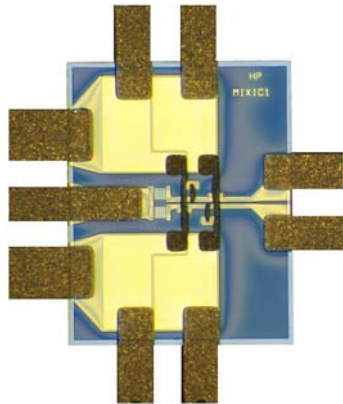


Agilent 1GG5-8045 110 GHz Double Balanced Mixer

TC676
Data Sheet



Chip Size: 836 x 977 μm (32.9 x 38.5 mils)
 Chip Size Tolerance: $\pm 10 \mu\text{m}$ (± 0.4 mils)
 Chip Thickness: $58 \pm 15 \mu\text{m}$ (2.3 ± 0.6 mils)
 Lead Dimensions: RF: 130 x 75 μm (5.1 x 3.0 mils)
 GND: 130 x 120 μm (5.1 x 4.7 mils)
 LO: 130 x 80 μm (5.1 x 3.1 mils)
 IF: 130 x 80 μm (5.1 x 3.1 mils)

Features

- Frequency Range:
 0–50 GHz LO
 0–110 GHz RF
 0–100 MHz IF
- Conversion Loss:
 14 dB typical N=1
 28 dB typical N=3

Description:

The TC676 is a broadband diode ring mixer that can be operated in fundamental and harmonic mixing modes. The mixer is double balanced when operated with external LO and IF baluns. The TC676 is fabricated in the MB6A low-barrier integrated diode process at WPTC. Beam leads allow the device to be mounted directly on a thin-film circuit.

Absolute Maximum Ratings^[1]

Symbol	Parameters/Conditions	Min.	Max.	Units
P_{in}	RF Input Power, any Port		18	dBm
T_{op}	Operating Temperature	-55	+100	$^{\circ}\text{C}$
T_{st}	Storage Temperature	-65	+150	$^{\circ}\text{C}$
T_{max}	Max. Assembly Temperature		+200	$^{\circ}\text{C}$
ESD	Electrostatic Discharge (Human Body Model)	-600	600	Volts

Notes:

1. Operation in excess of any one of these may result in permanent damage to this device.
 $T_A = 25^{\circ}\text{C}$ for ESD. $T_A = 55^{\circ}\text{C}$ for P_{IN} .