100–6000 MHz GaN SPDT MMIC Switch Die — IL 0.7 dB (typical)

LCI-SW-100-6000-SPDT · 100–6000 MHz · GaN SPDT MMIC Switch Die.



The RF table specifies: Insertion loss 0.7 dB (typical); Isolation 45 dB (typical); P0.2dB 47 dBm (typical). RF test conditions: TA = +25 °C.

The RF ports do not require external DC-blocking capacitors.

V1 / V2: 100 pF; 10000 pF; 10 nF

Die dimensions: 2.75 × 1.17 × 0.1 mm.

V1 (V) = -28; V2 (V) = 0; RF = RFc ↔ RF1

V1 (V) = 0; V2 (V) = -28; RF = RFc ↔ RF2

RF characteristics

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	100	-	6000	MHz
Insertion loss	-	-	0.7	0.8	dB
Isolation	-	-	45	-	dB
Input power at 0.2 dB compression	-	-	47	-	dBm
Input VSWR	-	-	1.8	-	-
Output VSWR	-	-	1.8	-	-
Switching time	-	-	20	-	ns

Control voltages

Parameter	Symbol	Minimum	Typical	Maximum	Value	Unit
Control voltages (V < 0)	-	-	-	-	-28	V
Control voltages (0 V)	-	-	-	-	0	V

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum input power [1]	-	-	-	47	dBm
Storage temperature	-	-65	-	150	°C
Operating temperature	-	-55	-	85	°C
Minimum gate bias	-	-60	-	-	V

Absolute limits

Absolute limits; these are not normal operating targets.

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Maximum pulsed input power [2]	-	-	-	49	dBm

[1] CW

[2] τ = 100 µs; D = 10%

Die dimensions

Parameter	Value	Unit
Die dimensions	2.75 × 1.17 × 0.1	mm
Plan-view outline tolerance	±100	µm

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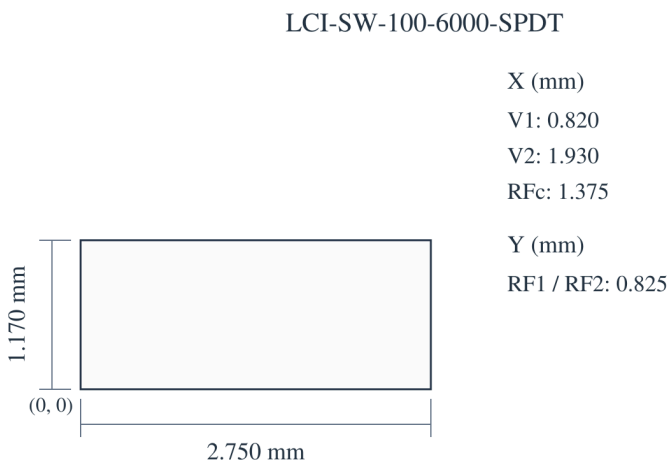
Integration notes

The RF ports do not require external DC-blocking capacitors. V1 / V2: 100 pF; 10000 pF; 10 nF V1 (V) = -28; V2 (V) = 0; RF = RFc ↔ RF1 V1 (V) = 0; V2 (V) = -28; RF = RFc ↔ RF2

Mechanical Outline

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



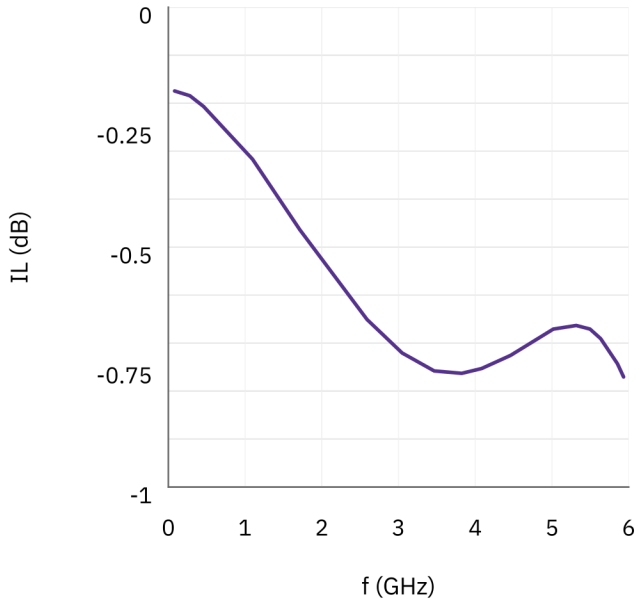
2.750 × 1.170 × 0.100 mm
X, Y: ±0.100 mm
X → · Y ↑ · X, Y: mm

