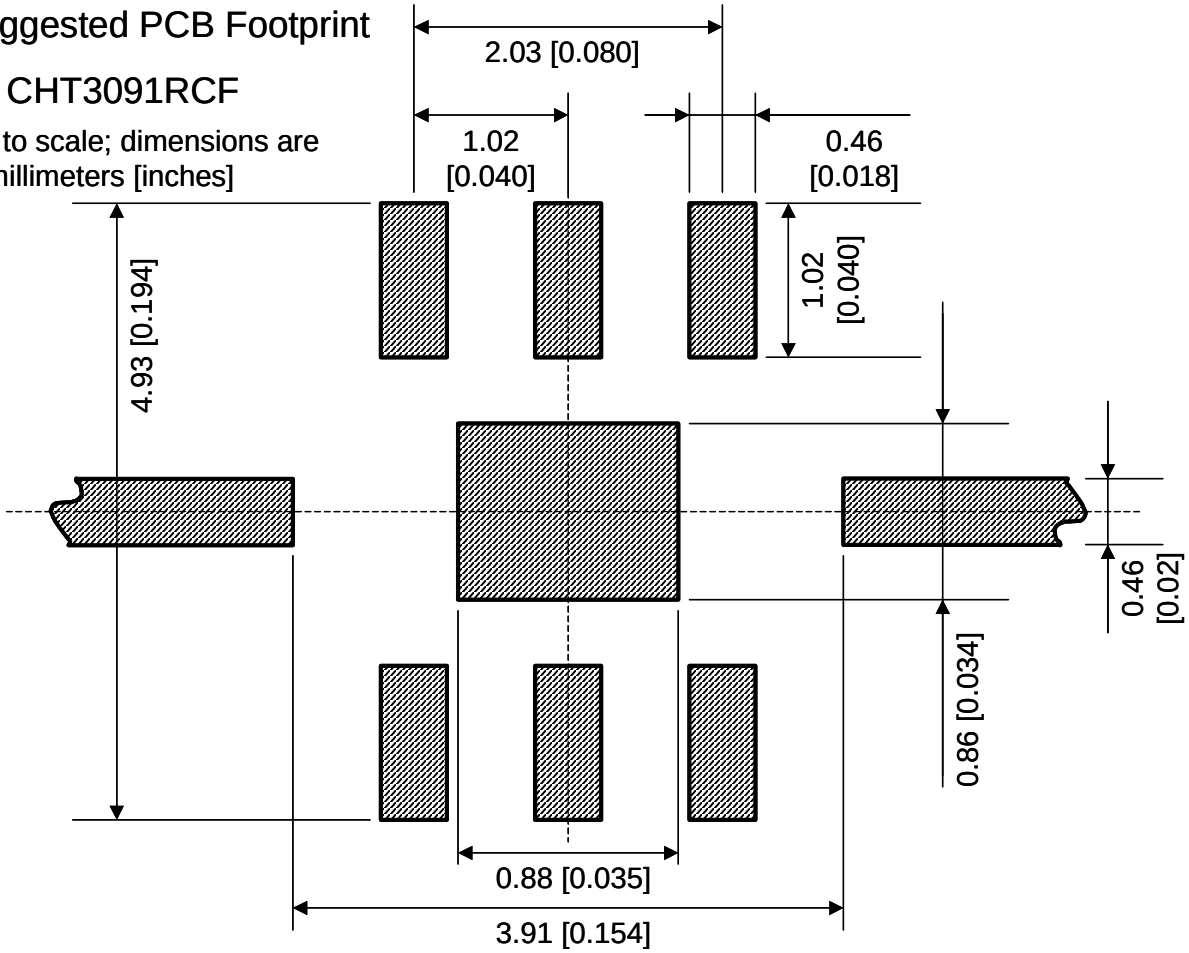
All other pins are not used for this device.

Footprint

Suggested PCB Footprint

for CHT3091RCF

not to scale; dimensions are in millimeters [inches]



SMD mounting procedure

The SMD leadless package has been designed for high volume surface mount PCB assembly process. The dimensions and footprint required for the PCB (motherboard) are given in the drawings above.

For the mounting process standard techniques involving solder paste and a suitable reflow process can be used.
For further details, see application note AN0005.

Route Départementale 128 , B.P.46 - 91401 ORSAY Cedex - FRANCE
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Ordering Information

SMD leadless package form : CHT3091RCF/24

Route Départementale 128 , B.P.46 - 91401 ORSAY Cedex - FRANCE
Tel.: +33 (0)1 69 33 03 08 - Fax : +33 (0)1 69 33 03 09