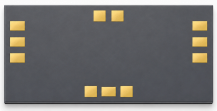
12000–18000 MHz GaN SPDT MMIC Switch Die — IL 1 dB (typical)

LCI-SW-12000-18000-SPDT · 12000–18000 MHz · GaN SPDT MMIC Switch Die.



The RF table specifies: Insertion loss 1 dB (typical); Isolation 38 dB (typical); P0.2dB 44 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 µF

Die dimensions: 1.8 × 0.95 × 0.1 mm.

V1 (V) = -28; V2 (V) = 0; RF = RFin ↔ RFout2

V1 (V) = 0; V2 (V) = -28; RF = RFin ↔ RFout1

RF characteristics

TA = +25 °C

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating frequency	f	12000	-	18000	MHz
Insertion loss	-	-	1	1.2	dB
Isolation	-	36	38	-	dB
Input power at 0.2 dB compression	-	-	44	-	dBm
Input VSWR	-	-	1.5	-	-
Output VSWR	-	-	1.5	-	-
Switching time	-	-	10	-	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]	-	-	-	45	dBm
Storage temperature	-	-65	-	150	°C
Operating temperature	-	-55	-	85	°C
Minimum gate bias	-	-60	-	-	V

[1] CW

Die dimensions

Parameter	Value	Unit
Die dimensions	1.8 × 0.95 × 0.1	mm
Plan-view outline tolerance	±100	µm

Bond-pad assignments

Pins	Symbol	mm
1	RFin	0.120 × 0.080
2, 3	O1, O2	0.120 × 0.080
4, 5	V1, V2	0.100 × 0.100

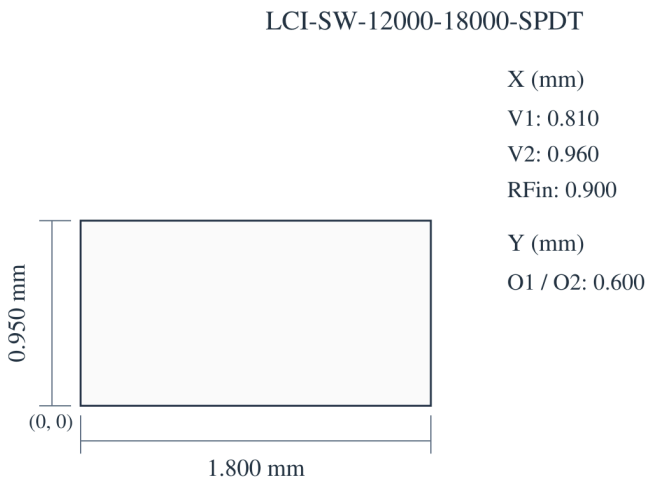
Current publication record · 1.7 · 2026-11-12. Product description or editorial content updated. Replaces revision 1.6.

Integration notes

The RF ports do not require external DC-blocking capacitors. V1 / V2: 100 pF; 10000 pF; 10 µF V1 (V) = -28; V2 (V) = 0; RF = RFin ↔ RFout2 V1 (V) = 0; V2 (V) = -28; RF = RFin ↔ RFout1

Mechanical Outline

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

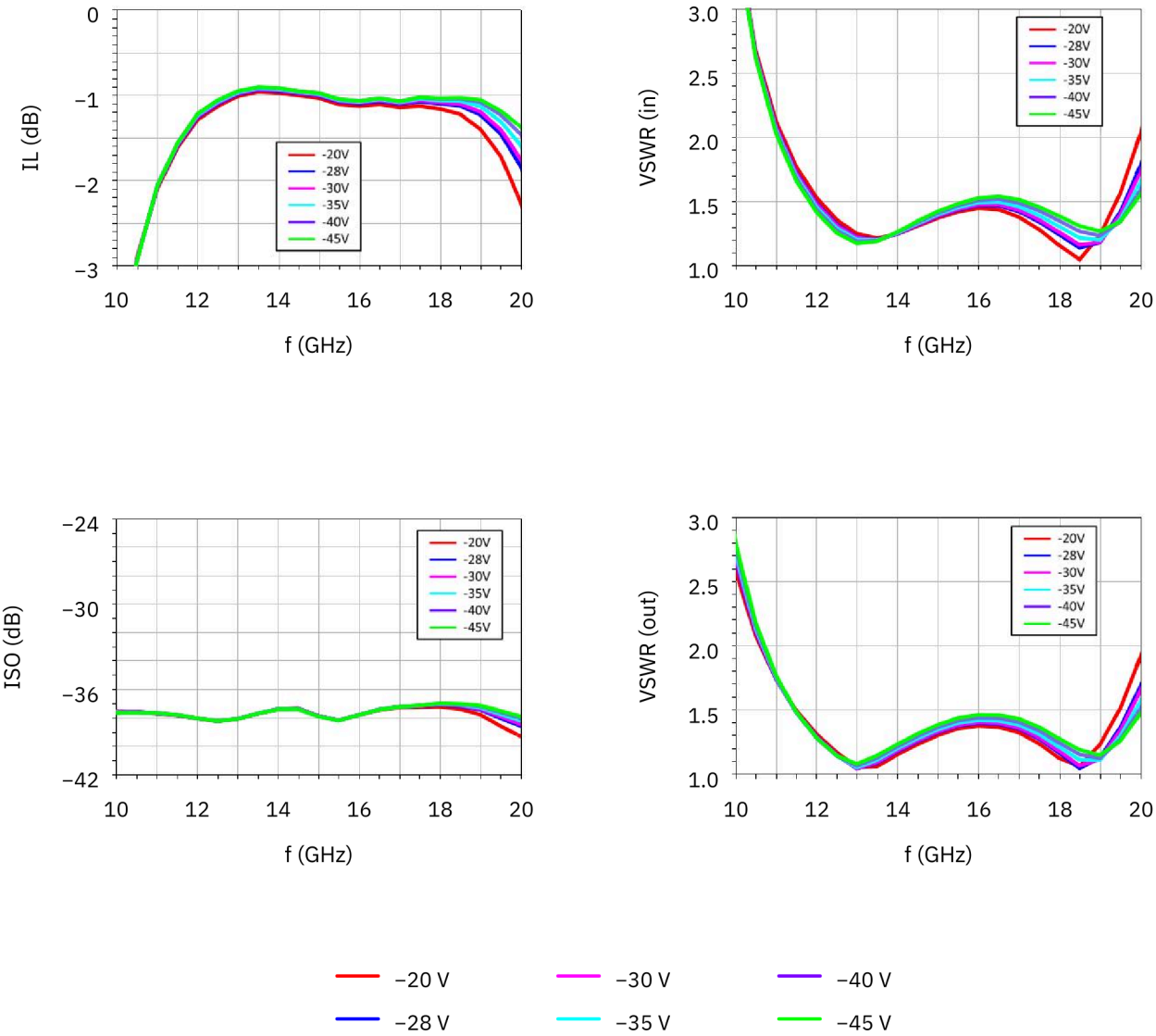


Performance curves

Each performance plot applies to its stated operating conditions.

Insertion loss; Isolation; Input matching; Output matching.

Figure notes: TA=+25°C. The legend lists −20 / −28 / −30 / −35 / −40 / −45 V. The voltage node is unspecified.



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.