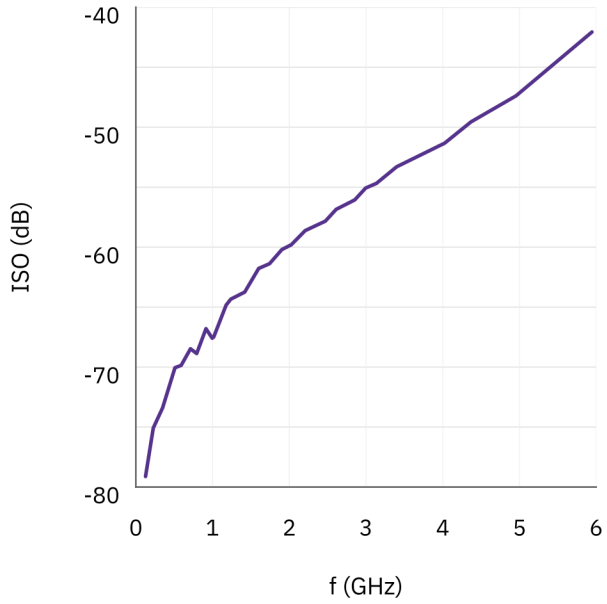
Performance curves

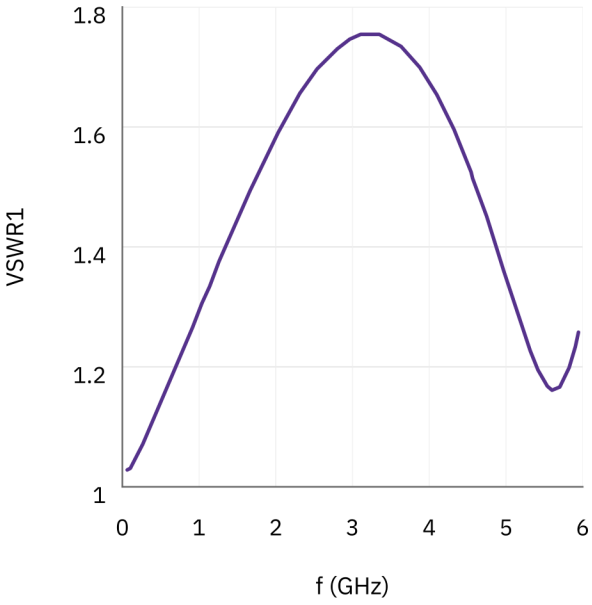
Each performance plot applies to its stated operating conditions.

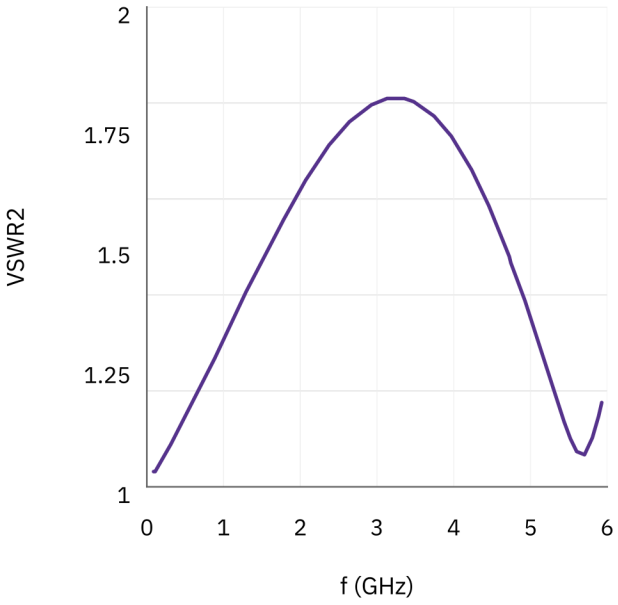
Insertion loss; Isolation; Port matching.

Figure notes: TA=+25°C. 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.