100–20000 MHz GaAs SPST MMIC Switch Die — IL ≤ 1.2 dB

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

The RF table specifies: Insertion loss ≤ 1.2 dB; Isolation 60 dB (typical). RF test conditions: TA = +25 °C.

Die dimensions: 1.4 × 0.6 × 0.1 mm.



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

VE (V) = -5; VC (V) = 3.3–5; RF = off

RF characteristics

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	100	-	20000	MHz
Insertion loss	-	-	-	1.2	dB
Isolation	-	-	60	-	dB
Input/output VSWR (on)	-	-	1.1	-	-
Input/output VSWR (off)	-	-	1.4	-	-

Control voltages

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Negative-supply quiescent current	-	-	0.0011	-	-	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	-	-	-	30	dBm
Storage temperature	-	-65	-	150	°C
Operating temperature	-	-55	-	125	°C
Minimum negative supply voltage	-	-6	-	-	V

Die dimensions

Parameter	Value	Unit
Die dimensions	1.4 × 0.6 × 0.1	mm
Plan-view outline tolerance	±100	µm

Bond-pad assignments

Pins	Symbol	mm
2	RFin	0.120 × 0.100
5	RFout1	0.120 × 0.100
7, 9	VE	0.100 × 0.100
8	VC	0.100 × 0.100
3, 4	GND	0.100 × 0.100
1, 6	GND	0.100 × 0.090

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Integration notes

VE (V) = -5; VC (V) = 0; RF = RFin ↔ RFout VE (V) = -5; VC (V) = 3.3–5; RF = off

Pad connection notes

The listed GND pads are test ground pads. For VE, use one of pads 7, 9; only one is required.

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-SPST-D



X (mm)
VE (7): 0.500
Vc: 0.900
VE (9): 1.050

Y (mm)
RFin / RFout: 0.3335

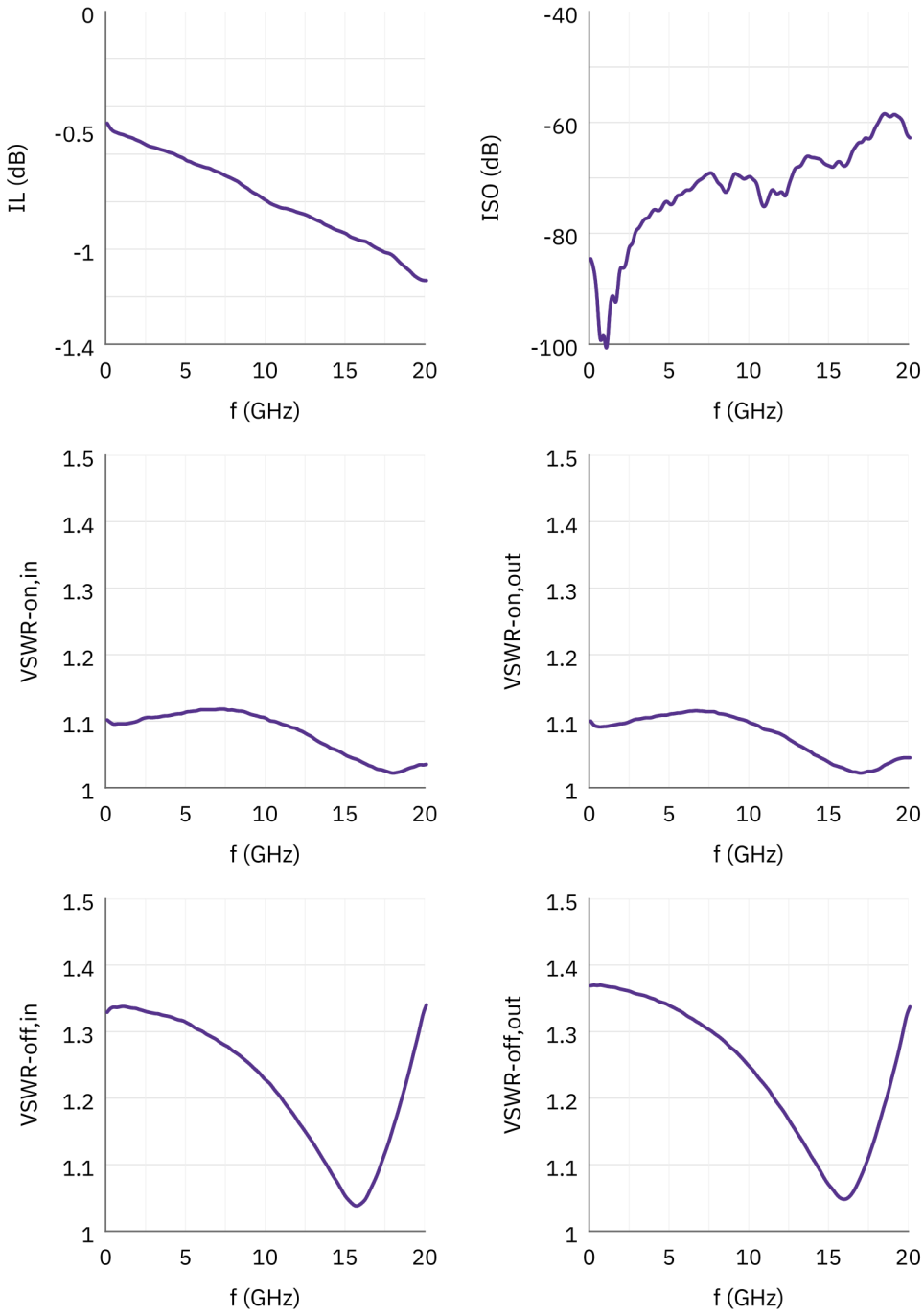
1.400 × 0.600 × 0.100 mm
X, Y: ±0.100 mm
X → · Y ↑ · X, Y: mm

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.