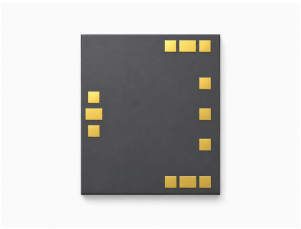
100–20000 MHz GaAs SPDT MMIC Switch Die — IL 1.6 dB (typical)

LCI-SW-100-20000-SPDT-D-IL1p6T · 100–20000 MHz · GaAs SPDT MMIC Switch Die.



The RF table specifies: Insertion loss 1.6 dB (typical); Isolation 45 dB (typical). RF test conditions: TA = +25 °C.

Die dimensions: 1.2 × 1.4 × 0.1 mm.

VE (V) = -5; VC (V) = 0; RF = RFin ↔ RFout2

VE (V) = -5; VC (V) = 3.3 / 5; RF = RFin ↔ RFout1

RF characteristics

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	100	-	20000	MHz
Insertion loss	-	-	1.6	-	dB
Isolation	-	-	45	-	dB

Control voltages

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Negative-supply quiescent current	-	-	0.0012	-	-	A
Input drive current	-	-	0.0002	-	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	-	125	°C
Maximum control voltage	-	-	-	6	V
Minimum negative supply voltage	-	-6	-	-	V

Die dimensions

Parameter	Value	Unit
Die dimensions	1.2 × 1.4 × 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
11	RFout2	0.150 × 0.100
7, 9	VE	0.100 × 0.100
8	VC	0.100 × 0.100
1, 3, 4, 6, 10, 12	GND	0.100 × 0.100

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Integration notes

VE (V) = -5; VC (V) = 0; RF = RFin ↔ RFout2 VE (V) = -5; VC (V) = 3.3 / 5; RF = RFin ↔ RFout1

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.

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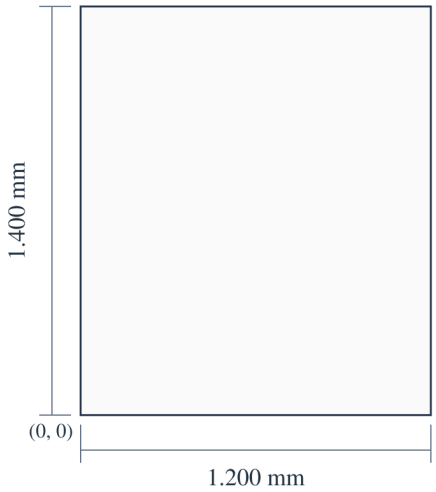


X (mm)
RFout1 / RFout2: 0.930

Y (mm)
RFin / Vc: 0.700
VE (7): 0.975
VE (9): 0.425

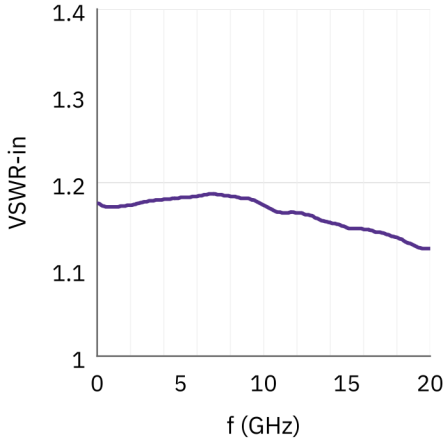
1.200 × 1.400 × 0.100 mm
X, Y: ±0.100 mm
X → · Y ↑ · X, Y: mm

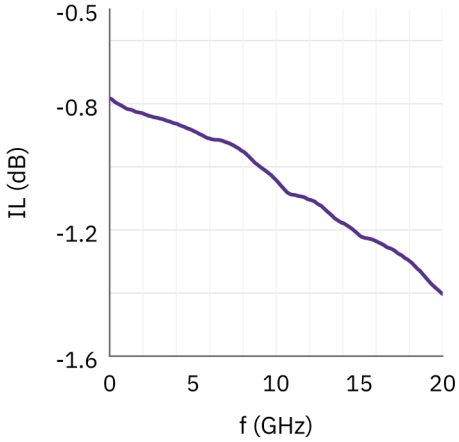
Performance curves

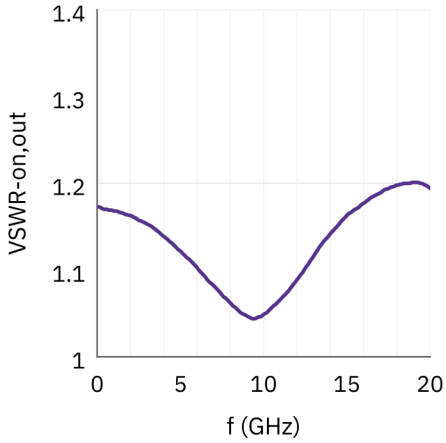
Each performance plot applies to its stated operating conditions.

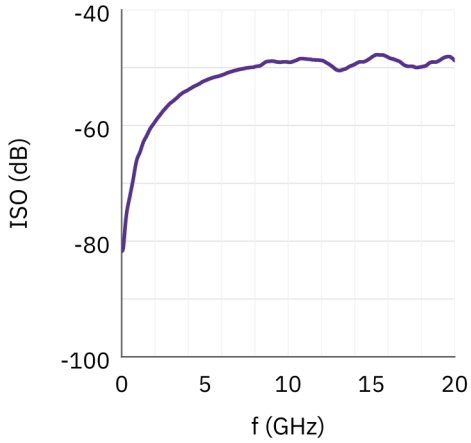
Output matching; Input matching; Isolation; Insertion loss.

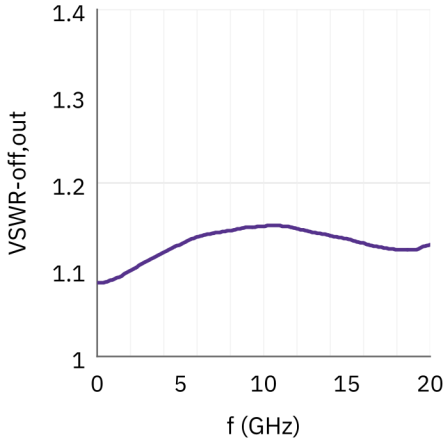
Readings are approximate. Insertion loss IL is plotted as signed dB values.











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.