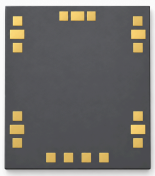
100–20000 MHz GaAs SP4T MMIC Switch Die — IL –2 dB (typical)

LCI-SW-100-20000-SP4T-D · 100–20000 MHz · GaAs SP4T MMIC Switch Die.

The RF table specifies: Insertion loss -2 dB (typical); Isolation -50 dB (typical). RF test conditions: TA = +25 °C.

Die dimensions: 1.6 × 1.9 × 0.1 mm.



VE (V) = -5; VA (V) = 0; VB (V) = 0; RF = RFin ↔ RFout1

VE (V) = -5; VA (V) = 3.3; VB (V) = 0; RF = RFin ↔ RFout2

VE (V) = -5; VA (V) = 0; VB (V) = 3.3; RF = RFin ↔ RFout3

VE (V) = -5; VA (V) = 3.3; VB (V) = 3.3; RF = RFin ↔ RFout4

RF characteristics

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	100	-	20000	MHz
Insertion loss	-	-	-2	-	dB
Isolation	-	-	-50	-	dB
Input VSWR	-	-	1.3	-	-
Output VSWR (on)	-	-	1.3	-	-
Output VSWR (off)	-	-	1.3	-	-

Control voltages

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Negative-supply quiescent current	-	-	0.0018	-	-	A
Input drive current	-	-	0.0003	-	TTL = +5 V	A
High-level input voltage	-	3	-	5	-	V
Low-level input voltage	-	0	-	0.4	-	V
Negative supply voltage	-	-	-	-	-5	V

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum input power	-	-	-	27	dBm
Storage temperature	-	-65	-	150	°C
Operating temperature	-	-55	-	85	°C

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum control voltage	-	-	-	6	V
Minimum negative supply voltage	-	-6	-	-	V

Die dimensions

Parameter	Value	Unit
Die dimensions	1.6 × 1.9 × 0.1	mm
Plan-view outline tolerance	±100	µm

Bond-pad assignments

Pins	Symbol	mm
2	RFin	0.150 × 0.100
5	RFout1	0.150 × 0.100
8	RFout2	0.150 × 0.100
15	RFout3	0.150 × 0.100
18	RFout4	0.150 × 0.100
10, 13	VE	0.100 × 0.100
11	VA	0.100 × 0.100
12	VB	0.100 × 0.100
1, 3, 4, 6, 7, 9, 14, 16, 17, 19	GND	0.100 × 0.100

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Integration notes

VE (V) = -5; VA (V) = 0; VB (V) = 0; RF = RFin ↔ RFout1 VE (V) = -5; VA (V) = 3.3; VB (V) = 0; RF = RFin ↔ RFout2 VE (V) = -5; VA (V) = 0; VB (V) = 3.3; RF = RFin ↔ RFout3 VE (V) = -5; VA (V) = 3.3; VB (V) = 3.3; RF = RFin ↔ RFout4

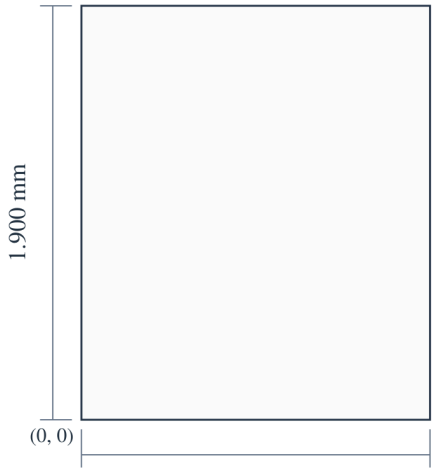
Pad connection notes

The listed GND pads are test ground pads.

Mechanical Outline

Outline and dimensioned coordinates in mm. Use this drawing as a dimensional reference. Fabrication and wire bonding require complete drawings.

LCI-SW-100-20000-SP4T-D



X (mm)

RFin: 0.800

VE (13): 0.500

VB: 0.700

VA: 0.900

VE (10): 1.100

Y (mm)

RFout1 / RFout4: 1.570

RFout2 / RFout3: 0.440

1.600 × 1.900 × 0.100 mm

X, Y: ±0.100 mm

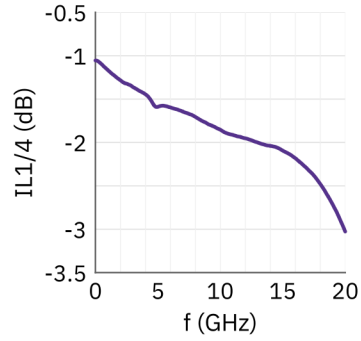
X → · Y ↑ · X, Y: mm

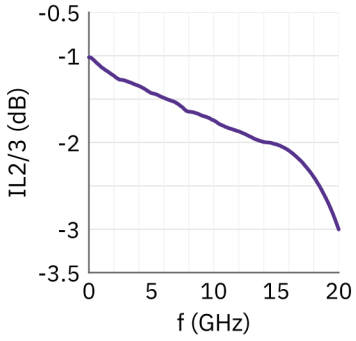
Performance curves

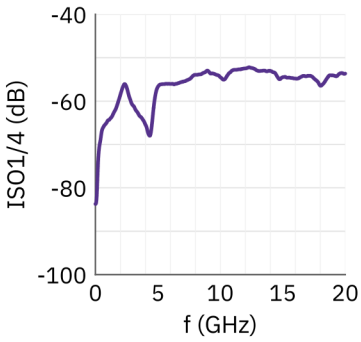
Each performance plot applies to its stated operating conditions.

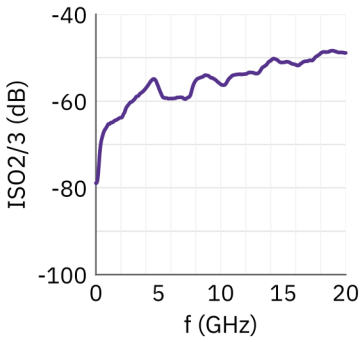
Output matching; Input matching; Isolation; Insertion loss.

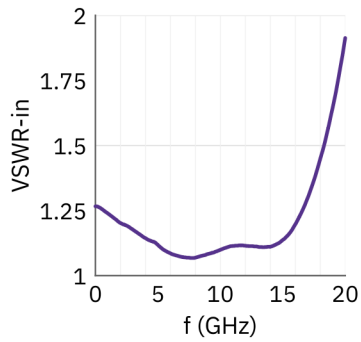
Readings are approximate.

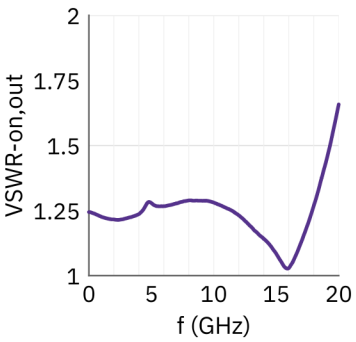


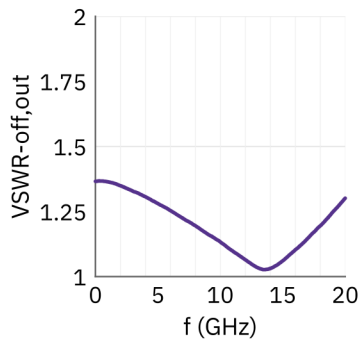












Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.